

OPUS 2

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Grenfell Tower Inquiry

Day 62

October 29, 2020

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(10.00 am)

SIR MARTIN MOORE-BICK: Good morning, everyone. Welcome to today's hearing. Today we're going to continue hearing evidence from Dr Barbara Lane.

So would you ask Dr Lane to come in, please.

DR BARBARA LANE (continued)

SIR MARTIN MOORE-BICK: Good morning, Dr Lane.

THE WITNESS: Good morning.

SIR MARTIN MOORE-BICK: All ready to carry on?

THE WITNESS: Well, I just want to talk about the screen and things, because yesterday my A3 pages are very blurry and they're too small in here, and I would appreciate if you could give me the section number when the thing is coming up on the screen so I can read it and listen to you and answer the question, because it's very fast and I'm trying to read and then listen a little bit late. So if you could say the section number, I will read it when it's small and large. I would really appreciate that.

MS GRANGE: Yes. I don't think we are going back to too many of those big A3 sections today, but they were a bit challenging.

THE WITNESS: Okay, no worries.

SIR MARTIN MOORE-BICK: We will try and make sure you can do

1

that.

THE WITNESS: No, it's just because I want to answer the questions properly.

SIR MARTIN MOORE-BICK: No, of course.

Right, Ms Grange.

Questions from COUNSEL TO THE INQUIRY (continued)

MS GRANGE: Thank you.

Can I just pick up on one part of your evidence yesterday. If we could go back to the transcript, {Day61/65:5-9}. This is where we were discussing, if you remember, the kind of evolution in thinking between 2012, 2013, 2014, if you remember --

A. Yes.

Q. -- in your evidence yesterday.

Then if we pick it up at line 5, you say:

"By 2013 -- I did go back, I dug out all my old notebooks the other day to see what I was up to. By 2013, we were sufficiently worried about materials and certificates that we started to run joint fire and façade seminars together within Arup."

Do you see that there?

A. Yes.

Q. I just wanted to be absolutely clear, so those were internal seminars between Arup Fire and Arup Façades; is that right?

2

A. That's what I was referring to yesterday.

Q. Yes, yes.

A. Yes.

Q. Were any external outside organisations or individuals involved in, say, those seminars at that time?

A. In those private seminars in Arup, no. But if you're trying to ask me about external events in 2013 --

Q. Yes.

A. -- yes, there were some external events where different companies or individuals --

Q. Yes.

A. -- were raising concerns. I could not list out all the dates.

Q. No, I understand.

A. Or the companies, because I haven't prepared for that.

Q. No, I understand. But just to get the general sense that it wasn't just within Arup that this was being realised.

A. Absolutely not. I was trying not to stray too far, but I am very clear that in 2013, let's say external to my company, there were other professional organisations like Arup --

Q. Yes.

A. -- and other types of organisations raising questions.

Q. Yes, yes, that's really helpful, thank you.

3

Now, we'd got to look at issue 3 of Exova's work from November 2013 yesterday. I'm now going to go forward in time and look at what happened with Exova's involvement after issue 3 --

A. Okay.

Q. -- and into the time when Rydon is appointed as design and build contractor. So that's going to be a big theme of the questions coming up.

Now, it's right, isn't it, that the whole process of selecting the ACM and selecting the particular ACM panels was one that was done without involving or consulting Exova?

A. Yes, and I've made no such assertion in my report, and I also wouldn't expect a fire safety engineer at that time to ever be consulted on selection of products.

Q. Yes.

I think you mentioned yesterday that you are also familiar with the NBS specification from --

A. Yes, I have studied it for the Inquiry.

Q. Yes, from January 2014.

A. All versions, yes.

Q. Yes, actually, you're right, there were a number of drafts and then iterations in late 2013, and then the final version in January 2014.

A. Yes, exactly.

4

1 Q. Again, are you aware that Studio E sought no input from
 2 Exova on the NBS specification, including the different
 3 alternative materials within that?
 4 A. I'm very well aware and I have no concern with that
 5 arrangement.
 6 Q. Yes.
 7 Now, the contract was then put out to tender.
 8 Rydon, after the OJEU procurement exercise, are chosen.
 9 Then, on 1 April 2014, there's an initial meeting with
 10 the contractor. On that agenda is the possibility of
 11 swapping zinc for Reynobond cassettes.
 12 It's right, isn't it, that Exova weren't at or even
 13 invited to that meeting, and I think weren't even sent
 14 the minutes of it?
 15 A. As would be entirely normal practice.
 16 Q. Yes.
 17 A. At that time.
 18 Q. I just want to highlight something you say at page 284
 19 of your report {BLARP20000017/284}, if we could bring
 20 that up now, and look at paragraph 9.1.34, and you say
 21 there:
 22 "It is very important to acknowledge the change from
 23 zinc to ACM, and it is correct that Exova were not asked
 24 their opinion about this change, as I read the evidence
 25 available."

5

1 A. Yes.
 2 Q. That remains your position; yes?
 3 A. Yes, it does. Just so we're absolutely clear, about the
 4 change from zinc to ACM.
 5 Q. Yes.
 6 A. Yes.
 7 Q. You also in your report have listed some instances where
 8 it's apparent that Rydon contacted RBKC building control
 9 directly to discuss matters relating to fire safety, and
 10 that Exova were excluded from some of those discussions.
 11 A. That's correct.
 12 Q. Yet -- and this is a point you made yesterday, and
 13 I want to take you to the invoice table -- you have made
 14 the point that Exova do continue to invoice the TMO.
 15 A. Yes.
 16 Q. The latest invoice we've found is, I think,
 17 February 2015. Can we look at that in your report. If
 18 we go to page 89 of your report {BLARP20000017/89}, here
 19 I think is that invoice table that you were referring to
 20 yesterday.
 21 A. Yes.
 22 Q. Is that correct?
 23 A. Yes, that's correct.
 24 Q. So what you have helpfully done here is split down all
 25 the invoice numbers and their dates on the left-hand

6

1 side, the amounts and the name of the person and
 2 organisation they were issued to.
 3 A. Yes.
 4 Q. I think always either Appleyards or the TMO; is that
 5 correct?
 6 A. Yes.
 7 Q. Or both sometimes.
 8 A. Yes, so I've given the names there, yes.
 9 Q. Yes.
 10 If we could go down the page, we can see that
 11 there's invoices then in March 2014, at the bottom of
 12 that page, October 2014, February 2015, and then if we
 13 go over the page {BLARP20000017/90}:
 14 "Time booked after 18th February 2015, but no
 15 associated invoice provided to me."
 16 So that's the invoicing position; is that correct?
 17 A. In the evidence that I have available to me.
 18 Q. Yes, in the written evidence.
 19 A. Yes.
 20 Q. You acknowledge in your report that Exova claims that it
 21 was "substantially excluded" from the project following
 22 the third issue of its report and the appointment of
 23 a design and build contractor.
 24 Now, can we just be clear about your view, and
 25 I just want to summarise your view and check that you

7

1 agree with this: do you agree that it is your opinion,
 2 as expressed in your written report, that by that stage
 3 there had already been very serious failures in Exova's
 4 work, both on the existing fire strategy and the
 5 fire strategy for the refurbishment works?
 6 A. Yes, I do.
 7 Q. Am I right, in summary, that your evidence is that even
 8 after that stage, Exova did respond to queries but did
 9 so inadequately?
 10 A. Yes, that's correct.
 11 Q. I'm going to take you back to a couple of those,
 12 including the important ones on 18 September 2014 and
 13 then in March 2015. We will do that in a moment.
 14 A. Okay, yes.
 15 Q. So we can see from the email exchanges that Exova were
 16 consulted on an ad hoc basis to give advice on issues
 17 that arose after Rydon's appointment as contractor;
 18 that's correct, isn't it?
 19 A. Yes, and again, that's something that's very familiar to
 20 me and entirely normal practice.
 21 Q. We see a number of emails in which Exova are consulted
 22 about the works, and you have helpfully set out some of
 23 those exchanges in a table at section 8.4 of your
 24 report, and I just want to look at that now briefly. If
 25 we go to page 256 {BLARP20000017/256}, it's at

8

1 table 8.1. It begins at the bottom of that page.
 2 Are you able to see that easily on the screen?
 3 A. Yes, no, that's fine, it's the landscape pages that are
 4 the problem.
 5 Q. It's A3 that are a problem.
 6 A. Yes.
 7 Q. So here we've got table 8.1, and you have got evidence
 8 of fire safety design advice being provided by Exova by
 9 email and/or telephone contact.
 10 A. Yes.
 11 Q. And then you have set out a chronology of --
 12 A. Yes.
 13 Q. -- some of the advice.
 14 If we could look at the next page --
 15 A. Yes, we need to keep going, yes.
 16 Q. Yes, in 2012, and then perhaps if we could go to the
 17 next page ...
 18 A. Yes, if we keep going until -- I think you said about
 19 after Rydon had been appointed in March.
 20 Q. Yes, so if we keep going across this table.
 21 (Pause)
 22 If we can go to the next page.
 23 (Pause)
 24 A. Yes, can we keep going?
 25 Q. Yes.

9

1 A. Just until 2014.
 2 Q. Yes, so keep going. Sorry, I haven't got the exact page
 3 reference for when it starts, 2014, but it's coming up,
 4 I think, shortly.
 5 A. Yes.
 6 Q. Yes, so here then we can see {BLARP20000017/264}, after
 7 their third issue, we get 18 September 2014, there's
 8 a couple of exchanges there --
 9 A. Yes.
 10 Q. -- that we will look at. Then if we go over the next
 11 page, 29 September 2014, 23 October 2014.
 12 A. Yes.
 13 Q. We can keep going. Then we have some in 2015 there.
 14 A. Yes.
 15 Q. And it goes all the way to December 2016.
 16 A. Yes.
 17 Q. That's right, isn't it?
 18 A. And again, I just want to be clear that that's again
 19 aligned with my own experience working on projects.
 20 You've issued your detailed fire safety strategy for
 21 which you're responsible.
 22 Q. Yes.
 23 A. And then, depending on how the project's going,
 24 depending on the rest of your scope of work, you will
 25 have queries like that for the rest of the project or

10

1 you may be appointed to do something more detailed.
 2 Q. Yes.
 3 A. But the most important point is that your detailed fire
 4 safety strategy is finished and available as a reference
 5 document to the rest of the professional design team as
 6 they carry on with their duties for the rest of the
 7 project.
 8 Q. Yes.
 9 Now, can I look at something you say at page 270 of
 10 your report {BLARP20000017/270}, paragraph 8.4.11.
 11 A. Yes.
 12 Q. This is where you have set out the table clearly --
 13 A. Yes.
 14 Q. -- and then you are making a number of remarks.
 15 A. Yes.
 16 Q. I want to pick up there, and you say:
 17 "In reviewing the queries Exova received, I consider
 18 these to be directly caused by the fact no detailed fire
 19 strategy had ever been produced. The queries are basic
 20 questions about performance requirements in fire."
 21 A. Yes.
 22 Q. Do I take it that you have looked at those email
 23 exchanges that have occurred through to 2016?
 24 A. Yes, I have.
 25 Q. Some in 2014, some in 2015, some in 2016.

11

1 A. Yes.
 2 Q. And your view is that, had a detailed fire strategy been
 3 prepared --
 4 A. Yes.
 5 Q. -- what, all of those wouldn't have been necessary or
 6 just a large proportion of them?
 7 A. I'm not going to say all, because I can't frantically go
 8 and read everything again.
 9 Q. Yes.
 10 A. But a large proportion of them.
 11 Q. Yes.
 12 A. And I'm particularly interested in all the questions
 13 over many years -- it wasn't just a period of weeks, for
 14 two further years -- asking basic questions about
 15 cavity barriers and insulation --
 16 Q. Yes.
 17 A. -- neither of which was addressed in the detailed fire
 18 safety strategy as it should have been.
 19 Q. Do you think that those were points that might have
 20 cropped up anyway as the design evolved?
 21 A. They very well may anyway, and I think -- you know,
 22 I was thinking about this. I think this concept that
 23 the professionals in the construction industry could
 24 write a report and leave out bits on some kind of
 25 assessment they've made of other people in the design

12

1 team, I don't understand that as a proposition, and
 2 I think even when you write a detailed fire strategy,
 3 it's perfectly acceptable for people to still come back
 4 to the fire safety professional and just re-check, ask
 5 another few questions, make sure their understanding is
 6 accurate.

7 Q. Yes.

8 A. Okay? I don't think that's an excuse to not produce
 9 a detailed fire safety strategy.

10 Q. Yes.

11 So, just to summarise, and then I am going to ask
 12 you some more questions on this theme, the position
 13 appears to be that, after Rydon were appointed, Exova
 14 wasn't asked at any point, whether by the TMO, Studio E,
 15 Rydon or building control, to update the third version
 16 of their report, but they do get asked a number of
 17 questions from time to time, mainly by Studio E.

18 A. Yes.

19 Q. Now, I want to ask you: what would you reasonably expect
 20 Exova to do when being asked those additional questions?

21 A. So I know I sound like a broken record: they should
 22 already have issued their detailed fire strategy as they
 23 offered in their own scope of work, and then, when we --
 24 hopefully I'll have the opportunity to show some
 25 details, but when the design team were clearly reaching

13

1 for information, and Mr Ashton, you know, should have
 2 known it wasn't in his report, I feel it was time to
 3 update that report, and that's what my professional
 4 practice is.

5 Q. But do you think he should have unilaterally done that
 6 and just gone ahead and updated his report and sent it,
 7 or do you think he should have sought clarification
 8 about what his role was at that point?

9 A. So it's a matter for him to explain why the report
 10 wasn't finished in the first place. If he had concerns
 11 about contractual arrangements or if Exova were going to
 12 get paid, which is entirely valid, if they were to do
 13 some work, the bare minimum I would expect a fire safety
 14 engineer to do is to simply write to their client and
 15 say, "I'm getting asked lots of questions about
 16 cavity barriers, I haven't addressed it in my report,
 17 I need X number of days to carry out this activity, do
 18 I have your approval to proceed?" Perfectly normal
 19 professional practice.

20 Q. Yes.

21 A. That is not an unreasonable ask of an experienced
 22 company working in the built environment.

23 Q. So do you consider it was important for Exova to be
 24 informing their client, the TMO, that there was work
 25 that still needed to be done on the fire strategy and

14

1 that was incomplete?

2 A. Oh, that it was incomplete? It shouldn't have been
 3 incomplete, but it was incomplete, and the design team
 4 were asking for help. So, yes, I would expect them to
 5 take a proactive step to resolve the matter either way.

6 If the client instructs you, you know, "No, don't do
 7 any more work", and that does happen sometimes, then you
 8 can write and say, "I need you to understand that my
 9 report has not addressed B4 and there is a risk because
 10 that work has not been completed, you need to get
 11 someone else to do that assessment".

12 Q. Yes.

13 A. So I think there's a duty of care to -- personally
 14 I think you should get your work done anyway, and if you
 15 can't for whatever reason, you explain to the
 16 decision-makers the consequences of you not finishing or
 17 doing that work, and we are trained to behave and
 18 operate that way.

19 Q. So just to be clear, are you critical of Exova for
 20 allowing itself to be drawn into advising on an ad hoc
 21 basis without being more formal about their contractual
 22 position?

23 A. No, because they offered an ad hoc basis level of
 24 service in their fee proposal.

25 Q. I see. So what you are saying is, as you read the

15

1 fee proposal, the stage F work was always going to be
 2 assisting the contractor on an ongoing basis?

3 A. That's what Exova said.

4 Q. Yes.

5 Now, you note in your report that the TMO never
 6 formally stood Exova down. So there's no evidence, is
 7 there, that the TMO ever said to Exova, "Actually, your
 8 appointment is terminated now"?

9 A. Yes.

10 Q. "It's finished."

11 A. I have not found any evidence about that.

12 Q. Neither did Studio E or any other party inform Exova
 13 that their services were no longer required?

14 A. That's correct. And, again, I need to say that that
 15 commonly occurs.

16 Q. Do you agree that it would have been difficult for Exova
 17 to have interposed themselves between Rydon and the TMO
 18 once Rydon come on board as the main design and build
 19 contractor?

20 A. Would you just explain a little bit more of what you
 21 mean by interpose?

22 Q. Once Rydon come on board, there's a kind of big change
 23 in terms of the way the project is structured and the
 24 responsibilities on the project.

25 A. Yes.

16

1 Q. And it might be said that, once a design and build
2 contractor is on board --
3 A. Yes.
4 Q. -- it's obvious that, if they don't appoint a fire
5 engineer, Exova's work has run its course. What would
6 you say to that?
7 A. Oh, no, I don't agree with that at all. It's not
8 obvious, and it isn't -- I don't understand. I mean,
9 when the contractor gets appointed or is being
10 considered, like my experience is -- and you can see
11 that in the evidence here, all sorts of exchanges trying
12 to get, you know, who is getting novated, who isn't, all
13 the arrangements set up, you know, ready for day one,
14 that happens on all the design and build contracts I've
15 ever worked on.
16 Q. Yes.
17 SIR MARTIN MOORE-BICK: When Exova were first appointed,
18 they were appointed, I think, by the TMO to give such
19 advice through or to Studio E as Studio E might think
20 was required, is that fair, at that stage?
21 A. Where does it say in their scope that it's for the
22 architect?
23 SIR MARTIN MOORE-BICK: Well, that was the way they report
24 it, anyway, and no one seems to have objected to that.
25 I was really asking the question to compare it with the

17

1 situation after the appointment of Rydon, when Rydon
2 take over responsibility for design.
3 A. Okay.
4 SIR MARTIN MOORE-BICK: At that point, presumably, Exova
5 were still engaged by the TMO --
6 A. Yes.
7 SIR MARTIN MOORE-BICK: -- to give such advice on design --
8 A. Yes.
9 SIR MARTIN MOORE-BICK: -- or on fire safety as Rydon might
10 require.
11 A. Okay, so that's really interesting. So I don't see that
12 the scope of work is to assist just the architect. So
13 a client appoints a fire safety engineer, and unless
14 I wrote expressly, "Dear client, I understand you want
15 me to assist only the architect on the design team",
16 which would be quite rare, we are providing advice to
17 the team, and we are producing our own advice for the
18 benefit of the team, not just for one company.
19 SIR MARTIN MOORE-BICK: All right, yes.
20 A. Okay? I entirely understand that when a principal
21 contractor is appointed, whose leading decision-making
22 day to day has altered or, you know, increased or
23 changed in some way, but my experience is when I stick
24 with the client after that change, which happens a lot,
25 you know, you're still giving advice on behalf of the

18

1 client.
2 If I was worried because Rydon knew people were
3 contacting me, I would write to my client and say,
4 "Look, the principal contractor and his or her team are
5 now contacting me, do you want me to carry on providing
6 advice to those new parties?" And my client will say to
7 me either, "Yes", or, "No, don't give any advice to the
8 principal contractor and their team, I want you to just
9 check everything at the end", or something like that.
10 So there is an obligation to check with your client,
11 which was the TMO in this instance, if they wanted you
12 to carry on giving advice to Rydon and any other
13 individuals Rydon had appointed.
14 SIR MARTIN MOORE-BICK: Yes. Thank you.
15 A. Again, please don't think that's a weird experience of
16 mine; that is normal practice in the industry.
17 SIR MARTIN MOORE-BICK: Right. Thank you very much.
18 MS GRANGE: Yes, that's helpful.
19 Now, you note, if we can bring it up on the page, at
20 339 of your report {BLARP20000017/339},
21 paragraph 14.1.58, and this links to the point you have
22 just made:
23 "I have found no evidence of any concern expressed
24 by Exova staff at any time, relating to any uncertainty
25 they had about their contracted status, once Rydon was

19

1 on board."
2 A. Yes.
3 Q. So I think what you are saying is you have looked at all
4 the exchanges that were occurring afterwards --
5 A. Yes.
6 Q. -- some of them were with Studio E, some of them were
7 with Rydon or their appointed subcontractors --
8 A. Exactly, yes.
9 Q. -- and you can't find anywhere any evidence of Exova
10 saying, "Hang on a moment, who are we being asked to
11 advise, what's our current status, what's our
12 contractual position?" That just doesn't happen.
13 A. No, it doesn't. I mean, everyone is entitled to worry
14 about being paid, if nothing else, so that's why you
15 check.
16 SIR MARTIN MOORE-BICK: Ms Grange, I thought the thrust of
17 the question which precipitated these exchanges was that
18 it was not perhaps reasonable to expect Exova to --
19 well, you used the word "interpose" itself, but in
20 a sense take an active stance as between Rydon and the
21 TMO. Was that the point?
22 MS GRANGE: That was one of the points that's being made.
23 SIR MARTIN MOORE-BICK: Perhaps we ought just to make sure
24 we get an answer.
25 MS GRANGE: Yes.

20

1 A. So active ...?

2 Q. So I think one of the points that might be made is it

3 certainly wasn't reasonable to expect Exova to just

4 finish its fire strategy work of its own volition once

5 a design and build contractor comes on board.

6 A. Okay. So I'm very sorry, they were meant to have

7 finished their fire strategy before Rydon were

8 appointed, and that keeps getting blurred.

9 Q. Yes.

10 A. They had to have finished their stage E detailed

11 fire strategy before the contractor came on board.

12 Normal common practice on design and build projects.

13 MS GRANGE: Mr Chairman, is that helpful?

14 SIR MARTIN MOORE-BICK: Yes, I just wanted to make sure that

15 the question, which might be quite an important one, had

16 been answered.

17 MS GRANGE: Yes.

18 Now, just some other points about what happens once

19 Rydon are appointed.

20 It's right, once Rydon are appointed, that Exova

21 aren't passed any work packages to review; is that

22 correct?

23 A. That's correct.

24 Q. And they're not asked to carry out a compliance check by

25 any of the design team; is that correct?

21

1 A. A compliance check of ...?

2 Q. Of the overall, final design.

3 A. So as more and more detail was being produced --

4 Q. Yes.

5 A. -- no, no one on the design team asked the fire safety

6 engineer to do a full review.

7 Q. And is it right that Exova aren't invited to any design

8 team meetings?

9 A. That's correct.

10 Q. And they aren't invited to any meetings with

11 building control?

12 A. That's correct, yes.

13 Q. Nor to any meetings with the TMO themselves?

14 A. No.

15 Q. Now, does any of that affect the views that you have

16 expressed in the last 15 minutes?

17 A. No, it doesn't, because, again, that is also my

18 experience when I'm working on projects.

19 Q. Now, the understanding of the Studio E witnesses when

20 they gave oral evidence was simply that Exova was

21 available as and when questions came up.

22 A. Yes.

23 Q. That's consistent with what you see in the documents; is

24 that right?

25 A. Yes, that's correct.

22

1 Q. Now, Rydon's attitude appears to be that, if necessary,

2 Studio E should take advantage of any free advice that

3 Exova were offering.

4 A. Yes, yes, it's a shame, yes. Again, just terribly

5 typical of things, yes.

6 Q. When you say it's "terribly typical of things" --

7 A. Well, you know, look, I don't know all those people,

8 but, you know, factually, I don't know why Rydon called

9 it free advice. I presume they meant it was free to

10 them, but, you know, it's best that they discuss what

11 that meant to them.

12 Q. Yes.

13 A. You know, in my mind, the facts are Exova had

14 an appointment and they were asked to give advice, and

15 if they were worried, they should have checked.

16 Q. Is it right that any further fees that Exova charged or

17 invoiced in that later period were negligible, ie less

18 than £300?

19 A. Yes, it was a very low amount.

20 SIR MARTIN MOORE-BICK: I'm sorry, can I follow up this

21 thought that you were putting to Dr Lane earlier.

22 I know that you take the view -- and I understand

23 why -- that the fire strategy report was not completed

24 by Exova.

25 A. Yes.

23

1 SIR MARTIN MOORE-BICK: Once Rydon came on board and became

2 responsible for design --

3 A. Yes.

4 SIR MARTIN MOORE-BICK: -- might it be said by Exova, "Well,

5 at that point we were only expected to do that which we

6 were specifically asked to do", or are you suggesting

7 that they should have been aware that there was

8 unfinished work that should have been completed without

9 any further request?

10 A. Yes. Okay, so I think presumably Exova considered their

11 fire strategy to be complete. I'm retrospectively

12 saying it wasn't, because there were so many things

13 missing from it. Okay? So I'm assuming they considered

14 it to be complete, and the design team included it in

15 the employer's requirements because they considered it

16 to be complete.

17 The fire strategy is seen as being a risk item to

18 a principal contractor normally. They like to know it's

19 complete and it's been approved or approved in principle

20 by building control before they take on that risk.

21 Okay? That's another thing that happens, and that's

22 where the timing comes into it all.

23 So you have the strategy completed, you can say to

24 the architect and the looming principal contractor,

25 "I have had various discussions with building control

24

1 and in general they're happy with the founding
 2 principles of the report, so once you take this and use
 3 it for your detailed design, you're not running a risk".
 4 Okay?
 5 SIR MARTIN MOORE-BICK: It might be said that the
 6 fire strategy report in relation to B4 --
 7 A. Yes.
 8 SIR MARTIN MOORE-BICK: -- was on its face not complete and
 9 not thought to be complete because it referred to
 10 a further report. Is that further report something
 11 which, in your view, ought to have been provided, as it
 12 were, in any event, or was Exova entitled to wait and
 13 see if it were asked for a further report and given
 14 further information on which to make it?
 15 A. So I don't understand what the further report was going
 16 to be. Okay? I don't know what was in their minds. As
 17 a minimum, I think they should have set out the basic
 18 performance standards as part of their fire strategy.
 19 If the contractor was going to come along and wanted to
 20 do something very different to what was set in the
 21 fire strategy, then I can imagine someone needed to be
 22 commissioned to do a further report. To set out the
 23 minimum requirements of their fire strategy, you don't
 24 need a lot of detail just to be clear on those points.
 25 SIR MARTIN MOORE-BICK: All right. I mean, I raised the

25

1 point because I think I'm right in saying that Mr Ashton
 2 said that he had not been told about the nature of the
 3 cladding at the time when he or Exova produced the
 4 fire strategy report.
 5 A. Yes.
 6 SIR MARTIN MOORE-BICK: And the impression I have -- we will
 7 have to check his evidence -- is that he was expecting
 8 to be given more information about the cladding --
 9 A. Yes.
 10 SIR MARTIN MOORE-BICK: -- before he could say anything more
 11 definitive about the implications for B4.
 12 A. Okay. So a -- I think you all use the phrase --
 13 reasonably competent fire engineer would set out the
 14 minimum requirements and leave it at that. Later on --
 15 and I think we will get there --
 16 MS GRANGE: Yes.
 17 A. -- he is asked very specific questions about the exact
 18 make-up of Harley's proposals. So if Exova's plan was
 19 they were going to do even more when they had that very
 20 specific information, that was the time to now say to
 21 everyone, "We told you we were going to do even more
 22 work on B4, the questions are now coming in, the
 23 product-specific information is coming in, we would like
 24 to finish B4, please confirm you are agreed it is time
 25 for us to do that", if they were worried commercially.

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1 SIR MARTIN MOORE-BICK: All right, thank you.
 2 MS GRANGE: I have the passage here, I think we should go to
 3 it now, in Mr Ashton's evidence, which is helpful about
 4 how he saw the fire strategy. If we can go to
 5 {Day17/132:8} and pick it up there, I ask him:
 6 "Question: -- you didn't have a look back at the
 7 fee proposal and remind yourself what you had committed
 8 to doing on the project?
 9 "Answer: No. I wouldn't do that routinely.
 10 "Question: We saw, and we looked at it in detail
 11 yesterday, that a detailed fire strategy for the
 12 proposed development was promised in that proposal?
 13 "Answer: It was, yes, indeed.
 14 "Question: So this wasn't the detailed
 15 fire strategy?
 16 "Answer: No. It certainly -- for example, it
 17 doesn't contain an analysis under B4.
 18 "Question: No, and that detailed fire strategy was
 19 said to be going to include determination of any
 20 external fire spread issues --
 21 "Answer: Indeed.
 22 "Question: -- and recommendations of
 23 compartmentation.
 24 "Answer: Yeah.
 25 "Question: But we don't see that in this report.

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1 "Answer: No. No, as I say, this wasn't -- as far
 2 as I was concerned, this wasn't the final report."
 3 So that was Mr Ashton's evidence.
 4 A. Okay.
 5 Q. Now, just to be clear, does that affect the answer that
 6 you just gave to the Chairman about what you would have
 7 expected Exova to do once they are being asked specific
 8 questions later in the project?
 9 A. I don't think it does, no, because if the third version
 10 of their fire strategy, which occurred in stage E,
 11 wasn't a stage E fire strategy -- it's not written down
 12 anywhere anyway what stage strategy it is, which again
 13 is normal to do, so people know: this is the stage C,
 14 stage D, stage E report. If he hadn't got round to
 15 doing his stage E report, and I still don't understand
 16 why not, now really specific questions are coming in
 17 about construct -- you know, now the construction team
 18 are in place and we're into named materials, isn't it
 19 the time to say, "Do you understand my fire strategy is
 20 not the detailed fire strategy I offered, and do you
 21 want me to now write it?", just as a minimum.
 22 Q. Yes.
 23 Now, can I just show you some of Exova's internal
 24 operating procedures for a moment.
 25 A. Yes.

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1 Q. So if we can go to {EX000001209}. This is dated
 2 18 December 2014.
 3 A. Yes.
 4 Q. It's called "Overall Procedure Review".
 5 A. Yes.
 6 Q. If we look at figure 1 on page 2 {EX000001209/2}, it
 7 suggests in this flow diagram that, after the main
 8 project phase, which is the fourth box down, there is
 9 going to be a project completion procedure to be
 10 followed.
 11 A. Yes.
 12 Q. Then if we go to page 4 {EX000001209/4}, in section 9,
 13 there is something called "Project closure".
 14 A. Yes.
 15 Q. It says:
 16 "EXOVA procedure [then it has a name of the
 17 procedure] describes the project closure process which
 18 requires
 19 • a check that all elements of the project to have
 20 been completed satisfactorily
 21 • a check that all time and other costs have been
 22 posted via the timesheet ...
 23 • a check that the project has been fully
 24 invoiced ...
 25 • all relevant electronic files to be in the placed

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1 in the correct folders."
 2 Et cetera.
 3 A. Yes.
 4 Q. Before I ask you some questions about that, I just want
 5 to look at another of Exova's project completion
 6 procedures, this time dated 1 April 2010. If we can go
 7 to {EX000001224}. On page 1 there is a heading under
 8 paragraph 4, if we can look at the bottom half of the
 9 page, "Closure of the project".
 10 A. Yes.
 11 Q. It says this:
 12 "For many projects the exact point at which the
 13 consultancy work has been completed is not always
 14 immediately evident. The project manager should make
 15 careful note of the scope of services provided in the
 16 contract documentation. This would initially be the fee
 17 proposal which was provided and the details confirmed on
 18 the fee acceptance form."
 19 A. Yes.
 20 Q. Just below there is a sentence beginning "Appendix A",
 21 and then below that there is a sentence that says:
 22 "To ensure that a high standard is maintained, the
 23 project manager is required to:-
 24 • Check that all elements of the project to have
 25 been completed satisfactorily. This will entail

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1 a review of the scope of services set out in the fee
 2 proposal and a specific review of the documents stored
 3 on the electronic filing system ...
 4 "Or
 5 •" Contact the client or client's representative to
 6 ensure that they are satisfied that the scope of
 7 services matched with their expectations."
 8 A. Yes.
 9 Q. So that's what we see in their written procedures.
 10 A. Yes.
 11 Q. Is a project completion procedure of some description
 12 standard practice amongst competent fire engineers?
 13 A. Any fire safety engineering company that operates to the
 14 ISO 9001, which again is common practice, yes, it is.
 15 Q. Does Exova's procedure reflect what you would generally
 16 expect of such a procedure, having looked at that
 17 limited information I've just shown to you?
 18 A. Yes. I just want to be absolutely clear, I've not
 19 reviewed Exova's full management system under the ISO,
 20 but in the context of the language on this page, it is
 21 a close-out in the sense you are actively taking
 22 a step -- there's two options given -- to make sure your
 23 work is completed, and that aligns with the type of
 24 requirements that are set for our staff as well. It's
 25 a very important part of the work.

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1 Q. Does a project completion procedure usually require
 2 a check that the scope of services have been completed
 3 and/or that the client is satisfied?
 4 A. Absolutely, yes, yes.
 5 Q. Have you seen any evidence that this project completion
 6 procedure was followed by Exova on the Grenfell project?
 7 A. Not in the evidence available to me.
 8 Q. Now --
 9 A. Ms Grange, would it be okay, I would like the panel to
 10 see an email exchange between Bruce Sounes and
 11 Terry Ashton about fees?
 12 Q. Okay. Can you remember the date of that?
 13 A. It was in February 2013, and Bruce Sounes wrote to
 14 Terry Ashton to ask him their status on the project,
 15 their fees status on the project.
 16 Q. Yes, we will find that right now.
 17 A. Yes, and if we -- just whenever you are ready, because
 18 that is relevant to these completion procedures also,
 19 and it's in my report.
 20 Q. Yes.
 21 Now, Exova's position in this Inquiry is that, after
 22 the third issue of its report, it was substantially
 23 excluded from the project and TMO effectively put an end
 24 to Exova's continuing obligations.
 25 Having regard to that project completion procedure,

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1 what is your view of that contention that its role
 2 simply fell away or was put to an end?
 3 A. Yes, but the contention isn't fell away or put to
 4 an end; it's "excluded", which is a very strong word.
 5 Then the second point was is it effectively ended by the
 6 TMO, I think you said in your question?
 7 Q. Effectively put to an end Exova's continuing
 8 obligations.
 9 A. No, I don't understand why that is being said.
 10 Q. Okay.
 11 I think the email, I have had a reference, is
 12 {EXO00000639}.
 13 A. Yes. "Excluded" means -- you know, it's quite
 14 a dramatic kind of pushing out.
 15 Q. Yes.
 16 A. I see people contacting the fire safety engineer when
 17 they think they need some fire safety advice.
 18 Q. Yes.
 19 A. I don't call -- that's not the classification of
 20 exclusion in my mind.
 21 Q. Yes.
 22 Is this the email that you were just referring to?
 23 A. Yes. So I thought it's useful, when thinking about
 24 these completion procedures, for the panel to see this
 25 email.

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1 Q. So we've got from Terry Ashton to Bruce Sounes,
 2 11 February 2013.
 3 A. Yes. Okay. So he says:
 4 "... one was for providing a fire safety strategy
 5 for the existing building and the other was for ... C,
 6 D, E and F. The work relating to the former ... has
 7 been completed. With regard to the latter ..."
 8 He sets out that they've invoiced for stage C and
 9 they're now invoicing in stage D/E.
 10 Q. Yes, then he says:
 11 "We indicated that, for RIBA Stage F, work would be
 12 at the appropriate hourly rate due to the uncertainty
 13 about the amount of input that would be needed."
 14 A. Yes.
 15 Q. Yes.
 16 A. So one part of the work is already completed, so I don't
 17 know if he considered this to be the completion
 18 procedure here.
 19 Q. Right.
 20 A. And it also shows an understanding of moving through the
 21 stages.
 22 Q. Yes. Yes, thank you.
 23 I want to move now to 18 September 2014 and the
 24 emails that occurred at that time. You address this at
 25 page 285 and following of your report

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1 {BLARP20000017/285}.
 2 A. Yes.
 3 Q. So we know that, by email dated 18 September 2014,
 4 Neil Crawford of Studio E forwards to Terry Ashton
 5 a request for information, RFI number 1, received from
 6 Harley relating to horizontal firebreaks within the
 7 cladding.
 8 A. Yes.
 9 Q. We can see that at {SEA00011703}.
 10 A. Yes. I would really like to -- oh, yes, good. If we
 11 could also have the actual RFI, because there's very
 12 interesting text in there, please. Is that okay?
 13 Q. I can take you to both.
 14 A. Oh, yes, sorry.
 15 Q. That's fine. So this is from Daniel Anketell-Jones to
 16 Simon Lawrence, so Rydon and Studio E --
 17 A. Yes.
 18 Q. -- attaching Harley's request for information form
 19 number 1, which relates to the requirement for
 20 firebreaks, and he says:
 21 "This may be something that has already been
 22 decided, or may need confirmation from the local fire
 23 officer, as the opinion tends to vary."
 24 A. Yes.
 25 Q. The RFI, we can find that at {HAR00003616}.

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1 A. I think even this email is very interesting, because he
 2 clearly has some prior experience where opinions have
 3 varied, okay? So I would be paying very close attention
 4 now to this correspondence.
 5 Q. Yes. So this is the RFI.
 6 A. Yes.
 7 Q. We can see it's from Daniel Anketell-Jones in the top
 8 right-hand corner, dated 17 September. The query is:
 9 "Please may you confirm the required extent of the
 10 horizontal firebreaks within the cladding areas?"
 11 A. Yes.
 12 Q. And the suggested solution says:
 13 "We believe that they will be required at every
 14 floor level on the vertical columns, but not in the area
 15 of cladding between windows. This is because there is
 16 no 'chimney' effect here, and therefore the cladding
 17 will not add to the spread of fire."
 18 A. Yes.
 19 Q. Now, you wanted to go to this. What --
 20 A. Yes, so I think this is actually such an interesting
 21 question, and it shows -- so Daniel Anketell-Jones
 22 clearly has either had some experience or is thinking
 23 about the columns acting as -- he uses the word --
 24 I think it's "chimney", and then he's thought even more
 25 then about the area between the columns, and he's

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1 decided there's no potential for a chimney effect there.
 2 So there's a lot of thinking going on about fire, in his
 3 view, you know, how the fire might perform.
 4 Q. Yes.
 5 A. And that is the background, that quite complex question
 6 actually, to the email exchange we're going to see.
 7 Q. Yes.
 8 A. So there's a recognition that cladding the columns so
 9 extensively may cause this classic chimney effect for
 10 the fire spread, and for some reason he thinks the
 11 windows are going to break that effect between the
 12 columns.
 13 Q. Yes.
 14 Now, Terry Ashton's response is at {EX000000708}.
 15 It's the third email down on page 1.
 16 A. Yes. Okay.
 17 Q. I think perhaps if we go to page 2 {EX000000708/2}, what
 18 we see is he's sent this email exchange.
 19 A. Yes, so --
 20 Q. If we go in the middle of that page, Neil Crawford:
 21 "Hi Terry
 22 "I am working on the Grenfell Tower regeneration
 23 project from the Studio E end. The following RFI has
 24 come in relating to horizontal fire breaks within the
 25 cladding areas.

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1 "Can you comment on the RFI attached and whether you
 2 believe this interpretation in relation to stack effect
 3 is correct?"
 4 A. Yes.
 5 Q. So that's Neil Crawford to Ashton, and then we see
 6 Terry Ashton's response at the bottom of page 1
 7 {EX000000708/1}.
 8 A. Yes.
 9 Q. His initial response is:
 10 "Neil
 11 "I've never seen details of what you're doing to the
 12 external walls. Do you have any cross
 13 sections/elevations?"
 14 Now, pausing there, what would you have expected
 15 Mr Ashton to do in this situation, where he's being sent
 16 this request and has realised that he's never seen
 17 details of what they're doing to the external walls?
 18 A. Well, what he's done there, which is ask for the
 19 drawings.
 20 Q. Yes. So that's a reasonable response?
 21 A. Yes, that's a reasonable response, but there's a little
 22 problem in the background, isn't there, which is his
 23 report said he wanted to do some more work later on B4.
 24 Q. Yes.
 25 A. And, you know, this is a B4, what I would call --

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1 you know, Harley and Studio E are interpreting
 2 themselves fire performance, chimney effect, stack
 3 effect, two quite complex fire behaviours, by the way,
 4 so we are in fire safety territory, where advice is
 5 needed.
 6 Q. Would you have expected him to have pointed out that
 7 this was not something that he had properly addressed in
 8 the fire strategy report?
 9 A. Ideally, yes. I wasn't going to kind of really hammer
 10 that point home. Ideally, yes. I think he's asked for
 11 the drawings, so that is a reasonable response at this
 12 stage.
 13 Q. Okay.
 14 A. Yes.
 15 Q. So moving on with the story, further information is then
 16 provided --
 17 A. Yes.
 18 Q. -- by Neil Crawford to Terry Ashton on that same day,
 19 18 September.
 20 If we go to {EX000000709}, we can see Neil Crawford
 21 says to Terry Ashton:
 22 "Hi Terry
 23 "Please see attached our sections and the initial
 24 drawings set we have had from Harleys. The initial
 25 drawings from Harleys are fairly limited but they

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1 attempt to establish the basic approach."
 2 A. Yes.
 3 Q. We can see that he sent a number of attachments there?
 4 A. Yes.
 5 Q. Including SEA drawing 1279 (06) 120.
 6 A. Yes, it would be good to see that.
 7 Q. Yes, I will take you to that. Then a number of detailed
 8 sections and Harley's initial drawing set, a pdf of
 9 that.
 10 Then if we go to that drawing, 1279, which is at
 11 {EX000000710}.
 12 A. Okay. I think if we could look over at -- we see where
 13 it says the number 19 and 20 on the right-hand side.
 14 Q. Yes, so if we zone in on the right.
 15 A. Just there, that's fine.
 16 Q. Yes.
 17 A. So I don't have a pointer or anything, but I hope I'll
 18 try and ...
 19 So what we see here, I hope you can see the red line
 20 of the old window, the new window coming to the left.
 21 Q. Yes.
 22 A. And further out to the left you will see some dashed
 23 lines in a big long strip, with the little thing
 24 sticking out to the right-hand side.
 25 Now, that is meant to represent the cavity barriers

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1 proposal in the column, as I understand this drawing.
 2 Then you see it come in over the top of the window.
 3 Q. Yes.
 4 A. I hope -- is that okay?
 5 Q. So the more intensively little hatched rectangle --
 6 A. Yes.
 7 Q. -- immediately at the head of the window?
 8 A. Yes. It's tricky. Some people are good at reading
 9 drawings and are experienced at reading drawings and
 10 some aren't, so it's a tricky drawing to interpret.
 11 There is some information written on the left, so it
 12 says zinc composite rainscreen, and you actually have to
 13 move to the left --
 14 Q. Yes.
 15 A. -- to find the cavity barrier arrow, because it isn't
 16 placed on this side of the drawing.
 17 Q. Yes. Shall we look to the left now?
 18 A. Yes, no harm to have a look at it. Yes. Maybe scroll
 19 up a little bit. No, actually, that's fine.
 20 So if you look at P10/435, it has an arrow over to
 21 the vertical cavity barrier.
 22 Q. Yes.
 23 A. And if you look at P10/435, it has a line to the
 24 horizontal cavity barrier. Okay?
 25 Q. So the vertical cavity barrier is at the top of that

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1 page?
 2 A. Yes, and it's just pointing to the dashed lines running
 3 down.
 4 Q. Yes.
 5 A. And then the horizontal cavity barrier is again pointing
 6 into the slightly darkened hatched area near where it
 7 says "Walkway level".
 8 Q. Yes.
 9 A. Joining out to the dashed line in the columns. Okay?
 10 So this drawing is very useful.
 11 Q. It also includes somewhere, I think, a reference to
 12 thermal insulation H92/776.
 13 A. It does. Let's try and find that. Yes.
 14 Q. Potentially if we go up to the top of this drawing --
 15 A. I can't see the whole drawing -- yes.
 16 Q. No.
 17 A. No.
 18 Q. I'm pretty sure it's on here somewhere.
 19 A. Could we just zoom out so I can see the whole -- oh, no,
 20 it's impossible.
 21 Q. Maybe go to the bottom left section. There, yes. You
 22 can see --
 23 A. Oh, yes, I can see it now, yes.
 24 Q. -- above the "Mezzanine Level + 9", three labels up you
 25 have H92/776, "Thermal insulation".

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1 A. Yes.
 2 Q. Now, would you have expected Mr Ashton to realise that
 3 these numbers labelled on the drawings were to the
 4 NBS specification?
 5 A. Well, I'm going to say no. Okay? I'm going to say no,
 6 at the moment, yes.
 7 So right now he's being asked about cavity barriers
 8 in a particular context, which is Harley's understanding
 9 that you get the chimney effect on the columns and you
 10 won't get the chimney effect in the windows.
 11 Q. Yes.
 12 A. Okay? And this is the drawing.
 13 Q. Yes.
 14 A. And my memory is Mr Ashton refers to this drawing in his
 15 response.
 16 Q. Yes.
 17 A. It would be good to see that.
 18 Q. Would you agree that he can see from this what the
 19 proposed cavity barrier strategy is?
 20 A. Their proposed cavity barrier -- yes, he can.
 21 Q. Yes.
 22 A. So he can see vertical cavity barriers in the column,
 23 horizontal cavity barriers in the column, and between
 24 the windows.
 25 Q. Yes.

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1 A. You know, horizontally between the windows.
 2 Q. Moving forward with the story, you then note in your
 3 report that, later that day, Mr Crawford sends Mr Ashton
 4 the datasheet for Celotex RS5000.
 5 A. Sorry, can we see his response to this first? Can we go
 6 back out to his email?
 7 Q. Yes, so I think we were on {EX000000708}.
 8 A. Yes, thank you, because his response is very important.
 9 So if we scroll up --
 10 Q. If we go to the top of this page.
 11 A. So what he says is:
 12 "If the insulation ... behind the rainscreen
 13 cladding is combustible you will need to provide
 14 cavity barrier as shown on your drawing ..."
 15 Q. Yes.
 16 A. And that is wrong.
 17 Q. Can you just explain exactly why it's wrong?
 18 A. Because it doesn't matter if the insulation is
 19 combustible or not, you are required to provide
 20 cavity barriers.
 21 Q. Yes.
 22 A. And I was asked yesterday about being critical; that is
 23 why I'm critical, one of the reasons why.
 24 Q. Yes, so that's just incorrect advice?
 25 A. That is incorrect advice, inaccurate advice.

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1 Q. Would you have also expected him as part of this
 2 response to highlight that paragraph 12.7 of Approved
 3 Document B requires any insulation to be of limited
 4 combustibility?
 5 A. So at this stage, no.
 6 Q. Right.
 7 A. I think right now what's needed is for the fire safety
 8 engineer to say, "You need cavity barriers". They're
 9 talking about chimney effects and stack effects.
 10 Q. Yes?
 11 A. Okay? He needed to say, "You need cavity barriers on
 12 the floor lines and around the windows and the top of
 13 the wall". It doesn't matter what insulation or
 14 anything else you've selected for the columns or between
 15 the areas between the column, at this point.
 16 Q. I understand.
 17 Is there anything else you want to say about this
 18 email before we move to the next step?
 19 A. No, that's fine, thank you.
 20 Q. We note that later that day, Mr Crawford sends the
 21 datasheet for the Celotex. This is {SEA00011724}.
 22 A. Yes, so Daniel says, "The insulation is class 0".
 23 Q. Yes.
 24 A. So having read your correspondence -- because the
 25 correspondence says, "If the insulation is combustible

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1 you need cavity barriers".
 2 Q. Yes.
 3 A. Daniel says, "The insulation is class 0, so having read
 4 the correspondence, I believe fire barriers are not
 5 necessary".
 6 Q. Yes.
 7 A. Okay? So he clearly is under the impression that
 8 class 0 means non-combustible.
 9 Q. Yes.
 10 A. And he's read the advice carefully.
 11 Q. Yes.
 12 A. And he's also now checking if his opinion is correct.
 13 Q. Yes. Then we see the response above.
 14 A. Yes. Again, the architect asks the fire safety
 15 engineer, "Are we interpreting all of this correctly?"
 16 Q. Yes.
 17 Then Mr Ashton's response is then at {EX000000714}.
 18 A. Yes.
 19 Q. This is what Mr Ashton says here.
 20 A. Yes, so --
 21 Q. Sorry, you go.
 22 A. There's the email where the Celotex information is
 23 attached, and that's when -- you know, in Harley's
 24 response?
 25 Q. Yes.

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1 A. They attach the information they're relying on to
 2 understand the insulation has class 0 fire performance,
 3 and they ask for clarification that their interpretation
 4 is correct. Okay?
 5 Q. Yes.
 6 SIR MARTIN MOORE-BICK: Can we just see where it is
 7 attached?
 8 MS GRANGE: Yes, go back to {SEA00011724}.
 9 SIR MARTIN MOORE-BICK: Right.
 10 MS GRANGE: It's that one, it's where he just says --
 11 SIR MARTIN MOORE-BICK: It's the datasheet, isn't it?
 12 MS GRANGE: Yes, "Is this interpretation correct", and we
 13 can see the attachment is the "Rainscreen cladding
 14 product datasheet Aug 14".
 15 A. So it would be good to open that.
 16 Q. Yes, let's open that now. {RYD00018155}.
 17 A. Yes.
 18 Q. That's the datasheet that is attached.
 19 A. Yes, and if you can zoom in at the top half.
 20 Q. Yes.
 21 A. Yes. So there you go. So Harley, again, they have this
 22 information.
 23 Q. Yes.
 24 A. They have read it, they think they have an insulation
 25 that has class 0, they think it's not combustible.

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1 Q. Yes.
 2 A. And they think therefore they don't need
 3 cavity barriers.
 4 Q. Yes.
 5 A. And they're very clear about that.
 6 Q. Yes. So this then comes to Mr Ashton.
 7 A. Yes.
 8 Q. So can I now go to Mr Ashton's response again.
 9 A. Yes, yes.
 10 Q. So {EX000000714}, and he says this:
 11 "A material which has a Class 0 rating is not
 12 necessarily non-combustible although the reverse is
 13 invariably true. Some Class 0 products will burn when
 14 exposed to a fully developed fire. In any case, you
 15 need to prevent fire spread from [one] flat to the flat
 16 above as I stated in my earlier email. What isn't clear
 17 from the information to hand is whether or not there is
 18 a continuous cavity from top to bottom in any part of
 19 the cladding (apart from around the column casings)
 20 irrespective of the type of insulation?
 21 "Kind regards
 22 "Terry."
 23 A. Yes.
 24 Q. You say in your report, first point, that Mr Ashton is
 25 correct that not all class 0 materials are

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1 non-combustible.
 2 A. Yes. But that's not the important --
 3 Q. Exactly.
 4 A. -- point about this email.
 5 Q. So the next point you make is that Mr Ashton doesn't
 6 identify the need for the insulation to be of limited
 7 combustibility.
 8 A. Yes.
 9 Q. Nor does he correct the erroneous performance cited by
 10 Harley.
 11 A. Yes. So this is a really important moment in my mind.
 12 You've got professionals asking really specific
 13 questions about B4, as they're entitled to do. They
 14 needed to hear that insulation, for a very long time,
 15 needs to be a material of limited combustibility, which
 16 is not class 0, and they needed to hear, regardless,
 17 cavity barriers were required around the window. And
 18 Harley had shown them on the compartment lines,
 19 you know, where the walls and floors meet the cladding.
 20 Q. Yes.
 21 A. They hadn't shown them around the window. They needed
 22 it to be explained to them that they are required
 23 anyway, and that the insulation could not be class 0.
 24 Q. Yes. So that's what you would have expected
 25 a reasonably competent fire engineer to have written in

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1 response to the request?
 2 A. Yes, because it's very simply exactly what it says in
 3 the Approved Document B.
 4 Q. So to be clear, this email does not provide clear
 5 guidance on what is or is not compliant with the
 6 statutory guidance document, nor the functional
 7 requirement --
 8 A. No.
 9 Q. -- B4?
 10 Now, Mr Ashton refers back to the need to prevent
 11 fire spread from one flat to the flat above?
 12 A. Yes.
 13 Q. Was that correct advice to be giving, just that part?
 14 A. Yes, that's correct, but I think there was a need to
 15 mention the words "cavity barrier", because the design
 16 team were asking about cavity barriers. So he was
 17 correct to say that.
 18 Q. Yes.
 19 A. But it needs some interpretation, doesn't it? And
 20 people are already asking for more specific advice.
 21 Q. Yes.
 22 I think what happens is there's no evidence then
 23 that Mr Anketell-Jones ever confirms the extent of the
 24 external wall cavity, so nobody gets back to Mr Ashton
 25 about this. Would you have expected him to reasonably

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1 follow up on that?
 2 A. Would I have expected him to ... I would have preferred
 3 if he had given accurate advice in the first place.
 4 Like, I haven't ... I suppose, you know, ideally maybe
 5 he should have been worried. I think he needed to get
 6 a reply back to this email more than he -- you know,
 7 that's more in the balance of who needed to do what.
 8 I think a reply to his email was needed and more
 9 interrogation was needed.
 10 Q. Yes.
 11 A. Not to just leave it as occurred. On both sides,
 12 actually.
 13 Q. Yes.
 14 A. Yes.
 15 Q. Now, you say in your report that 18 September 2014 was
 16 a point in time when a detailed fire strategy could have
 17 been successfully put together.
 18 A. Yes.
 19 Q. Just for the transcript, at page 340
 20 {BLARP20000017/340}, paragraph 14.1.62.
 21 Can you just explain why you say that?
 22 A. Well, it's for the same reason, you know, we have
 23 exchanged on in the last day or so. Exova now say that
 24 report wasn't final and they were going to do a B4
 25 report or analysis later. These are really detailed B4

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1 questions. The design team clearly need some help. So
 2 it's time to do the work to give them the guidance that
 3 they need.
 4 Q. Would you have expected Mr Ashton to have updated that
 5 outline fire safety strategy after this correspondence?
 6 A. It's what I said earlier, it's now time to say, "I need
 7 to do my B4 work, are you happy for me to proceed?"
 8 Q. Yes. So you wouldn't necessarily expect him just to go
 9 ahead, but what you would have reasonably expected him
 10 to do, just to be clear, is to clarify with his client
 11 that they are content for him now to finish the work
 12 that's incomplete?
 13 A. Yes, because it's a safer commercial way to behave.
 14 Q. Might he have needed access to perhaps more information
 15 in order to do that full B4 analysis?
 16 A. Might he have needed more information? Well, he knew
 17 the insulation was not compliant.
 18 Q. Yes.
 19 A. He should have known there were missing cavity barriers.
 20 There's two red flags raised. I think it's now time to
 21 start worrying about what the external surface is, and
 22 how together the three things can comply with B4.
 23 Q. Yes.
 24 A. So it's time to start asking for more information.
 25 Q. Yes.

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1 A. But remember, regardless, because in fairness -- and
 2 I wrote this -- it still says zinc on these drawings,
 3 you know, erroneously.
 4 Q. Yes.
 5 A. But the bigger problem in terms of compliance at that
 6 time is the insulation and the cavity barriers.
 7 Q. Yes.
 8 A. So I don't know what work he had planned to do to
 9 resolve that matter.
 10 Q. Yes. We're now in September 2014.
 11 A. Yes.
 12 Q. Going back to the conversations we were having yesterday
 13 about an evolution that was occurring in terms of
 14 people's awareness of external flame spread issues,
 15 people's awareness of the problem with the use of
 16 combustible materials, does the fact that this is now
 17 September 2014 affect what you were saying yesterday
 18 about what a reasonably competent fire engineer should
 19 know?
 20 A. Yes, so by then, things were, let's say, noisier than
 21 they were in 2013, okay, about insulation particularly.
 22 The BCA note was issued --
 23 Q. That was June 2014.
 24 A. Yes, and that group of people had decided on different
 25 ways of resolving external wall problems. I don't want

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1 it taken that I agree with their proposition, but that
 2 was their proposition, and that guidance note was
 3 circulating in industry.
 4 You know, I struggle to understand, because Exova
 5 Warringtonfire were cited in that note as being
 6 a company that one could go to for these so-called
 7 desktop assessments -- I don't know if we're allowed
 8 to -- can we see that?
 9 Q. BCA Technical Guidance Note 18?
 10 A. Yes. I don't know. I mean --
 11 Q. Of course you can see it, and we'll find the reference.
 12 A. I don't need to -- but, you know --
 13 Q. No, no, we'll find the reference.
 14 A. So I think that guidance has been issued, it's
 15 circulating widely. I just wish I knew all the dates.
 16 Has the Lacrosse fire happened by now? Certainly --
 17 anyway, so there's more noise in the industry and more
 18 and more use of materials going on in the industry at
 19 this time.
 20 Q. So I think the Lacrosse fire is November 2014.
 21 A. I think it is too.
 22 Q. But I'm just going to check my notes on that in
 23 a minute.
 24 We can go to BCA Technical Guidance Note 18,
 25 {CEP00057294}.

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1 A. Yes. If we could just scroll down to when it gets to
 2 options, please.
 3 Q. Yes, I think that's page 2 {CEP00057294/2} of this
 4 guidance.
 5 A. Yes, option 3, please.
 6 Q. Yes.
 7 A. Okay.
 8 Q. Yes, so there it says:
 9 "If no actual fire test data exists for a particular
 10 system, the client may instead submit a desktop study
 11 report from a suitable independent UKAS accredited
 12 testing body (BRE, Chiltern Fire or Warrington Fire
 13 [that's Exova Warringtonfire]) stating whether, in their
 14 opinion, BR135 criteria ..."
 15 So what you are saying is, according to this
 16 guidance note, there are only three independent UKAS
 17 accredited bodies that can do desktop assessments.
 18 A. At that point.
 19 Q. And this is the guidance, isn't it, that introduces the
 20 idea of a desktop report to the industry?
 21 A. Yes, and you might say it's a tacit acknowledgement
 22 regarding the insulation, you know, the use of
 23 insulation --
 24 Q. Yes.
 25 A. -- that is not of a material of limited combustibility.

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1 Q. So you would have expected a reasonably competent fire
 2 engineer to have been aware of this guidance?
 3 A. Yes.
 4 Q. And I think what you're saying is particularly if you're
 5 in Exova to have been aware of it.
 6 A. Yes.
 7 Q. Just going back to those emails that were exchanged
 8 between Mr Ashton and the team, do you think that it
 9 also ought to have been incumbent on him to have asked
 10 the basis on which the compliance was being achieved, ie
 11 were they going to follow ADB in paragraphs 12.6 to
 12 12.9, or were they followed the alternative route
 13 canvassed in section 12.5.? Do you think he should have
 14 clarified that with the design team?
 15 A. I think it should have been in his report anyway, sorry
 16 to be annoying, okay, but at that point the insulation's
 17 not compliant, the cavity barriers are not compliant,
 18 it's absolutely time to ask: how is this external wall
 19 being assessed?
 20 Q. Yes.
 21 A. Yes.
 22 Q. Yes.
 23 A. How you might phrase that, you know, I don't know, but
 24 it is time to now check and ask.
 25 MS GRANGE: Yes.

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1 Mr Chairman, I now want to turn to the March 2015
 2 emails.
 3 SIR MARTIN MOORE-BICK: Yes.
 4 MS GRANGE: We could break now.
 5 SIR MARTIN MOORE-BICK: Would that suit you?
 6 MS GRANGE: It would suit me just fine. I would rather do
 7 that in one run than have to start it and then break.
 8 SIR MARTIN MOORE-BICK: Yes, all right.
 9 Well, we're going to take a break now, I think a bit
 10 earlier than usual, but it's a convenient point. So we
 11 will come back at 11.30, and please no talking while
 12 you're out of the room. All right?
 13 THE WITNESS: I won't, no, thank you.
 14 SIR MARTIN MOORE-BICK: Thank you very much.
 15 (Pause)
 16 How are we going along, Ms Grange?
 17 MS GRANGE: We're doing well, yes.
 18 SIR MARTIN MOORE-BICK: All right. 11.30, then, please.
 19 (11.11 am)
 20 (A short break)
 21 (11.30 am)
 22 SIR MARTIN MOORE-BICK: Right, ready to carry on?
 23 THE WITNESS: Yes.
 24 SIR MARTIN MOORE-BICK: Good, thank you.
 25 Yes, Ms Grange.

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1 MS GRANGE: Thank you.
 2 Just in terms of dates, it's right that the Lacrosse
 3 fire was November 2014.
 4 A. That's later, yes.
 5 Q. Just for the chronology -- because I know we're coming
 6 to March 2015 next -- the Marina Torch fire in Dubai was
 7 in February 2015.
 8 A. Yes.
 9 Q. So now I want to turn to the emails that were exchanged
 10 in March 2015 --
 11 A. Yes.
 12 Q. -- between Mr Crawford and Studio E. If we turn to
 13 {SEA00013049}. I want to look at the final email on the
 14 first page for the moment, going over into the second
 15 page.
 16 A. Yes.
 17 Q. So Neil Crawford, 31 March 2015, says, "Hi Terry", then
 18 if we go to the next page {SEA00013049/2}:
 19 "Can you comment on the history of this item -
 20 please see correspondence below as it is not clear to me
 21 why this item is causing such a difference in
 22 interpretation - can't see anything that seems to
 23 reference it in the fire strategy."
 24 He's forwarded correspondence below which was this
 25 debate that was going on between building control and

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1 other members of the design team about whether a cavity
 2 barrier was required or a 120-minute firestop in the
 3 rainscreen.
 4 A. Yes.
 5 Q. So that's Mr Crawford asking for Terry Ashton's comment
 6 on this item.
 7 A. Yes.
 8 Q. If we go then over to the bottom of page 1,
 9 {SEA00013049/1}, Mr Ashton responds the same day:
 10 "Neil
 11 "This isn't something that would necessarily form
 12 part of a fire safety strategy for a building.
 13 Therefore, it would not have been dealt with in the fire
 14 safety strategy for this buildings (sic). I agree with
 15 Ben Kay. I believe that a cavity barrier is all that is
 16 required in this application. Even if we were to agree
 17 with RBKC, it is difficult to see how a fire-stop would
 18 stay in place in the event of a fire where external
 19 flaming occurred as this would cause the zinc cladding
 20 to fail."
 21 A. Yes.
 22 Q. So that's his response.
 23 Now, you say in your written report that Mr Ashton
 24 is substantially wrong to say that cavity barriers isn't
 25 something that would necessarily form part of a fire

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1 safety strategy.
 2 A. Yes.
 3 Q. Can you explain to us exactly why you say that?
 4 A. Well, I think this correspondence shows exactly the
 5 problem with the fire safety engineer not making clear
 6 minimum requirements, as, you know, this concept of
 7 reasonably competent fire safety engineering. And the
 8 important point is another year has passed and the
 9 design team are still confused, and now they've drawn in
 10 the RBKC as well --
 11 Q. Yes.
 12 A. -- to try -- everyone is trying to resolve a confusion.
 13 Q. Yes.
 14 A. And, again, another year later, it needs a competent
 15 person, with experience of fire safety engineering
 16 legislation and fire safety engineering, you know,
 17 behaviour of materials and construction forms, to give
 18 that team some advice.
 19 Q. So just to be clear, what you're saying, I think, is
 20 that the B3 and B4 sections together of a detailed
 21 fire strategy should have answered these questions that
 22 they were asking?
 23 A. Yes, because we now see entering into the narrative here
 24 a confusion about the difference between a firestop and
 25 a cavity barrier, and the need for someone who

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1 understands that fully , which is the fire safety
 2 engineer's job , to explain what those two things are,
 3 what they're for , and where they needed to go, or not,
 4 on the Grenfell project.
 5 Q. Again, is your answer the same in terms of what you
 6 would have expected Mr Ashton to have done about the
 7 fire safety strategy at this point? I think earlier you
 8 said at the very least he should be writing saying,
 9 "It's not complete, it needs to be completed, do you
 10 want me to do this".
 11 A. Yes, as an absolute minimum.
 12 Q. And you think some fire safety engineers may have
 13 decided, "Actually, I'm going to write the strategy now
 14 on the back of this"?
 15 A. You know, like, honestly, at this point, with the
 16 confusion, the most important thing now in the email is
 17 to give accurate advice to the design team.
 18 Q. Yes.
 19 A. Okay? Having a detailed fire safety strategy on the
 20 record is second.
 21 Q. Yes.
 22 A. Okay? Because Exova are now in a position where the
 23 design team are confused, they haven't set out what's
 24 needed in their report and they need to deal with that
 25 matter arising in the email correspondence.

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1 Q. Yes.
 2 Now, we can see that Mr Ashton is saying later in
 3 that that:
 4 "... it is difficult to see how a fire-stop would
 5 stay in place in the event of a fire where external
 6 flaming occurred as this would cause the zinc cladding
 7 to fail."
 8 So he is stating that the zinc cladding can fail ;
 9 however, is it right that it's your view that he wrongly
 10 offers no alternative solution to demonstrate that the
 11 external wall construction still meets the functional
 12 requirement of regulation B3(4) in terms of internal
 13 fire spread?
 14 A. Yes.
 15 Q. Given that the zinc cladding had been changed to
 16 aluminium cladding by this time, do you find it
 17 surprising that Mr Ashton is referring to zinc cladding
 18 in this exchange?
 19 A. Do I find it surprising ...
 20 Q. Perhaps a better way of putting this is: ought he to
 21 have taken note of the email from Neil Crawford to
 22 John Hoban further down the chain which refers to the
 23 new external rainscreen aluminium cassettes?
 24 A. Yes.
 25 Q. So would you have expected him to have read the full

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1 chain and picked up -- I'll show you where it is in
 2 a moment --
 3 A. Yes.
 4 Q. -- the fact they're referring now to aluminium?
 5 A. Yes, because he was asked -- I think if we can scroll
 6 down to Neil Crawford's original query of Terry.
 7 Q. Yes, so that's at the bottom of page 1:
 8 "Can you comment on the history of this item ..."
 9 A. Yes, so comment on the history of the item means you
 10 need to open up the email and read the history of the
 11 item.
 12 Q. Yes, "please see correspondence below", and then I think
 13 if we look on page 4 {SEA00013049/4}, that's where
 14 I think we see an email from Neil Crawford to John Hoban
 15 in the middle of that page dated 27 March 2015 where he
 16 says:
 17 "There has been a lot of conversation on site about
 18 the cavity barrier requirements ..."
 19 Then in the second line, he is saying:
 20 "... between the existing concrete external wall
 21 panels and the new external rain screen aluminium
 22 cassettes."
 23 A. Yes.
 24 Q. So, just to be clear, are you saying that a reasonably
 25 competent fire engineer reading this correspondence

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1 ought to have picked up that what they're now referring
 2 to, contrary to what was shown on the drawings that
 3 we've seen in September 2014, was aluminium cassettes?
 4 A. Yes, but I don't want to overstate that change. Okay?
 5 The primary issue here is a lack of understanding about
 6 the difference between a firestop and a cavity barrier.
 7 A firestop is inside the building; a cavity barrier is,
 8 you know, in the external wall.
 9 Q. Yes.
 10 A. And the ongoing confusion about which one is required
 11 and its performance rating. There's still the problem
 12 of the insulation being Celotex. I don't want to say
 13 that -- you know, I don't want to say that I would
 14 immediately have expected Terry Ashton to have noticed
 15 aluminium and to do something else on that particular
 16 day.
 17 Q. Okay, I understand.
 18 A. I'm trying to be fair and only focus on the problem in
 19 hand, which is incorrect reference to firestopping,
 20 incorrect reference to where cavity barriers go, and
 21 a non-compliant insulation.
 22 Q. Yes.
 23 Going back to Mr Ashton's response, if we can look
 24 at that again on page 1 {SEA00013049/1}, he's talking
 25 about how he expects the cladding will perform.

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1 A. Yes.
 2 Q. He says in the last couple of lines :
 3 "... it is difficult to see how a fire-stop would
 4 stay in place in the event of a fire where external
 5 flaming occurred as this would cause the zinc cladding
 6 to fail ."
 7 A. Yes.
 8 Q. Now, would you expect a reasonably competent
 9 fire engineer to bring their understanding of that, ie
 10 the potential for the zinc cladding to fail where
 11 external flaming occurred, to the attention of the
 12 building control officer?
 13 A. I think I'm going to say no. It would be better if they
 14 did. I can imagine that that would not happen, because
 15 you're really now dealing with a design team problem.
 16 The building control officer is actually on this chain
 17 as well.
 18 Q. Yes, he's further down the chain.
 19 A. I know he's further down, but I don't want to -- I think
 20 it would be unreasonable if I said that he should have,
 21 you know, kind of called the building control officer .
 22 Q. I understand.
 23 Then we can see, just to complete the story, at the
 24 top of the page Neil Crawford responds back to
 25 Terry Ashton:

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1 "Thanks this was my point as well - metal cladding
 2 always burns and falls off, hence fire stopping is
 3 usually just to the back of the cladding line. Thanks
 4 for this confirmation anyway."
 5 A. Yes.
 6 Q. Just to be clear, in terms of the substance of the
 7 advice that was being given, I think you agree that it
 8 was a cavity barrier required in that location --
 9 A. Yes.
 10 Q. -- not a firestop .
 11 A. Correct.
 12 Q. And that's if you look at diagram 33.
 13 A. Yes.
 14 Q. What do you say to the point, though, that diagram 33 --
 15 it was a point made by Ms Menzies, I think, when she
 16 gave evidence -- is perhaps more suggestive of
 17 a traditional masonry construction?
 18 A. Yes, it is, yes.
 19 Q. Therefore, when you come to a rainscreen arrangement --
 20 A. Yes.
 21 Q. -- you perhaps don't apply it literally, because your
 22 thinking is slightly different about how a rainscreen
 23 might behave in fire .
 24 A. So I don't know about not applying it, but certainly,
 25 you know, if -- remember, we looked at a drawing

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1 earlier, there's lots of lines, dotted lines, hashed
 2 lines, it's much more complex than the diagram in the
 3 Approved Document B. So I would say it's going to
 4 require more thought.
 5 Q. Yes.
 6 A. And for me, I would absolutely be calling an architect
 7 at that point, because I would need to understand how,
 8 with the complexity of Grenfell Tower, you could end up
 9 with something that achieved the same simplicity as set
 10 out in Approved Document B. Do you know what I mean?
 11 So I couldn't ignore it, but I would understand it
 12 might look slightly different. Okay?
 13 Q. Yes, I understand.
 14 A. Rainscreen cladding was very prevalent by then, so
 15 preferably a new diagram would have been put into
 16 Approved Document B, that would be my preference.
 17 Q. Just on that point again on cavity barriers, at Phase 1
 18 when you gave evidence --
 19 A. Yes.
 20 Q. -- you expressed some reservations about the
 21 effectiveness of cavity barriers --
 22 A. Yes.
 23 Q. -- in a rainscreen system once the rainscreen is on
 24 fire .
 25 A. Yes.

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1 Q. Do you remember, we looked at the diagrams of the
 2 rainscreen warping, et cetera?
 3 A. Yes.
 4 Q. Can I just be clear with you: what is your evidence
 5 about the importance of cavity barriers around windows
 6 in a rainscreen system? Is it your view that
 7 cavity barriers can be effective and are effective
 8 around windows?
 9 A. Sorry, are you asking me this in the context of in
 10 Exova's evidence or generally?
 11 Q. Well, Exova have suggested in their opening that
 12 a number of experts at Phase 1, including yourself, made
 13 the point that cavity barriers were effectively
 14 redundant in any event because of the way the
 15 fire spread.
 16 A. Because of the terrible material used for the external
 17 surface.
 18 Q. Yes.
 19 A. That's the problem.
 20 Q. Yes.
 21 A. Not some theoretical proposition about cavity barriers
 22 around the windows.
 23 Q. Exactly. That's the point I'm just wanting to tease out
 24 here.
 25 A. So all of this -- it's a bit hard to talk about, I do

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1 have to say, it's quite upsetting. But all of this is
 2 about the external surface and the insulation and the
 3 cavity barriers. It's just theoretical, and I just find
 4 it slightly deflecting to start to really hone in on one
 5 thing or the other. The three together are required to
 6 provide the performance.
 7 Q. Yes.
 8 A. Okay? So I don't want to even get into: if the
 9 cavity barriers had been there, could something else
 10 have happened? The cavity barriers were not there, the
 11 insulation was not compliant, and the external surface
 12 was highly combustible, and there's nothing else to say,
 13 in my mind.
 14 Q. I understand.
 15 Just one more question.
 16 A. Yes.
 17 Q. You are clear, are you, that cavity barriers can be
 18 effective round windows even in a rainscreen system?
 19 A. No, I've never said that, and I'm not going to say that
 20 now.
 21 Q. I see.
 22 A. Okay? But I don't want that to be taken as a reasonable
 23 excuse never to have considered them in the first place.
 24 Q. I understand.
 25 A. Okay? I don't want to imply that.

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1 Q. Yes.
 2 Now, just some questions now about
 3 building control --
 4 A. Yes.
 5 Q. -- and what happened with building control later in the
 6 project.
 7 Now, you're aware, I think, that it was Studio E
 8 that had a lead role on building control approval and
 9 the building control approval process.
 10 A. Yes, on behalf of Rydon, as I understand it.
 11 Q. Would it be normal for a fire consultant, a fire
 12 engineer, to liaise directly with a building control
 13 officer, or would they normally do that through the
 14 design team, in your experience?
 15 A. Yes, so normally you work in partnership, you know, with
 16 the design team, as you go through the approvals
 17 process. If you get worried about something or if you
 18 have something very complex and you feel the need to,
 19 you know, maybe have a special meeting, do something
 20 else, I suppose it's just professional courtesy that,
 21 you know, you would work with the company and let them
 22 know that's what you wanted to do, and typically
 23 together, then, you would approach building control, or
 24 the architect or the contractor may say, "You keep going
 25 on your own". So, again, it's about asking, you know,

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1 and agreeing the plan.
 2 Q. Yes. Now, we know early in the project that Exova did
 3 have some direct contact with building control,
 4 for example Exova sent issue 1 of their outline fire
 5 safety strategy directly to building control.
 6 A. Yes.
 7 Q. Just for the transcript, the reference is {SEA00006443}
 8 where Mr Ashton did that.
 9 Would that be normal practice on a project like
 10 this, for a fire engineer to send their outline fire
 11 safety strategy direct to building control?
 12 A. Do you mean not telling anyone before they did it, or
 13 just that it was a ... I mean, I don't recognise that as
 14 being a negative thing.
 15 Q. No, fine.
 16 A. You know, once you're keeping everyone else in the loop.
 17 Q. I just want to then look at some more September 2014
 18 emails, some more correspondence between Neil Crawford,
 19 Terry Ashton and John Hoban. If we look at
 20 {EX000000454}, this is an email from Neil Crawford to
 21 Terry Ashton attaching revised fire strategy drawings,
 22 and then saying:
 23 "Terry
 24 "Please see attached revised Fire Strategy plans for
 25 Grenfell Tower Regeneration Project."

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1 At this point, I think it might be helpful to
 2 distinguish between a number of things.
 3 Is it right that fire strategy drawings, as they're
 4 referred to, say, in this email, are different from the
 5 fire safety strategy that Exova had been writing?
 6 A. The report, yes.
 7 Q. Yes.
 8 A. So a report is a narrative; the drawings are meant to
 9 show the location of the fire safety measures.
 10 Q. Then there are a number of drawings attached. These,
 11 just to be clear, show the first four floors of the
 12 tower and a typical residential floor in those drawings.
 13 Then Mr Ashton replies ten days later, if we go to
 14 {EX000001441}, on 29 September. He says this, at the
 15 top of that page:
 16 "Neil
 17 "Apologies for the late response (I came back on
 18 Monday after a week away and have been catching up!). I
 19 think this opening is a relic from the past and can be
 20 blocked up."
 21 Sorry, I should have read from the top of page 2
 22 {EX000001441/2}, apologies. If we go to the top of
 23 page 2, he says, 29 September:
 24 "Sorry for the lateness ..."
 25 Then he says this:

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1 "The proposed changes highlighted in your email are
2 acceptable from a fire strategy point of view."
3 Then he gives a little bit more detail.
4 Now, pausing there, just assume this was all that
5 was going on in September, and assume the 18 September
6 exchanges about the external wall hadn't happened,
7 should these kind of exchanges, in your view, have
8 prompted Mr Ashton to think about going back and
9 revising the fire strategy report that he had done?
10 A. Yes.
11 Q. So, yes, your view is that should have happened?
12 A. Yes, because things change throughout construction.
13 Q. So, again, is your answer the same: that at a minimum,
14 you would expect a reasonably competent fire engineer to
15 clarify whether or not he ought to do that, given he can
16 see that changes are occurring?
17 A. Yes, and so then you might agree with your client,
18 "Let's wait a few months and sweep up all the changes in
19 one final issue of your report on X date".
20 So I'm not implying there's just this constant
21 re-issuing of the fire strategy. Typically you give
22 your advice, and you agree a final sweep-up and a final
23 version.
24 Q. Yes.
25 If we look at what you say, I think, about these

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1 exchanges in your report at page 255
2 {BLARP20000017/255}, paragraph 8.2.10, you say this:
3 "However, even though substantial changes had been
4 made to the proposed layout of the building, the review
5 of a new set of design drawings in September 2014 did
6 not lead Mr Ashton to communicating to Studio E, Rydon
7 or KCTMO, that their fire strategy report needed to be
8 updated to match the layouts he had just commented
9 upon."
10 A. Yes.
11 Q. "Instead Mr Ashton simply stated in his e-mail that 'The
12 proposed changes highlighted in your email are
13 acceptable from a fire strategy point of view.'"
14 A. Yes.
15 Q. Now, just to follow forward with what happened next on
16 this string, if we go to {RBK00002974}, this is
17 a message then from Neil Crawford to John Hoban, the
18 building control officer, on 18 November 2014 and he is
19 attaching a number of plans, et cetera. If we look in
20 the email -- can we just pan out, because I need to find
21 the ...
22 (Pause)
23 I think in this email somewhere he attaches the
24 Exova rev B changes.
25 (Pause)

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1 I can't see that in that email. Sorry, that might
2 be a wrong reference.
3 There's an email -- perhaps I can just read out to
4 you what happens -- that then occurs where Neil Crawford
5 forwards Mr Ashton's reply to building control and says
6 {RBK00002974/2}:
7 "Please see attached the current Exova Study which
8 was written prior to the Fire Strategy Rev B changes and
9 also attached the correspondence with Exova relating to
10 the Rev B changes which we will modify accordingly."
11 Do you see that there?
12 A. Yes.
13 Q. This is back on 29 September 2014, Neil Crawford sent
14 those exchanges to John Hoban.
15 A. Okay, and so Neil is referring to the drawing, rev B.
16 Q. Yes.
17 A. Yes, okay.
18 Q. And it's to ask you a little bit about those final few
19 words he uses. So he says, "which we will modify
20 accordingly".
21 Now, does it look like from these exchanges that
22 Studio E are acknowledging that the fire strategy is out
23 of date and offering themselves to modify the fire
24 safety strategy?
25 A. No.

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1 Q. Can you explain what's happening instead?
2 A. I see the architect offering to update their drawings.
3 Q. I see. And that would be normal practice, would it?
4 A. You have to update the drawings until the last day.
5 Q. So that doesn't suggest, in your view -- is this
6 right? -- that somehow Studio E themselves are taking on
7 responsibility for updating the fire strategy
8 themselves?
9 A. Absolutely not. It does show an understanding, though,
10 doesn't it, that there's a difference in completeness
11 or, you know, a reflection of where the detailed design
12 actually is at this stage during construction.
13 Q. Yes, yes.
14 A. Okay? So things are out of sync.
15 Q. The key point I wanted to put to you is whether this is
16 somehow Studio E assuming responsibility --
17 A. No, no, no.
18 Q. -- for the fire strategy?
19 A. No, I think that's an unfair allegation, actually.
20 That's not what that email says to me.
21 Q. Just one further email on this topic and then I'll move
22 to a different topic.
23 A little later, if we go to {EX000001441} and look
24 at the foot of page 1, Mr Crawford's response back to
25 Mr Ashton is:

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1 "Hi Terry
 2 "Will take this forward for Building Control
 3 discussion regarding the Rev B modifications."
 4 A. Yes.
 5 Q. So, again, same question: do you see that as somehow
 6 Studio E assuming responsibility for the fire strategy?
 7 A. No. Again, they're talking about their drawings.
 8 I mean, what I would wonder is why neither Mr Crawford
 9 nor Mr Ashton, in this exchange, one of them doesn't
 10 say, "When are we updating the fire strategy to reflect
 11 the changes, just as we are updating the drawings to
 12 reflect the changes", because both were required. And
 13 again, perfectly normal professional practice to do
 14 both.
 15 Q. Yes, I understand.
 16 I think you may have heard Ms Menzies give evidence
 17 that, in her opinion, later than this, Mr Paul Hanson
 18 she felt wrongly took it upon himself effectively to
 19 re-design the fire strategy in terms of the smoke
 20 control system. So in her report, Ms Menzies is
 21 critical of how much input Mr Hanson put into the design
 22 of that system, which she felt overstepped a boundary.
 23 Again, a similar question: do you see that as
 24 somehow building control themselves taking on
 25 responsibility for the fire strategy?

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1 A. No, I don't, but building control always have to be very
 2 careful about any advice they give, because once they
 3 step over that line, they enter into CDM territory and
 4 take on design responsibility, and it's a very delicate
 5 line they have to walk, based on my own experience of
 6 working with building control officers.
 7 Q. Yes.
 8 A. I don't particularly want to criticise Paul Hanson for
 9 doing that. I've some sympathy with what he was trying
 10 to achieve.
 11 Q. Yes.
 12 A. But, yes, it is dangerous for building control officers
 13 and approved inspectors when they start to stray into
 14 giving advice or making changes, and we would raise
 15 concerns when that happens on our projects, which it
 16 does.
 17 Q. Yes.
 18 Now, my penultimate main topic, CDM, just briefly,
 19 as it applies to Exova's work. I know Ms Grogan is
 20 going to be asking you about your CDM report.
 21 A. Okay, yes.
 22 Q. In chapter 14 of the first version of your report
 23 dealing with the fire engineer's work, you expressed the
 24 view that Exova was a designer for the purposes of the
 25 CDM Regulations because a fire safety strategy is

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1 an important performance specification in the design
 2 process?
 3 A. Yes.
 4 Q. Now, does that remain your view?
 5 A. Yes.
 6 Q. I think you suggest that there were three types of
 7 information that, pursuant to regulation 18(2) of the
 8 CDM Regs 2007, Exova should have provided to the CDM
 9 co-ordinator, principal designer, for inclusion in the
 10 health and safety file.
 11 A. Yes.
 12 Q. That was in the first version of your report.
 13 What I want to ask you is: that chapter doesn't
 14 feature in the next version of your report, so we don't
 15 get the same comment later, but we want to be clear
 16 whether that's still your view, that they are designers?
 17 A. I need to see where I wrote that in the first version
 18 and I don't have it with me. I'm afraid to answer that
 19 question.
 20 Q. I will bring it up. This is {BLARP20000003/249}. It's
 21 paragraph 14.1.6 and following where you say:
 22 "First, I consider Exova to be a designer
 23 because ..."
 24 Then you have the definition of a designer under the
 25 2007 regs.

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1 A. Yes, yes.
 2 Q. And then you say, "With 'design' defined as 'includes
 3 drawings', et cetera, and then you say, "Regulation 2 of
 4 CDM 2015 states", and you set out the definitions there
 5 of "design" and "designer".
 6 A. Yes.
 7 Q. Below that, 14.1.10, you say:
 8 "I consider the fire safety strategy to be
 9 a substantially important performance specification in
 10 the design process, and so a fire safety engineer is
 11 a designer."
 12 A. Yes.
 13 Q. Yes.
 14 A. That remains my view. I now need to be -- I just --
 15 I have my own version of report comparisons.
 16 Q. Yes.
 17 A. And I need to go back and check.
 18 Q. I see.
 19 A. You're saying it's gone, because --
 20 Q. That's not a criticism, it was just we wanted to check.
 21 A. Oh, no, I know that, but, you know, I want to do
 22 a comparison and, if it is gone, I need to put it back
 23 in.
 24 Q. I see, okay.
 25 Now, the Exova witnesses were asked about their

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1 understanding of the CDM Regulations and whether they
 2 would have been classified as designers.
 3 Let's just look briefly at what Mr Ashton said.
 4 This is {Day16/120:1-24}.
 5 So I ask him the question at the top of that page:
 6 "Question: Can you also explain why there is no
 7 mention of the CDM Regulations anywhere in this
 8 fee proposal, the Construction (Design and Management)
 9 Regulations?
 10 "Answer: We have traditionally taken the view that
 11 we're not designers as defined under the
 12 CDM Regulations. That is changing, I think, in the
 13 light of the fact that we sometimes design smoke extract
 14 systems and so possibly we need to look at that.
 15 "Undoubtedly, if we were still employed at this
 16 stage of the RIBA series of works, then we would be in
 17 touch with the CDM Regulations, so -- with the design
 18 approved to ensure that the CDM Regulations are met. So
 19 maybe that's something else that we would need to put in
 20 our documentation.
 21 "Question: Can you expand on why it is that Exova's
 22 taken the view that they're not designers, for example
 23 if they're preparing a fire strategy for a building?
 24 "Answer: Well, because when we prepare
 25 a fire strategy for a building, in most cases we're

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1 referring to published documentation. A designer would
 2 do something unique or original.
 3 "So, as I say, if we were given the task of
 4 designing a smoke extract system for a shopping centre,
 5 then we could be deemed to be designers."
 6 Do you see that there?
 7 A. Yes.
 8 Q. I just want to ask whether you agree with that?
 9 A. No.
 10 Q. And you maintain your view as expressed in the sections
 11 of the report that I just took you to?
 12 A. I don't think the CDM Regulation says that a designer
 13 does something unique or unusual.
 14 Q. In your view, would a reasonably competent engineer or
 15 engineering firm have appreciated that they were
 16 designers under the CDM Regs at the time they were
 17 working on the Grenfell project?
 18 A. Yes.
 19 Q. Okay.
 20 Now, my final substantive topic is about disabled
 21 and mobility-impaired persons. If we look at --
 22 actually, this is one of those A3 parts of your report,
 23 so I put up that warning.
 24 A. Yes.
 25 Q. If we go to page 129 {BLARP20000017/129} of your report,

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1 table 5-7 at the top.
 2 A. Yes. Can I just be clear that in Module 3 I'm doing
 3 extensive work about all the different types of people
 4 that need assistance --
 5 Q. Yes.
 6 A. -- in the event of a fire. I've not finished that work,
 7 and I don't want to give any final opinions on this
 8 subject until I have finished that work.
 9 Q. I understand.
 10 A. Okay? Because it's not something I focused on very
 11 heavily in this Module 1.
 12 Q. I understand.
 13 I mean, the key point I'm going to want to put to
 14 you is that when Exova's witnesses were taken to
 15 a number of passages in Approved Document B which deal
 16 with mobility-impaired persons and other similar topics,
 17 the answers that they gave were: well, Approved
 18 Document B doesn't require us to do anything concrete,
 19 it doesn't make any positive suggestions that we have to
 20 do anything different as a result of those initial
 21 paragraphs.
 22 A. Yes.
 23 Q. So that's why we don't see it in their existing or
 24 refurbishment fire strategies.
 25 A. Okay.

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1 Q. It's that point I want to ask you about.
 2 A. Okay, understood, yes.
 3 Q. Yes.
 4 So just going back to table 5-7 in your report,
 5 I want to deal with paragraph 3.3.1 of the existing
 6 strategy. Sorry, can I just have a look on the
 7 left-hand side, because I need to orientate myself.
 8 Yes, so if we then go to section 9 across the page
 9 again.
 10 (Pause)
 11 Somewhere in here you make the comment that it
 12 doesn't provide any information on disabled persons or
 13 any other occupant requiring assistance to escape. At
 14 the end of the second paragraph in that box, yes.
 15 A. Yes, I can see it, yes.
 16 Q. Have you got that clearly?
 17 A. Yes, I can see it on the paper version.
 18 Q. Yes.
 19 So in that section, Ms Cooney's dealing with
 20 evacuation strategies based on defined principles,
 21 et cetera:
 22 "Using terms from BS 9999, Exova proceed to set out
 23 why a simultaneous evacuation is 'most appropriate' for
 24 Levels 1, 2 and 4. However, this does not provide any
 25 information on disabled persons or any other occupant

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1 requiring assistance to escape."
 2 Yes?
 3 If you look on page 180 {BLARP20000017/180} in
 4 table 6-11, box 8, this is instead where we're dealing
 5 with now the outline fire safety strategy for the
 6 refurbishment project, the first version of that. You
 7 state there that it provides an overview of means of
 8 escape arrangements for the nursery, et cetera.
 9 Then in the penultimate paragraph there, you say:
 10 "Exova do not state design requirements for travel
 11 distance, minimum escape route widths, calculations of
 12 number of occupants, minimum door sizes or provision of
 13 refuge spaces for disabled people."
 14 Do you see that there?
 15 A. Yes.
 16 Q. So what we can see is that in a number of places, both
 17 as regards the existing fire strategy and the
 18 refurbishment fire strategy, you are critical of Exova
 19 in terms of what information has been provided about the
 20 occupants requiring assistance to escape, their
 21 vulnerabilities; is that correct?
 22 A. Yes.
 23 Q. Now, in her evidence, if I take you to Dr Barker's
 24 evidence first, if we go to {Day15/142:22}. This is
 25 Mr Millett asking Dr Barker, and he says at the very

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1 bottom there, line 22:
 2 "Question: Let me see if I can put the question
 3 a bit less delicately and a bit more bluntly: did it
 4 occur to you when you saw Ms Cooney's report to think to
 5 yourself: given that we're dealing with residents in
 6 a high-rise block, and we've got to advise the TMO on
 7 the fire safety management plan for the occupants, we
 8 should look at how we're going to get people with
 9 mobility issues out?
 10 "Answer: No, I didn't consider that.
 11 "Question: Can you help us understand why that is?
 12 "Answer: Because, again, if they did have mobility
 13 issues, then maybe Grenfell Tower wasn't the best place
 14 for them to live. To reiterate, Approved Document B
 15 does not make any provisions in residential buildings
 16 for people with mobility impairments."
 17 Now, pausing there, and before I ask you about this,
 18 I also want to show you what Mr Ashton said on this same
 19 topic. If we go to {Day17/149:14}, we're discussing
 20 a similar topic here, and if we pick it up at line 14,
 21 I say:
 22 "Do you agree that there is no requirement specified
 23 anywhere here in this report for the responsible person
 24 regarding mobility-impaired persons?"
 25 So I'm putting to him that there is nothing

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1 specified anywhere in his report for the responsible
 2 person regarding mobility-impaired persons, and he says
 3 this:
 4 "Well, that's a difficult one. I'm not saying it's
 5 a difficult question for me. There are no requirements
 6 to put in place provisions for facilities for disabled
 7 persons in residential buildings. They are excluded
 8 from the requirements for other buildings simply,
 9 I think, on the basis that you can't manage it in this
 10 type of building, and that persons with disabilities, if
 11 they're not in the fire affected apartment, are
 12 perfectly safe to stay where they are."
 13 Do you see that there?
 14 A. Yes.
 15 Q. Then if we go on to the next page, I say {Day17/151:1}:
 16 "Question: Does that mean that, in the preparation
 17 of these reports, you didn't consider the means of
 18 escape for those with disabilities?
 19 "Answer: No, but the law didn't require us to.
 20 "Question: At this time, were you aware that
 21 Approved Document B requires consideration of means of
 22 escape for those with a disability?
 23 "Answer: I think that that was a general statement
 24 in the approved document, but it didn't apply
 25 specifically to apartment blocks, because there are no

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1 provisions for apartment blocks in the guidance."
 2 Then we go to that, and I take him to that, and
 3 I take him to a number of references within that. He
 4 says he is aware of the general cross-reference, at
 5 line 22.
 6 If we go over the next page, I'm taking him to
 7 a number of parts of Approved Document B. His answer at
 8 line 11 {Day17/151:11}, he says:
 9 "I absolutely agree with that sentiment, but I go
 10 back to the point I made: there are no recommendations
 11 in the documentation issued by Government departments or
 12 others as to what you do about means of escape for
 13 disabled persons in residential buildings."
 14 Then at line 17 he said:
 15 "You might say, well, there should be. But the fact
 16 is there are not."
 17 Okay?
 18 So that was Dr Barker and Mr Ashton's evidence, and
 19 I want to ask you about whether they're right that there
 20 is no requirement within Approved Document B to make
 21 provision for those with mobility issues or other
 22 disabilities?
 23 A. That's a very long question.
 24 So, remember, Grenfell Tower has two uses: one is
 25 residential, one is non-residential, and so it would be

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1 helpful to go to Approved Document B, if we can,
 2 because --
 3 Q. I was going to take you to it next. So if we go
 4 {CLG00000173/12}, paragraph 0.13. I mean, there are
 5 a number of passages within ADB --
 6 A. Yes, could we go to inclusive design, 0.19 first,
 7 please?
 8 Q. Yes, that is on page 14 of this document
 9 {CLG00000173/14}. So at the bottom there of the
 10 left-hand column.
 11 A. Yes. Do you want me to ...
 12 Q. It says there:
 13 "The fire safety aspects of the Building Regulations
 14 are made for securing reasonable standards of health and
 15 safety of persons in and about buildings. This is
 16 intended to include all people, including people with
 17 disabilities."
 18 A. Yes.
 19 Q. "Part M of the Regulations, Access to and use of
 20 buildings, requires reasonable provision for access by
 21 people to buildings. Regardless of compliance with
 22 Building Regulations, there will also be obligations
 23 under the Disability Discrimination Act 1995 for service
 24 providers and employers to consider barriers created by
 25 physical features in buildings.

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1 "People, regardless of disability, age or gender,
 2 should be able to gain access to buildings and use their
 3 facilities, both as visitors and as people who live or
 4 work in them.
 5 "As such the fire safety measures incorporated into
 6 a building will need to take account of the needs of all
 7 those persons who may have access to the building. It is
 8 not appropriate, except in exceptional circumstances, to
 9 presume that certain groups of people will be excluded
 10 from a building because of its use."
 11 A. And then the sentence up on the top.
 12 Q. Yes, and then it says:
 13 "The provisions set out in this Approved Document
 14 are considered to be a reasonable standard for most
 15 buildings. However, there may be some people whose
 16 specific needs are not addressed. In some situations
 17 additional measures may be needed to accommodate these
 18 needs. This should be done on a case by case basis."
 19 A. Yes.
 20 Q. Now, with reference to that -- and I know there are
 21 other passages in the approved document which have
 22 a similar sentiment --
 23 A. Yes.
 24 Q. -- in your view, do you consider that a reasonably
 25 competent fire safety engineer should take those general

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1 paragraphs into account when preparing a fire safety
 2 strategy?
 3 A. I think we're required to do so.
 4 Q. Would you have expected Exova to have given guidance in
 5 both fire safety strategies, ie in the existing one and
 6 in the refurbishment one, on persons who may have
 7 required assistance to evacuate?
 8 A. Yes. So, remember, Grenfell Tower, we need to split it
 9 into two when we're thinking about this subject, okay?
 10 So for the lower floors, which are non-residential,
 11 there is guidance in Approved Document B very
 12 specifically about provisions for those uses.
 13 Q. Yes.
 14 A. Okay?
 15 Q. Including things like refuges?
 16 A. Refuges, et cetera.
 17 Q. Yes.
 18 A. Okay? So that's all set out.
 19 Q. Yes?
 20 A. So the lower floors, there was clear guidance available.
 21 The upper floors, which I think you might want me to
 22 focus on --
 23 Q. Yes.
 24 A. -- is a different matter, okay? And I don't know if
 25 we ... so it is correct that, when it comes to refuges,

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1 that is in the part of Approved Document B that excludes
 2 high-rise residential buildings.
 3 Q. Yes.
 4 A. Okay? So that is correct. When you get to the general
 5 after -- I think it's section 5 in B1. I don't know if
 6 we can go there, in Approved Document B? Can we --
 7 I just don't want to ad lib.
 8 Q. We'll just quickly find the page number for that.
 9 A. Is that okay? Because when we --
 10 Q. So section 5 in B1?
 11 A. In B1 of Approved Document B, which is for all buildings
 12 again, okay? Sorry, excuse me, all uses, excuse me.
 13 All uses. It draws in there this issue of
 14 mobility-impaired -- I just want to wait. I don't want
 15 to ad lib the text.
 16 Q. Actually, maybe have a look at page 18 {CLG00000173/18}.
 17 Is it under "Criteria for means of escape", B1.v?
 18 A. Oh, yes.
 19 Q. Is that what you're referring to?
 20 A. Let me just ...
 21 Q. There is a note at the bottom underneath a and b in that
 22 heading, "Criteria for means of escape", on the
 23 right-hand side?
 24 A. Oh, yes, thank you. So looking at B1.v:
 25 "Some people, for example those who use wheelchairs,

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1 may not be able to use stairways without assistance .
 2 For them evacuation involving the use of refuges on
 3 escape routes and either assistance down (or up)
 4 stairways or the use of suitable lifts will be
 5 necessary.”
 6 Q. Yes.
 7 A. Okay? So I am very clear in my own mind, there is no
 8 section in the Approved Document B for high-rise
 9 residential buildings that expressly asks for, you know,
 10 X and Y measure. So it doesn't say, "In a high-rise
 11 residential building, please put in refuges, please put
 12 in lifts ". Okay? I understand that, and I accept that.
 13 But it makes very clear that these are reasonable
 14 measures, and there are cases where the person doing --
 15 you know, the fire safety engineer needs to consider the
 16 occupancy profile and if these general provisions are
 17 relevant.
 18 Q. Yes.
 19 A. Okay?
 20 So on the lower non-residential floors, Exova did
 21 need to set out the published guidance, and on the upper
 22 floors, there were a few things that needed to be
 23 considered. Okay?
 24 Q. Yes.
 25 A. Because, remember, in the risk assessment for

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1 Grenfell Tower, it said there were evacuation lifts if
 2 people had a PEEP. Okay?
 3 Q. Yes.
 4 A. And I'm looking into all of that at the moment, okay?
 5 Q. I understand.
 6 A. So there is a complexity that requires attention, and
 7 careful attention, because if there are evacuation
 8 lifts, as a fire safety engineer, I need to understand
 9 that, why, are they safe to use, why have they been
 10 provided, what is the occupancy profile of this building
 11 that merited apparently the need for an evacuation lift
 12 and for potentially PEEPs? Okay?
 13 Q. Yes.
 14 A. I think that the inclusive design part of Approved
 15 Document B and other signals around lifts, not about
 16 refuges at the moment, is enough for a fire safety
 17 engineer to just raise the issue.
 18 Q. Yes.
 19 A. Okay?
 20 Q. Yes.
 21 A. Probably wouldn't want to go very much further on that
 22 point.
 23 Q. No, I --
 24 A. But I don't at all agree that there was nothing needed
 25 on the lower floors and there is no duty whatsoever to

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1 even consider the residential floors .
 2 Q. Just very specific to Exova's work, would you expect
 3 a reasonably competent fire engineer to have requested
 4 information from the TMO, from the client, about the
 5 occupancy profile of those in the tower?
 6 A. If I read in a fire risk assessment for a building,
 7 a high-rise residential building, that they had
 8 an evacuation lift, I would absolutely want to know why,
 9 and so I needed to ask about the occupancy profile.
 10 Q. Would that be limited to disabled issues or would any
 11 other characteristics of residents be in mind?
 12 A. I would prefer to talk about all the different
 13 characteristics in Module 3.
 14 Q. I understand.
 15 A. I'm just doing a lot of work on that at the moment.
 16 Q. It's really getting across the point about whether
 17 further information should have been requested. It's
 18 your evidence that it should have been; yes?
 19 A. Yes, because, as I said, the risk assessment says there
 20 is an evacuation lift, so you need to know why.
 21 Q. Would you have expected these issues about those
 22 requiring assistance to evacuate to have been addressed
 23 expressly in both the existing fire strategy and the
 24 refurbishment fire strategy?
 25 A. As a minimum for the non-residential floors .

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1 Q. Yes.
 2 Just help us, we talked a lot yesterday about the
 3 site visit; if a proper site visit had been done and
 4 someone had looked at the lift as part of that site
 5 visit, how obvious would it have been on that site visit
 6 that the lift was not a fully functioning firefighter
 7 lift, in the way that term is understood, and its --
 8 A. Oh, a firefighter lift, not an evacuation lift. Are we
 9 in a different subject?
 10 Q. No.
 11 A. Oh.
 12 Q. I'm really trying to discover from you how obvious it
 13 would have been to Exova if they had gone to site what
 14 the limitations were of the lift there that they had.
 15 A. Okay, so that would be difficult to observe on a quick
 16 walk-round. If it was an evacuation lift,
 17 British Standard 9999, for example, says the lift needs
 18 to be signed as such. Okay? It would be very difficult
 19 based on my experience as a fire safety engineer to
 20 stand outside a lift and work through, you know, the
 21 level of detail, for example, I've done in my Phase 1
 22 report. You need drawings, I would need to talk to,
 23 you know, other engineers.
 24 Q. So you don't think there might have been key signs in
 25 terms of physical signs about the lift that might have

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1 told you that it was or wasn't a certain standard of
 2 lift ?
 3 A. Well, if I had been told it was an evacuation lift
 4 before I went to site, I would want to see the sign in
 5 the building that says it's an evacuation lift .
 6 Q. Yes.
 7 A. Because you're meant to have a notice that it's there as
 8 a minimum.
 9 Q. Yes.
 10 SIR MARTIN MOORE-BICK: When Ms Grange refers to signs,
 11 I think what she really had in mind was physical
 12 indications .
 13 A. I think that would be very difficult . Others may say
 14 they should immediately notice, but I would find that
 15 a very difficult thing to do myself.
 16 MS GRANGE: I see, I was thinking about --
 17 A. Just on a quick tour, you couldn't do it .
 18 Q. Sorry, I think we're both talking over one another.
 19 A. Oh, sorry, excuse me, sorry.
 20 Q. I was thinking of, exactly, physical indicators, such as
 21 the hatch for firefighters inside the lift or other
 22 similar features .
 23 A. If you're doing a two-hour walk-around ...
 24 Q. I understand that about two hours, but I think your
 25 evidence yesterday was a reasonable time period for that

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1 visit would have been a day, is what I think you say.
 2 A. At least, yes, okay. So, sorry, do you mean if -- okay.
 3 Sometimes I get confused, because that didn't happen,
 4 and you ask me to talk about things that never happened,
 5 okay?
 6 Q. I know. I'm saying if a reasonably competent fire
 7 engineer had done a proper site visit and had taken the
 8 time that was necessary on that site visit, would they
 9 have been able to discover that it wasn't an evacuation
 10 lift .
 11 A. So if a fire safety engineer was going to check all the
 12 active safety measures, now you need to bring
 13 a checklist with you to site for visible features of the
 14 lift shaft doors, the buttons, the interiors, to try and
 15 work out if it is the evacuation lift / firefighting lift
 16 as it was categorised in the fire risk assessment.
 17 Q. Yes.
 18 A. I can't really speculate on -- you know, Exova didn't do
 19 that, so I can't speculate on what they might have done
 20 in something that they didn't do. I'm sorry, I just
 21 don't have that kind of brain.
 22 SIR MARTIN MOORE-BICK: Just tell me this: if you go to
 23 visit a building of this kind --
 24 A. Yes.
 25 SIR MARTIN MOORE-BICK: -- let's say even just for a couple

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1 of hours, I imagine you spend a bit of time in the
 2 lifts, don't you? You don't walk up and down all the
 3 stairs. Is that right?
 4 A. Yes.
 5 SIR MARTIN MOORE-BICK: So, I mean, you are actually in the
 6 lifts and you get a chance to see.
 7 A. Yes.
 8 SIR MARTIN MOORE-BICK: Anyway, you don't think that's
 9 enough to tip you off to whether it's one sort or
 10 another? It may not be, I don't know.
 11 A. You would hope so.
 12 SIR MARTIN MOORE-BICK: I don't think you're very confident,
 13 are you?
 14 A. I just ... if you're in the lift, I would hope that you
 15 would notice.
 16 SIR MARTIN MOORE-BICK: Well, what would you notice, if you
 17 noticed it at all?
 18 A. Do you mean if I was standing in the lift ?
 19 SIR MARTIN MOORE-BICK: Yes, if you were in the lift .
 20 A. Yes.
 21 SIR MARTIN MOORE-BICK: Now, of course, you might take the
 22 opportunity to chat to anyone who is with you doing the
 23 survey, so you might not --
 24 A. I may not look up.
 25 SIR MARTIN MOORE-BICK: Well, exactly.

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1 A. You know what I mean? I may not look up.
 2 Now, if you sent me to site and said, "Barbara,
 3 you're not to come back here without telling me if this
 4 is a firefighting lift or not", I'll have my checklist
 5 with me. So I don't want to, you know, overstretch --
 6 SIR MARTIN MOORE-BICK: All right. I think we have probably
 7 pursued that as far as we can, thank you.
 8 MS GRANGE: Just finally on this topic, I want to ask you if
 9 British Standard 9991:2011 might also be relevant to the
 10 question as to whether or not the evacuation of disabled
 11 occupants or occupants that require assistance to escape
 12 ought to have been considered.
 13 A. Yes.
 14 Q. Can I pull that up, this is {LFB00024106}.
 15 A. Yes.
 16 Q. This is that British Standard, "Fire safety in the
 17 design, management and use of residential buildings -
 18 Code of practice", and if we go within that to page 128
 19 {LFB00024106/128}, at 52 there, "Evacuation of disabled
 20 occupants or occupants that require assistance to
 21 escape", it says there:
 22 "Providing an accessible means of escape should be
 23 an integral part of fire safety management in all
 24 residential buildings. Fire safety management should
 25 take into account the full range of people who might use

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1 the premises, paying particular attention to the needs
2 of disabled people. It is important to note that it is
3 the responsibility of the premises management to assess
4 the needs of all people to make a safe evacuation when
5 formulating evacuation plans."

6 Was that guidance also potentially relevant to
7 whether this topic ought to have been expressly
8 addressed in the two different fire safety strategies?

9 A. Yes, because they're the recommendations -- I think
10 that's the 2011 -- published at the time.

11 Q. Yes.

12 A. And they don't say there's nothing to do in high-rise
13 residential buildings. This is the high-rise -- this is
14 the residential British Standard.

15 Q. Yes.

16 Now, just to finish off a couple of very short
17 topics: gold standard. What would you say to the
18 suggestion that your approach represented a gold
19 standard which is not realistic as a benchmark for fire
20 engineers more generally?

21 A. I would say, "How rude", and then I would ask, "What is
22 gold standard?" Okay? Because the only benchmark I've
23 used in this work are all the published guidance
24 documents, and absolutely nothing else. If I was to
25 draw in anything else, I think my report would be

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1 classified as even more critical than it's been.

2 So I have expressly and deliberately only relied on
3 published guidance documents and referred to them every
4 single time, and if there are people out there who think
5 that's a gold standard, well, shame on them, is all I've
6 got to say.

7 Q. Now, your overall conclusions about Exova's work, they
8 are set out at section 14 of your report. I just want
9 to pull those up. If we go to page 335
10 {BLARP20000017/335}, they're at 335 to 341.

11 This is a summary, so you have very helpfully at the
12 end distilled down your conclusions about Exova's work
13 here, and we can see you deal with Exova's scope and
14 fee, and then if we look at page 338 {BLARP20000017/338}
15 and following, you have there at 14.1.39 the conclusions
16 about Exova's fire safety strategy reports for the
17 primary refurbishment, and there's your conclusions
18 there.

19 A. Yes.

20 Q. Then at page 340 {BLARP20000017/340} you've got your
21 conclusions about Exova's advice relating to cladding,
22 and you set out there your core conclusions, including
23 your conclusions about the 18 September exchanges which
24 we dealt with this morning.

25 A. Yes.

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1 Q. Overall, your conclusion on page 341 {BLARP20000017/341}
2 at paragraph 14.1.80, you say:

3 "Overall, I conclude that the advice provided by the
4 fire safety engineers ... was entirely inadequate."

5 A. Yes.

6 Q. Do those conclusions still remain your opinion, having
7 heard all the oral evidence that you have?

8 A. Yes, they do.

9 MS GRANGE: Mr Chairman, those are all of my questions. It
10 probably makes sense to have perhaps a ten-minute break
11 just to sweep up any final questions about Exova's work.

12 THE WITNESS: Okay.

13 MS GRANGE: It might be sensible then perhaps to take
14 an early lunch.

15 SIR MARTIN MOORE-BICK: Let's see how we're going, shall we,
16 but I think you're right. I think it would be sensible
17 now to have a short break to sweep up any additional
18 questions.

19 So if I say ten minutes, or longer if you find it
20 necessary, but otherwise we'll come back at 12.40,
21 please, and see whether there is anything else that
22 needs to be asked.

23 THE WITNESS: Okay, no problem, thank you.

24 SIR MARTIN MOORE-BICK: Thank you very much.

25 MS GRANGE: Thank you.

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1 (Pause)

2 SIR MARTIN MOORE-BICK: Right, 12.40, then, please, but if
3 you need longer --

4 MS GRANGE: We'll say.

5 SIR MARTIN MOORE-BICK: -- just tell us. Thank you.

6 (12.30 pm)

7 (A short break)

8 (12.40 pm)

9 SIR MARTIN MOORE-BICK: Right, we will see if there are any
10 more questions.

11 THE WITNESS: Yes.

12 SIR MARTIN MOORE-BICK: Now, Ms Grange, where are we?

13 MS GRANGE: So we have no further questions, but literally
14 about 30 seconds ago an email pinged into my inbox from
15 somebody at Team 2 for the residents asking whether they
16 could have another ten minutes to draft a question.

17 SIR MARTIN MOORE-BICK: Ten minutes to draft it? All right.

18 MS GRANGE: Maybe what we should do is ... I'm keen to give
19 Ms Grogan as much time as possible this afternoon. We
20 could break for lunch now and I can consider the
21 question over the lunch break, and if it needs to be
22 put, I can quickly put it at 1.45 and then let Ms Grogan
23 carry on.

24 SIR MARTIN MOORE-BICK: Yes. That sounds sensible, and then
25 whoever is drafting the question won't necessarily feel

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1 under too much pressure.
 2 MS GRANGE: No.
 3 SIR MARTIN MOORE-BICK: All right. I think what we will do
 4 is stop now and have some lunch.
 5 THE WITNESS: Okay.
 6 SIR MARTIN MOORE-BICK: We will start a bit earlier than we
 7 usually do after lunch, we'll start again at 1.45,
 8 please.
 9 THE WITNESS: Okay, that's fine.
 10 SIR MARTIN MOORE-BICK: Usual injunction: please don't speak
 11 to anybody about your evidence.
 12 THE WITNESS: I won't, don't worry.
 13 SIR MARTIN MOORE-BICK: Then we will see if there is
 14 a question that needs to be put to you and we will sweep
 15 it up then.
 16 THE WITNESS: Okay, thank you.
 17 SIR MARTIN MOORE-BICK: Thanks so much.
 18 (Pause)
 19 Right, 1.45, then, please. Thank you.
 20 MS GRANGE: Thank you.
 21 (12.45 pm)
 22 (The short adjournment)
 23 (1.45 pm)
 24 SIR MARTIN MOORE-BICK: All right, Dr Lane?
 25 THE WITNESS: Yes, I am, thank you.

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1 SIR MARTIN MOORE-BICK: I think there are a couple of other
 2 questions. Is that right, Ms Grange?
 3 MS GRANGE: Just a couple of short questions, yes.
 4 I just want to pull back up the Celotex datasheet,
 5 so this is {RYD00018155}. So that's the datasheet that
 6 we looked at this morning that Mr Ashton is sent on
 7 18 September 2014.
 8 A. Yes.
 9 Q. Just a couple of short questions on this.
 10 Would you expect a reasonably competent fire
 11 engineer to understand and interpret the contents of
 12 such a datasheet in terms of its performance for fire?
 13 A. Yes.
 14 Q. Mr Ashton, having been asked about this datasheet and
 15 having been told that the insulation was class 0, would
 16 you have expected him to have advised against the use of
 17 Celotex RS5000?
 18 A. So, first, I would have first expected him to ask about
 19 the assembly and the overall plan for the assembly being
 20 compliant. So he might have asked if a test of that
 21 assembly had been done or for something else first.
 22 Q. Yes. I think you said this morning that you would have
 23 expected him to have advised that paragraph 12.7 of
 24 Approved Document B required the insulation to be of
 25 limited combustibility.

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1 A. Yes.
 2 Q. But would you also have expected him to have said, "You
 3 shouldn't be using Celotex RS5000, certainly pending
 4 clarification of its proper fire performance in that
 5 system"?
 6 A. I would expect him to have said that, "Unless you have,
 7 you know, the valid information for an assembly, I need
 8 to warn you that an insulation that only has a class 0,
 9 you know, test certificate is a fundamental breach of
 10 the Building Regulations". Now, I know when I say that
 11 other -- the legal profession minds, but in our
 12 profession we do explain to our clients when things are
 13 major or minor non-compliances and the consequences of
 14 those in the context of fire legislation.
 15 Q. Yes.
 16 A. Okay? And I would have expected him to warn them. You
 17 said should he have told them not to use it.
 18 Q. That was the question.
 19 A. Yes. So I'm not prepared to kind of take that next
 20 step, no. I think his job was to tell them what it
 21 meant as a minimum.
 22 Q. Yes, I understand. Thank you, that's helpful.
 23 A. Yes.
 24 MS GRANGE: Mr Chairman, those are all of the questions that
 25 we had.

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1 SIR MARTIN MOORE-BICK: Right, so you have finished your
 2 questions?
 3 MS GRANGE: I have done my questions. We just need a quick
 4 five minutes to clean this area, and then Ms Grogan is
 5 going to replace me and ask some questions about CDM and
 6 regulation 38.
 7 SIR MARTIN MOORE-BICK: I was warned.
 8 We now have to do a little bit of housekeeping because
 9 there's going to be a change in counsel.
 10 THE WITNESS: That's fine. So do I need to leave?
 11 SIR MARTIN MOORE-BICK: I'm afraid you do. So do we.
 12 THE WITNESS: Oh, I see, right. Okay.
 13 SIR MARTIN MOORE-BICK: So we will have five minutes. We'll
 14 get you back as soon as we can. Thank you.
 15 (1.50 pm)
 16 (A short break)
 17 (1.55 pm)
 18 SIR MARTIN MOORE-BICK: Right, Dr Lane, different counsel,
 19 but more questions, I'm afraid.
 20 THE WITNESS: Okay.
 21 SIR MARTIN MOORE-BICK: All right?
 22 Yes, Ms Grogan.
 23 MS GROGAN: Thank you.
 24 Good afternoon, Dr Lane. We're now moving on to
 25 a new area and I'm going to ask you some questions about

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1 regulation 38 of the Building Regulations and the health
2 and safety file under the CDM Regulations.

3 You have provided the Inquiry two sets of reports
4 and they should both be on your desk, one addressing
5 regulation 38 and one addressing the health and safety
6 file.

7 The first is a report entitled "Regulation 38
8 Fire safety information". The first version was dated
9 31 October 2019, and consisted of a main report and two
10 appendices, appendix A and appendix B.

11 You then prepared an updated report, version 2,
12 dated 19 May 2020, which has three appendices,
13 appendix A, appendix B and appendix C. You have also
14 provided a further updated version of that report dated
15 26 October 2020, and that's the one that that's in front
16 of you on the desk. That report contains some
17 corrections to typographical errors and additional
18 references to documents and oral evidence.

19 For the transcript, the main report is
20 {BLARP20000021}; appendix A, {BLARP20000007};
21 appendix B, {BLARP20000020}; appendix C,
22 {BLARP20000009}. You have also provided a separate
23 document setting out the changes of October 2020,
24 {BLARP20000019}.

25 Does that all sound about right?

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1 A. Yes.

2 Q. A long list there.

3 A. I hope you are right, yes.

4 Q. Mostly that's reading things in so they are in the
5 record.

6 A. Understood, yes.

7 Q. Unless I specify otherwise, when I refer to your report,
8 I'll be referring to version 2 as updated in October
9 2020.

10 A. Okay, thank you.

11 Q. Can you please confirm that you have not changed your
12 overall conclusions as between 19 May 2020 report and
13 the 26 October 2020 report?

14 A. No.

15 Q. That report focuses on regulation 38 of the
16 Building Regulations, its application to the various
17 works carried out at Grenfell Tower, including the
18 primary refurbishment, and your review of the building
19 manual for the primary refurbishment; is that right?

20 A. Yes.

21 Q. As you indicate in the declaration on section 23, which
22 we can pull up now, that's {BLARP20000021/301}, you have
23 provided that report in the same way as you would have
24 provided a report to the court?

25 A. Yes.

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1 Q. And on page 302 {BLARP20000021/302} we see a statement
2 of truth. Is that your signature there?

3 A. Yes, it is.

4 Q. We're going to have to go through this all again now
5 with the next report, which is the health and safety
6 file.

7 A. Yes.

8 Q. Version 1 was dated 29 October 2019, and you then
9 prepared an updated report, version 2, dated
10 9 June 2020, and a further updated version dated
11 22 October 2020. Again, that updated version contains
12 corrections to typographical errors, additional
13 references to documents and oral evidence, and we can
14 find that at {BLARP20000016}, and a separate document
15 setting out the changes of October 2020,
16 {BLARP20000013}. That report focuses on the
17 CDM Regulations and, in particular, the obligation to
18 have and maintain a health and safety file.

19 A. As relevant to fire safety only.

20 Q. Yes.

21 A. Yes.

22 Q. Again, if we pull that up, that's {BLARP20000016/193}.
23 There's your expert's declaration. You have provided
24 that in the same way as you would have provided a report
25 to the court?

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1 A. Yes.

2 Q. On page 194 {BLARP20000016/194}, is that your signature?

3 A. Yes, it is.

4 Q. Again, can you confirm that you have not changed our
5 overall conclusions as between the 9 June report and the
6 22 October report?

7 A. No, I haven't.

8 Q. Now, any matters of law within your reports will
9 ultimately be for the Chairman and the panel to decide,
10 but can you confirm that the factual matters set out in
11 your reports are true to the best of your knowledge and
12 belief?

13 A. Yes.

14 Q. Can you confirm that your reports accurately set out
15 your true and complete professional opinion on the
16 matters set out within them?

17 A. Yes.

18 Q. Just to outline the structure of your evidence on these
19 topics, I'm first going to ask you about your background
20 and experience relevant to both of these topics. Then
21 I'll ask you some brief questions about how industry
22 professionals approach areas of their work that raise
23 legal issues, and you touched on that briefly with
24 Ms Grange just a moment ago. We will then look at
25 regulation 38 first and the health and safety file after

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1 that. Then I will ask you about the availability of
2 both the regulation 38 information and the health and
3 safety file on the night of the fire. So that's a topic
4 addressed in both reports.

5 A. Okay.

6 Q. We will look at those together as one at the end.

7 A. Right.

8 Q. Finally, I just want to make clear that, as Module 1 has
9 focused on the primary refurbishment, ie the works which
10 took place between 2012 to 2016, I will not be asking
11 you detailed questions about earlier works or subsequent
12 works to Grenfell Tower, such as the lifts, the fire
13 doors and the gas main, as these will be covered in
14 detail in Module 3.

15 A. Okay.

16 Q. So just to make that clear.

17 Now, moving on to my questions, starting first with
18 your background and experience, Ms Grange has already
19 asked you about your background and experience and you
20 have provided an updated CV. If we could go to that,
21 {BLARP20000015}. In terms of your experience relevant
22 to regulation 38, you have set out some relevant
23 experience which starts on page 4 and then goes over to
24 the next page {BLARP20000015/5}. We see at the bottom
25 there "Building Manual and Health and Safety File", just

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1 at the bottom. Then over again to page 6
2 {BLARP20000015/6}, we see the list of projects
3 continues.

4 Why have you selected these as examples of your
5 experience of building manuals and regulation 38?

6 A. Because that's what I did on the project.

7 Q. How often does your work involve advising on or
8 preparing information relevant to regulation 38?

9 A. Sorry, can you say that again, preparing ...?

10 Q. Advising on or preparing information relevant to
11 regulation 38.

12 A. I don't know how often, because it's not something I've
13 ever quantified, but in my role as a fire safety
14 engineer, I explain what regulation 38 is, and
15 sometimes, if an architect or a principal contractor,
16 whose duty it is to deal with completion certificates,
17 if they require further assistance, they would ask me,
18 as such, on projects where I have carried out that
19 service.

20 Q. So it's right you have practical experience of working
21 with regulation 38?

22 A. Yes, that's what the projects in my CV are meant to do
23 and that's a selection, yes.

24 Q. We also see projects that you have set out relevant to
25 your health and safety file experience. I think that's

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1 page 8 {BLARP20000015/8}.

2 Again, is it right that these show that you have
3 practical experience of contributing to or advising on
4 a health and safety file?

5 A. So the three projects you showed me earlier, they're
6 three projects I selected especially to show where
7 I have had specific experience on the health and safety
8 file and regulation 38 and providing fire safety
9 information. These are projects where I worked on site.

10 Q. I see. So on page 6 {BLARP20000015/6}, then, the first
11 set of examples that we looked at, that's your --

12 A. Exactly, so that's where I have expressly participated
13 in information in a health and safety file as opposed to
14 being a user of a health and safety file, which I would
15 be on lots of -- in an existing building project.

16 Q. Thank you, that's helpful.

17 A. Yes.

18 Q. Now, moving on to legal matters, in both of the topics
19 that we're going to cover today, regulation 38 and the
20 health and safety file, the relevant duties and
21 requirements come from legislation, ie regulations.
22 That's the Building Regulations 2010 for reg 38, and the
23 Construction (Design and Management) Regulations 2015,
24 as well as earlier versions of those regulations.

25 In your reports, you have explained how these

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1 regulations operate and, in some cases, what you
2 understand the regulations themselves to mean.

3 Can you briefly explain why, as a non-legal
4 professional, you have given a view about the meaning of
5 regulations?

6 A. Because it's my job to have read them thoroughly, to
7 understand them as a practising fire safety engineer,
8 and to have a professional opinion on them. It's not
9 a legal opinion, because I have no legal skill, but in
10 my work I have to understand the requirements of me, if
11 you want to say it that way.

12 So any building I work on, in whatever kind of
13 capacity that is, you know, existing building,
14 new-build, I have to give accurate advice to my clients,
15 whatever type of client that is, so I have to have
16 understood the fire relevant legislation, regulations,
17 statutory and non-statutory guidance, otherwise I can't
18 give accurate professional or technical opinion.

19 Q. In your professional life, do you advise clients about
20 whether they are or are at risk of being in breach of
21 regulations?

22 A. Yes, I do, and I'm paid to give advice like that. So
23 I'm appointed on a project or a complexity and I'm asked
24 to give my opinion, and all it is is my opinion, and
25 I have to give it and explain, from my technical

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1 perspective, you know, why that is my opinion. When
 2 I say things like that, I'm not thinking about anything
 3 else beyond that, that other legal experts may think.
 4 I understand my opinion may be found to be wrong or
 5 less valid than another, for example, fire safety
 6 engineer's opinion on the same matter, but I have to
 7 explain it to my clients and why, and I'm not unique in
 8 that. We do that all the time in our work.
 9 Q. Thank you.
 10 I think you would agree, then, that the question of
 11 the meaning of regulations is ultimately for a court
 12 and, in this case, the panel, but you have given, as you
 13 say, your opinion on what they mean because it's
 14 relevant to your professional role?
 15 A. Yes, so I feel I have to do that. So I've done a lot of
 16 work with principal contractors, as I've said, and when
 17 you are coming up to the end of a project, it can be
 18 a very frantic time, getting all the paperwork, getting
 19 everything built, making sure everything's okay, and
 20 sometimes when projects are handed over, there may be
 21 some work left outstanding that you do after handover,
 22 and that's a really important time where you explain
 23 major and minor non-compliances, and if a client should
 24 allow the handover and let minor non-compliances occur
 25 afterwards. So in that space particularly, you have to

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1 give a view, and you live with the consequences of that
 2 view also.
 3 Q. Thank you.
 4 Turning now to the topic of the regulation 38
 5 information, and looking first at regulation 38 itself,
 6 and we can turn that up in your report at
 7 {BLARP20000021/9}. It's that top half of the page there
 8 you have quoted from regulation 38.
 9 Looking first just at the type of work that it
 10 applies to, we can see that at 38(a). It applies to
 11 work which:
 12 "(a) consists of or includes the erection or
 13 extension of a relevant building; or
 14 "(b) is carried out in connection with a relevant
 15 change of use of a building, and Part B of Schedule 1
 16 imposes a requirement in relation to that work."
 17 Is that right?
 18 A. Yes.
 19 Q. Moving down, then, to 38(2), it says:
 20 "The person carrying out the work shall give fire
 21 safety information to the responsible person not later
 22 than the date of completion of the work, or the date of
 23 occupation of the building or extension, whichever is
 24 the earlier."
 25 Then beneath there we see some definitions.

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1 "Fire safety information" is defined as:
 2 "... information relating to the design and
 3 construction of the building or extension, and the
 4 services, fittings and equipment provided in or in
 5 connection with the building or extension which will
 6 assist the responsible person to operate and maintain
 7 the building or extension within reasonable safety."
 8 A relevant building is defined there as:
 9 "... a building to which the Regulatory Reform (Fire
 10 Safety) Order 2005 applies ..."
 11 Then:
 12 "A 'relevant change of use' is a material change of
 13 use where, after the change of use takes place, the
 14 Regulatory Reform (Fire Safety) Order 2005 will apply,
 15 or continue to apply, to the building ..."
 16 And "responsible person" has the same meaning as in
 17 the RRO.
 18 A. Yes.
 19 Q. We can see your analysis of the primary refurbishment
 20 and why it was a relevant change of use in a later
 21 section of your report. If we go to that, it's page 103
 22 {BLARP20000021/103} at 13.4.7. You say there:
 23 "The works described by the full plans submission
 24 for the primary refurbishment works also touched every
 25 part of the rest of the building from Ground floor to

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1 the roof of Grenfell Tower."
 2 Can we take it that your view is regulation 38
 3 therefore applied to all of the works that comprised the
 4 primary refurbishment?
 5 A. I think that fire safety information was needed for
 6 fire safety works during the primary refurbishment.
 7 Q. So it would not just apply to the parts of the
 8 refurbishment that were a material change of use, so the
 9 changing into the flats on the lower levels?
 10 A. Oh, I see what you mean. So -- well, you've left --
 11 there's an extra part of material change of use, but
 12 anyway. So on the lower floors were a material change
 13 of use, but you still have that duty, because of the
 14 height of the building, to consider B4, and the cladding
 15 occurred on all the floors, and the fire safety systems,
 16 their extension into the new floors -- they don't exist
 17 in isolation.
 18 So, in my opinion, it's very hard to cut off
 19 different parts of the fire safety works and divvy them
 20 up into pieces you would explain and pieces you would
 21 not explain under regulation 38.
 22 Q. Yes. I see. So we can see it just above, actually,
 23 13.4.6, I skipped a step. You have explained there that
 24 the works included a material change of use, and you
 25 give your reasons, which is the dwellings were

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1 increased, and also new flats were introduced that did
 2 not previously contain flats, and then you go on to say
 3 those works also touched every part of the rest of the
 4 building.
 5 A. Yes.
 6 Q. So, taking all of that together, your view is that you
 7 had to submit regulation 38 information relating to all
 8 works rather than just the new flats?
 9 A. So you had to submit regulation 38 information, which is
 10 fire safety information, about works that impact
 11 fire safety.
 12 Q. I see.
 13 Are you aware of a contrary body of opinion on this
 14 issue, so a body of opinion that believes that you would
 15 only need to present information relevant to the flats
 16 themselves?
 17 A. The flats?
 18 Q. Yes. The new flats.
 19 A. So inside the flat? No. Outside the flat -- do you
 20 mean that the ... so outside the flat, because the flat
 21 demise is a different issue, because -- anyway, so
 22 outside the flats, the new flats in the common parts,
 23 I think you're asking me if some people might think they
 24 just needed to explain that with respect to relevant
 25 fire safety information.

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1 Q. Yes, that's what I'm asking.
 2 A. But as I've explained, the smoke control system doesn't
 3 operate independently on that floor. The cladding
 4 doesn't exist independently on those storeys only. I'm
 5 trying to think what else ... the lift shafts were
 6 extended, they don't exist in isolation on those floors.
 7 So when I take every single -- if you wanted to take
 8 that view, the substantial changes on the lower floors,
 9 in a fire, don't exist in a separate kind of cut off
 10 place. I'm probably not verbalising that correctly.
 11 Q. I understand what you mean. I think the point I'm
 12 trying to get at is: is there a rival view in the
 13 industry that you would just look at that area?
 14 A. Oh, sorry. No, not that I'm aware of.
 15 Q. Thank you.
 16 A. No.
 17 Q. The obligation to comply with regulation 38 rests on the
 18 person carrying out the works.
 19 A. Yes.
 20 Q. You have given your understanding of this concept at
 21 2.18 of your report.
 22 A. Yes.
 23 Q. If we can go to your analysis, it's on page 24
 24 {BLARP20000021/24}. We see there the heading, "Person
 25 carrying out work".

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1 You start there by saying that there is no
 2 definition provided in the regulations of "person
 3 carrying out work", and it's also not defined in any
 4 approved document or fire safety procedural guidance.
 5 A. Yes.
 6 Q. You then say at 2.18.3 that, for the purposes of this
 7 report, you have defined the person carrying out the
 8 work to be the organisation with primary responsibility
 9 for and in primary control of undertaking the physical
 10 construction work.
 11 A. Yes.
 12 Q. Then you have set out a little later the factors that
 13 have helped you in reaching that interpretation.
 14 A. Yes.
 15 Q. Now, the Inquiry has heard from Ms Menzies that she
 16 considers the person carrying out the works to be the
 17 owner, or at least the owner as one of the candidates.
 18 A. Yes.
 19 Q. Does that, now you are aware of that evidence, affect
 20 your view at all?
 21 A. It doesn't affect my view, but I think it's a very
 22 interesting point, and I also, like Ms Menzies -- I read
 23 her report last week -- have experience of working with
 24 a client body where they have, you know, a contractor
 25 arm that does work and hands over to the landlord unit

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1 in the same organisation.
 2 So on paper it might read that you're handing over
 3 the information to yourself, as such, as a client body,
 4 but -- so I have experience of that, where there's
 5 an in-house contracting team and they hand over to the
 6 in-house responsible person and there's an exchange of
 7 information that way, and that does happen.
 8 Currently, I don't equate that situation with KCTMO.
 9 I am, however, at this time looking very carefully at
 10 the communications between Claire Williams and
 11 Janice Wray around this time period in my Module 3 work,
 12 and if I found something there that changed my view,
 13 I would make it clear then.
 14 But at this stage -- and I have read a lot of
 15 evidence around that, you know, interrelationship so
 16 far -- as far as I'm concerned, Rydon were in that
 17 position. They're not part of KCTMO, they were in
 18 control of the works, they could assemble that
 19 information and give it to the KCTMO as an organisation.
 20 This next step about what happens in the KCTMO is
 21 a very valid one and I am still looking at that.
 22 Q. So just for clarity, your view is that, on the Grenfell
 23 primary refurbishment, it was Rydon who were the person
 24 carrying out the works?
 25 A. Yes, as I said, yes. But you asked me if, you know,

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1 what Ms Menzies said raises something, and yes, it does.
 2 Q. Thank you.
 3 SIR MARTIN MOORE-BICK: Can I ask you this: just thinking of
 4 the actual arrangements for carrying out a construction
 5 project and the nature of the information that has to be
 6 handed over, which person is likely to be best equipped
 7 to produce that information?
 8 A. Yes. In my opinion, on the Grenfell project, it was
 9 Rydon as principal contractor, and my own experience is
 10 the principal contractor running that process of
 11 gathering everything together.
 12 SIR MARTIN MOORE-BICK: Am I right in understanding -- we
 13 have had some evidence about this and we have touched on
 14 this -- that, in principle, the health and safety file
 15 is intended to be maintained as you go along?
 16 A. Yes, so that's the other file. Sorry, I'm probably
 17 confusing everyone now. So the regulation 38
 18 information is different to the CDM information. On
 19 Grenfell, it was all merged together.
 20 SIR MARTIN MOORE-BICK: Right.
 21 A. Okay? So --
 22 SIR MARTIN MOORE-BICK: My question then really ought to be:
 23 who is in the best position to produce the CDM file?
 24 A. The health and safety file? Well, there's a legal duty
 25 to produce the health and safety file, which is separate

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1 to this regulation 38 fire safety information.
 2 So at the moment we are talking about the
 3 fire safety information for the building manual under
 4 this particular regulation, and that is different to the
 5 health and safety file required under CDM.
 6 SIR MARTIN MOORE-BICK: I think I'm responsible for the
 7 confusion.
 8 A. Sorry, yes, no, I didn't want to -- it is horrendous,
 9 yes.
 10 SIR MARTIN MOORE-BICK: Let's just go back to it, because
 11 one of the ways in which you might reach a decision
 12 about who is responsible for producing this file is who
 13 is best placed to do it, because if the regulations will
 14 work better in one sense than if you give them
 15 a different sense, that might affect one's approach to
 16 the construction.
 17 This is why I ask you: who is best placed to do the
 18 job that the regulations require to be done?
 19 A. So when it comes to communicating works and the
 20 fire safety information about works, I have always said,
 21 to be honest, it's the principal contractor. Okay?
 22 If the definition was very clear and caused that to
 23 become someone else, I understand that may happen, but
 24 the principal contractor understands what's happening,
 25 you know, has his or her subcontractors, is programming

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1 it, knows where everything is, knows where all the
 2 paperwork is, so that's why I always attribute the
 3 assembling of the information to them.
 4 SIR MARTIN MOORE-BICK: Yes, thank you.
 5 Yes, Ms Grogan.
 6 MS GROGAN: Thank you. It is confusing because we're
 7 talking about various different manuals as we go along.
 8 A. Yes, and I think, because it is really confusing, can
 9 I just say: so at Grenfell Tower, there was one building
 10 manual with several parts, one part of which was the
 11 health and safety file. The rest of the parts were not
 12 the health and safety file. Okay? And, yes, it takes
 13 months and months and months and months to work all of
 14 that out for Grenfell. Yes.
 15 SIR MARTIN MOORE-BICK: Thank you.
 16 MS GROGAN: Your regulation 38 report also refers to
 17 a fire safety manual. We will come on to that and
 18 explore what that is and how it fits in in a moment.
 19 Staying with the person carrying out the work,
 20 besides the organisation with primary responsibility, so
 21 besides the principal contractor, are there any other
 22 potential candidates for a person carrying out the work,
 23 just in principle? So designers or ... would it ever be
 24 the case that it was someone else who was a person
 25 carrying out the work?

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1 A. No.
 2 Q. In your experience, what was the prevailing
 3 understanding of who the person carrying out the work
 4 is?
 5 A. Oh, honestly, I've never asked anybody.
 6 Q. Is it not something that's come up?
 7 A. No.
 8 Q. It's not something that was confusing or led people to
 9 be confused at the time?
 10 A. Not that I'm aware of, no. I'm sorry. Yes.
 11 Q. I'm now going to move on and ask you some questions
 12 about the guidance supporting regulation 38, and we're
 13 still sort of working through what regulation 38 means
 14 and what it requires.
 15 You have identified a number of pieces of guidance
 16 that support regulation 38, and if we can look at those
 17 in a list, it's 11.1.4 on page 72 of your report
 18 {BLARP20000021/72}. There you have listed out three
 19 sets of guidance: "Procedural Guidance", produced by
 20 what was DCLG, and then after that a fifth edition
 21 produced by the LABC; appendix G, "Fire safety
 22 information", of Approved Document B; and annex H,
 23 "Fire safety manual", of BS 9999:2008.
 24 Starting first with Approved Document B, you have
 25 explained at 11.3.8, page 76 of your report

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1 {BLARP20000021/76} that the guidance in appendix G
 2 hasn't changed since ADB was first issued in 2006; is
 3 that right?
 4 A. Yes.
 5 Q. So there are no relevant changes that we need to concern
 6 ourselves with. If we can just go to ADB,
 7 {CLG00000173/149}, that's appendix G there.
 8 If we look on the left-hand side, the second half of
 9 the page, just above the heading "Simple buildings", it
 10 says:
 11 "This Appendix is only intended as a guide as to the
 12 kind of information that should be provided. For
 13 clarity the guidance is given in terms of simple and
 14 complex buildings, however the level of detail required
 15 will vary from building to building and should be
 16 considered on a case by case basis."
 17 Given that it says there that the appendix is only
 18 intended as a guide, does that tell us anything about
 19 how strictly it should be followed or does it
 20 distinguish appendix G from the rest of ADB in any way?
 21 A. I don't think so, no.
 22 Q. It then goes on to give guidance for simple buildings
 23 and complex buildings, but it's right that it doesn't
 24 actually define what a simple building is or what a
 25 complex building is?

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1 A. That's correct, yes.
 2 Q. In your opinion, was Grenfell a simple building or
 3 a complex building?
 4 A. Well, I personally think it's a complex building.
 5 Q. What features in particular lead you to that view?
 6 A. So it was a high-rise residential building which, if it
 7 was being built now, would require sprinklers, it didn't
 8 have sprinklers; it was undergoing a complex
 9 overcladding project with different materials; it needed
 10 a new smoke control system; and the designers had to
 11 work within the constraints of the existing building, so
 12 they didn't have, like, free rein over how to develop
 13 a smoke control system.
 14 And also -- no, I think they would be my three main
 15 points. I think I gave a longer list in my report, but
 16 after a day and a half, I can't remember everything off
 17 by heart anymore, I'm sorry, but I did actually give
 18 a list in my report.
 19 Q. You did, it's section B2 of appendix B. Would you like
 20 to go there, or I can just give the reference for the
 21 transcript?
 22 A. No, I don't mind, but I think for me, they're three
 23 complex things, very complex things.
 24 Q. For the transcript -- we don't need to go to it -- it's
 25 {BLARP20000020/7}, and that's sets out the features.

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1 Do you agree that Grenfell could be considered to be
 2 a simple building, or at least that another expert might
 3 come to a different view from you?
 4 A. Do I agree another expert could come to a different
 5 view?
 6 Q. Could reasonably come to a different view.
 7 A. Could reasonably come to a different view ... well, I've
 8 heard another expert say that, Ms Menzies said that.
 9 Q. Under the guidance for complex buildings, which we can
 10 see on the right-hand side, point 3:
 11 "For more complex buildings a more detailed record
 12 of the fire safety strategy and procedures for operating
 13 and maintaining any fire protection measures of the
 14 building will be necessary."
 15 A. Yes.
 16 Q. So that's the guidance saying what kind of regulation 38
 17 information should be provided for a complex building;
 18 is that right?
 19 A. Yes, it says "operating and maintaining", just as
 20 regulation 38 itself. They're the two --
 21 Q. Yes.
 22 A. Yes.
 23 Q. Then it says there:
 24 "Further guidance is available in BS 5588-12:2004."
 25 A. Yes.

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1 Q. But it's right, isn't it, that that British Standard was
 2 replaced by BS 9999:2008?
 3 A. Yes.
 4 Q. And therefore what you have done is you have gone on to
 5 look at that British Standard in your report.
 6 A. Yes, as a guide, yes.
 7 Q. As a guide to the kind of information that regulation 38
 8 requires.
 9 A. Yes.
 10 Q. Now, in terms of a complex building, ADB appendix G
 11 itself also tells you a list of things that the records
 12 should include, and we can see that there, just starting
 13 at (a) and going over to the next page.
 14 Then BS 9999, you have already mentioned it, you
 15 would agree that's an additional source of guidance
 16 about all the things that should be included?
 17 A. Yes, it gives you more practical information about what
 18 to actually do, yes.
 19 Q. Is it building on that list there in ADB?
 20 A. Yes, it is, yes.
 21 Q. Now, it's right that BS 9999 it's not prescriptive,
 22 there is no requirement that says you must follow it; is
 23 that right?
 24 A. Yes, it's a British Standard.
 25 Q. And if Grenfell was a simple building -- and we know you

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1 don't agree with that -- there would be no need to refer
2 or attempt to follow BS 9999?

3 A. Because it doesn't say it at point 2?

4 Q. Yes.

5 A. Actually, can we just scroll up to the top of the page
6 so I can see the rest of the list for a simple building,
7 please.

8 (Pause)

9 Yes. I mean, I think I find this point kind of
10 a little bit difficult, in the sense that, even for
11 a simple building, if it had very simple matters from a
12 to j under point 2, if I was trying to work out exactly
13 what to do about that, I think the 9999 offers just some
14 practical help about what those words mean, as opposed
15 to it saying, "Don't read the British Standard if it's
16 a simple building, and only read the British Standard if
17 it's a complex building". So I'd struggle a little bit
18 with that.

19 Q. Yes, thank you.

20 Just to give the panel and the public an idea of the
21 differences between a simple and a complex building, is
22 there a great difference between the kind of information
23 you should be providing for a simple building and for
24 a complex building?

25 A. Is there a great difference?

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1 Q. Yes. Are they completely different things that you have
2 to provide or are they all --

3 A. So I think that in order to operate and maintain
4 a building, there are certain things that you need to
5 know. I don't think they change. I don't think that
6 you can operate -- I don't think they change because
7 a building is simple or complex; it's the scale of
8 information that changes, rather than the quality of the
9 information that changes.

10 Q. Now, let's go and look at BS 9999, and you have
11 helpfully extracted bits of it in your report. If we go
12 to 11.4.11 on page 78 {BLARP20000021/78} of your report,
13 and we look at that quotation there which gives
14 an overview, I just want to look at the last sentence
15 which says:

16 "Fire safety procedures and maintenance schedules
17 are developed at the design stage and included in the
18 fire safety manual, which is handed over to the person
19 responsible for fire safety of the building in order to
20 enable a suitable and sufficient fire risk assessment to
21 be carried out."

22 Then underneath you say:

23 "The 'fire safety manual' is therefore described as
24 a specific piece of documentation for the building ..."

25 A. Yes.

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1 Q. Can you just help us understand: we obviously have
2 regulation 38 and the requirement to hand over
3 fire safety information.

4 A. Yes.

5 Q. How does the fire safety manual fit in with that? Is it
6 fair to say that it's one way of providing the
7 regulation 38 information?

8 A. Yes, I think fire safety manual is like ... it's a loose
9 description of something, it's not an entity in itself,
10 maybe is what you might be asking me.

11 Q. It's not a term of --

12 A. Yes, it doesn't have, "A fire safety manual is the
13 following". To me, it's a concept where -- the
14 important part of regulation 38 is that the fire safety
15 information the responsible person needs to do all sorts
16 of different things -- and we will be covering that in
17 Module 3 -- is available for that responsible person.
18 Because when they take possession of the building, they
19 have to set up a fire risk assessment process, they have
20 to set up a maintenance programme, they have to write
21 an emergency plan, they need to brief the Fire Brigade
22 on what measures are being provided to them, so they
23 need information.

24 I wouldn't criticise anyone for, you know, the
25 visual aspect of the information; it's that the

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1 information is provided.

2 Q. So if you don't have a nice document that says
3 "Fire safety manual" on the front of it, that doesn't
4 matter so long as the actual information that's required
5 is handed over?

6 A. So if you have a building manual, I would expect to see
7 a fire safety manual register or a table of contents
8 that refers to the correct part of the building manual
9 that contains fire safety information. I wouldn't
10 expect someone to reproduce parts of a building manual,
11 put it back into another massive set of folders and call
12 it a fire safety manual.

13 I seem to be actually losing my voice this
14 afternoon. Sorry, excuse me.

15 So once you explain where the fire safety
16 information is, in my mind you are delivering
17 a fire safety manual.

18 Q. Thank you, that's very helpful.

19 Annex H of BS 9999 then sets out what a fire safety
20 manual should contain. Again, you have reproduced that
21 in your report on page 78 {BLARP20000021/78}, or at
22 11.4.16, so it's a little further down this page. The
23 text there says:

24 "The design information forms the basis of an
25 ongoing history document to which additional material is

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1 added when the building is occupied and at regular
 2 intervals thereafter.
 3 "The designer is largely responsible for those parts
 4 of the fire safety manual that contain design
 5 information; further information is given in H.4.1.
 6 "The fire safety manager is responsible for those
 7 parts of the fire safety manual that contain operational
 8 records, the fire safety policy statement and the fire
 9 safety documentation ..."
 10 Where a building is being refurbished, so not
 11 a new-build, is it expected that a new fire safety
 12 manual should be produced for that refurbishment or is
 13 it expected that an existing fire safety manual will be
 14 updated?
 15 A. If there was an accurate existing building manual and
 16 you were relying on information in it, you would then
 17 add in any additional information that was required.
 18 But that's a hypothetical, isn't it?
 19 Q. Yes.
 20 It says there that a designer is largely responsible
 21 for certain parts of the fire safety manual. How does
 22 that fit with the obligation under regulation 38 for the
 23 person carrying out the work to provide fire safety
 24 information?
 25 A. Because there's a gathering exercise of information.

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1 The designer doesn't disappear, as such.
 2 SIR MARTIN MOORE-BICK: Well, in this case the designer is
 3 the contractor.
 4 A. Well, I was actually about to say that, but I was afraid
 5 to open up another can of worms. Yes, they were, and
 6 they are in fact listed as a designer on most of the F10
 7 forms as well.
 8 So, if you're asking me if it wasn't a design and
 9 build project, so we're back into hypotheticals again,
 10 the designer and the contractor is putting information
 11 together and there will be one party more responsible.
 12 I don't want to get into that, because that's not what
 13 happened at Grenfell.
 14 MS GROGAN: Moving on then, at 11.4.21, which is on page 79
 15 {BLARP20000021/79}, we see the beginning of a very long
 16 list of information that's to be included in the
 17 fire safety manual, and it goes over on to page 80.
 18 It's right that this is the list you have relied on as
 19 the basis for your analysis of what happened on
 20 Grenfell Tower?
 21 A. Yes, and some of it applies and some of it doesn't.
 22 Q. Yes, and you have made that clear in your reports.
 23 As you said, this list provides further practical
 24 guidance, building on what's in appendix G.
 25 A. Yes.

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1 Q. As both Approved Document B and BS 9999 are guidance
 2 rather than regulations themselves, is it in principle
 3 possible to comply with regulation 38 by some
 4 alternative means, so by not following this guidance and
 5 doing something different?
 6 A. Well, as the information needed to operate and maintain
 7 a building is the same, it's kind of a redundant point,
 8 you know, what order you assemble it in or what it looks
 9 like at the end. The information is the information.
 10 Q. Yes.
 11 Moving on now to the scope of regulation 38
 12 information, the regulation itself says that the
 13 information provided should be that that assists the
 14 responsible person to operate and maintain the building
 15 or extension with reasonable safety, so the focus there
 16 is on information that assists with operation and
 17 maintenance; is that right?
 18 A. Yes.
 19 Q. And also information that enables the responsible person
 20 to comply with their duties under the RRO?
 21 A. Yes, their later duties, yes.
 22 Q. Do you agree that information which is already in the
 23 possession of the responsible person, or information
 24 that might not assist them in achieving those
 25 objectives, falls outside of the regulation 38 --

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1 A. Yes, I do. But, again, that's a hypothetical situation,
 2 in my opinion. And the information under the RRO we're
 3 covering in Module 3.
 4 SIR MARTIN MOORE-BICK: That really is a question of
 5 construction, isn't it?
 6 MS GROGAN: Yes.
 7 SIR MARTIN MOORE-BICK: What I think the witness could help
 8 on is whether there are matters in the context in which
 9 these regulations have to be applied which would help
 10 one to understand how they ought to be interpreted.
 11 MS GROGAN: I see, yes.
 12 SIR MARTIN MOORE-BICK: So, well, you say that in your view,
 13 if I've understood your last answer correctly, it's not
 14 necessary to include in the fire safety information,
 15 information that is already in the possession of the
 16 responsible person.
 17 A. Yes. So --
 18 SIR MARTIN MOORE-BICK: Is there any particular reason
 19 arising out of the nature of the works and so on that
 20 leads you to that conclusion, or is it in your view just
 21 a matter of common sense?
 22 A. So if a refurbishment -- so let's take the lifts at
 23 Grenfell Tower. They remained. So, you know, there
 24 wasn't a massive lift refurbishment, they remained. So
 25 you would expect the existing building manual for

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1 Grenfell Tower contained the relevant information for
 2 the responsible person to carry out their duty. So then
 3 I wouldn't say Rydon should have found that information.
 4 Okay? It should exist already. Rydon are then
 5 providing fire safety information for the things they've
 6 changed, replaced, created only, give it to the
 7 responsible person, and they can incorporate that with
 8 any existing fire safety information that remains valid
 9 after the refurbishment. So they're going to rely on
 10 the lifts or rely on something that existed all along,
 11 and then they would combine them.

12 SIR MARTIN MOORE-BICK: I can see that, but I can also see
 13 an argument for saying it ought to be all in one place,
 14 and therefore that any new provision of information
 15 ought to contain everything.

16 A. Yes. I would expect it to be all in one place. Again,
 17 it should be in one place, and ... I'm just a bit
 18 conscious about straying.

19 So we will be talking in the future about where
 20 information was stored at the KCTMO, existing
 21 information, and then this new information coming in and
 22 how that was dealt with then, yes, and I could answer
 23 your question more appropriately then.

24 SIR MARTIN MOORE-BICK: Right.

25 MS GROGAN: We will come on to that.

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1 A. Is that okay? Yes.

2 Q. Again, just assisting with context, during
 3 a refurbishment project, for example, or even
 4 a new-build, as the client, and also in this case the
 5 responsible person, the TMO was receiving fire safety
 6 relevant information as the works progressed.

7 Does that mean that, in practice, you wouldn't need
 8 to have a compendious set of information handed over at
 9 the end because, for example, the TMO already had
 10 fire strategy drawings in its possession throughout the
 11 works?

12 A. No, I think, as we have been talking about a lot in the
 13 last day and a half, there's an exercise needed at the
 14 end of the job. Remember, the fire safety information
 15 is meant to reflect the as-built condition, not things
 16 as they go along, okay? So there's a sweep-up exercise
 17 at the end. The drawings and all the relevant
 18 fire safety information reflect the as-built condition.
 19 And, yes, there is a moment when that needs to be handed
 20 over. It's not necessarily about the incomplete or
 21 superseded information as you go. And "as-built" is
 22 a really important word.

23 Q. Yes.

24 A. Yes.

25 Q. Moving on now to the completion certificate and how

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1 regulation 38 fits in with that.

2 A. Yes.

3 Q. On Tuesday the Inquiry looked with Ms Menzies at
 4 regulation 17 of the Building Regulations, and it's
 5 right that a building control body has to satisfy itself
 6 that regulation 38 has been complied with before it can
 7 issue a completion certificate.

8 A. Yes.

9 Q. I want to explore with you how, in your experience,
 10 a building control body goes about satisfying itself
 11 that regulation 38 has been complied with.

12 In your report, you go to the fire safety procedural
 13 guidance, which gives guidance about regulation 38,
 14 among other things.

15 If we look at page 83 of your report
 16 {BLARP20000021/83} at 12.2.1, you have provided
 17 an extract there, and at the bottom it just sets out the
 18 legal status of the guide. It says:

19 "Although this guide has no legal force it is
 20 intended that all building control bodies and
 21 fire safety enforcement authorities should use the
 22 consultation procedures described in the guide as
 23 a model for arrangements they make, so that procedures
 24 will be similar throughout England and Wales."

25 You have given your opinion, and I just want to ask:

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1 was it your understanding at the time of Grenfell -- so
 2 2012 to 2016 -- that whilst this guidance has no legal
 3 force, it's nonetheless important guidance to take into
 4 account?

5 A. Yes.

6 Q. You have identified a change in the guidance between the
 7 fourth and fifth edition, and we can look at that at
 8 a table on page 93 {BLARP20000021/93}. You have
 9 provided some excerpts there, and it's the highlighted
 10 text at the bottom. You will see the fourth edition
 11 says that for regulation 38 information, a copy should
 12 also be sent to the building control body.

13 A. Yes.

14 Q. On the right-hand side, that text is no longer there in
 15 the fifth edition, and it simply says that a written
 16 confirmation to the building control body should be sent
 17 where regulation 38 information has been provided.

18 Now, we've heard evidence from Mr Hoban and Mr Allen
 19 that RBKC had a practice of accepting a verbal assurance
 20 that regulation 38 had been complied with.

21 A. Yes.

22 Q. That guidance there doesn't mention a verbal assurance
 23 being acceptable.

24 A. No, it doesn't.

25 Q. Were you aware of this kind of practice in the industry

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1 at the time?

2 A. Yes, I am aware of that practice, yes.

3 Q. How widespread was it?

4 A. How can I answer a question like that? I mean, all

5 I can tell you is that, as a fire safety engineer,

6 remember, we don't run that process, we assist

7 an architect or we assist a contractor. The last

8 experience I have on this matter before the fire, I was

9 helping a principal contractor, and in that particular

10 circumstance building control asked the principal

11 contractor to lay the manual out on a very large table,

12 I have to say, lay all the manuals out, and they

13 observed other things on site, and then they asked us in

14 our particular capacity on that job if we considered the

15 building manual to contain an adequate quantity of

16 fire safety information, and we had to discuss that with

17 them. So they did it that way. That is my last

18 experience. But I'm also aware that that does not

19 happen on our projects.

20 Q. And on your projects -- and you may not be able to help

21 us with this -- did you detect any change in practice as

22 between the fourth and fifth edition? So when the fifth

23 edition came out, did you notice building control bodies

24 stopped asking you --

25 A. I would be of the view, and we as -- you know, I would

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1 be of the view, and in the work that I have been doing,

2 that regulation 38 hasn't really had a huge priority for

3 some time.

4 Q. You have concluded in your report -- and we can look at

5 that at 12.5.18 on page 95 {BLARP20000021/95} -- that

6 your view is that the current guidance doesn't enable

7 a local authority to issue a compliant completion

8 certificate in accordance with regulation 17. Why do

9 you say that?

10 A. I feel that that change in the procedural guidance where

11 you go from, you know, being expected to actually check

12 something, and the professional design team having to go

13 to make an effort to display relevant fire safety

14 information and share it, to simply accepting a verbal

15 confirmation, is a reduction in standard. I don't know

16 how an authority can cope with that.

17 I mean, my own experience of trying to -- you know,

18 that handover is a really fraught, complex time, trying

19 to finish the construction, people want to finish up on

20 the job, trying to gather all that information, it's

21 very, very difficult. Everybody in the industry is

22 aware of how difficult it is. So for an authority to

23 just have to accept a verbal assurance, it's a very

24 light way of dealing with such an important transfer of

25 information to the person who now has to start running

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1 that building.

2 Q. Moving on now, I'm going to ask you some questions about

3 the primary refurbishment itself and what happened with

4 the building manual.

5 Just to establish some parameters, we know your view

6 is that regulation 38 applied to the primary

7 refurbishment, we have been through that already, and we

8 have also heard that your view is Rydon was the person

9 carrying out the work.

10 You have also set out in your report at page 183

11 {BLARP20000021/183} some of Rydon's contractual

12 responsibilities. So we see there at 16.2.5, Rydon had

13 a responsibility in its contract to comply with

14 statutory requirements and to obtain statutory consents.

15 Then you have also referred, at 16.2.13, which is

16 over the page {BLARP20000021/184}, to Rydon's obligation

17 to produce a building manual.

18 Again, just so we're clear -- and we have touched on

19 this briefly already -- the building manual and the

20 reason why we're talking about the building manual today

21 is because that is the means by which regulation 38

22 information was passed or could at least in principle

23 have been passed --

24 A. Exactly, that was the vehicle or the process where

25 fire safety information could have been passed, and

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1 that's how it happens on the projects that I work on.

2 SIR MARTIN MOORE-BICK: Does anybody actually identify the

3 contents of the fire safety information?

4 A. So in the work that I have done, I have been asked to

5 produce a document, it's almost like an index, setting

6 out what's required and, on the project, which party

7 should provide the information. Okay? And I call that

8 a fire safety manual index.

9 SIR MARTIN MOORE-BICK: What I was really thinking was -- it

10 was your evidence about verbal assurances --

11 A. Oh, yes.

12 SIR MARTIN MOORE-BICK: -- that started my mind working. If

13 you only have a verbal assurance, you have no evidence

14 that anything has been handed over, and almost as

15 importantly, you have no idea, even if you accept the

16 assurance, what has been handed over, do you?

17 A. I couldn't agree with you more. That's exactly the

18 situation that the building control officer finds

19 themselves in. Okay?

20 SIR MARTIN MOORE-BICK: If you give the fire safety

21 information as part of the building manual, or within

22 the building manual, is it normal to identify which

23 parts of the building manual are considered to provide

24 the fire safety information?

25 A. Yes, that is what we/I do. Yes.

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1 SIR MARTIN MOORE-BICK: Thank you.
 2 MS GROGAN: You have also mentioned that, in your
 3 experience, there are some building control bodies who
 4 would sit down and ask to see bits of the building
 5 manual, I think you mentioned earlier.
 6 A. Yes, they want to physically -- because, I mean, it's
 7 exactly as the Chairman has just said. It's almost like
 8 it doesn't even exist. You just ask a question, you get
 9 an answer. So the last project I did, they wanted to
 10 see that it existed, and they wanted assurances that
 11 parts of the manual contained the relevant fire safety
 12 information.
 13 Q. At 16.2.20 of your report, which is on page 185
 14 {BLARP20000021/185}, you have said you also note that
 15 KCTMO were responsible as a client to ensure that their
 16 appointed contractor was fulfilling their required
 17 duties, and that they appointed Artelia as their agent.
 18 A. Yes.
 19 Q. In the context of regulation 38 information, when you
 20 say KCTMO was responsible to ensure Rydon was fulfilling
 21 their duties, what do you mean?
 22 A. Well, I think what I was trying to say is sometimes I've
 23 been asked by an organisation to check the building
 24 manual they're going to receive to make sure, when it
 25 comes to the fire safety information, that it's there

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1 and accurate. Because, again, it's a bit like the
 2 building control officer just accepting, you know, some
 3 organisations will want some assurance from another
 4 party that the building manual is complete and accurate,
 5 because, as I've said, it's very, very frantic towards
 6 the end of a project, simple or complex.
 7 Q. Just to draw out a contrast to CDM, which we will come
 8 to, under CDM, the client actually has a regulatory
 9 obligation to check.
 10 A. Yes, agreed.
 11 Q. But there is no equivalent obligation under
 12 regulation 38 for the responsible person to do any
 13 checking.
 14 A. No.
 15 Q. But as we've heard from you, some do choose to do that.
 16 A. Yes. So it's an assurance rather than a duty, yes.
 17 Q. In your experience, would a client or responsible person
 18 such as the TMO have the skills and expertise to be able
 19 to police what a contractor had provided them?
 20 A. In my experience -- should they or did they, sorry?
 21 Q. Did they?
 22 A. Did they police Rydon?
 23 Q. So, in principle, a client in the position of the TMO,
 24 would they be equipped to look at the information
 25 provided and actually say, "Well, that's not right and

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1 I want this done differently"?
 2 A. Okay. Well, the KCTMO have a lot of properties, they
 3 had a lot of operating and maintaining duties already,
 4 before this refurbishment, so that branch of KCTMO could
 5 be expected to know what they needed, because they were
 6 already doing it.
 7 Q. Yes, that answers the question.
 8 A. Okay.
 9 Q. Moving on to Artelia, you have referred to their
 10 contract with the TMO.
 11 A. Yes.
 12 Q. In particular -- we can see it up on screen -- you have
 13 highlighted two of their obligations, 1.5.9 and 1.5.10.
 14 A. Yes.
 15 Q. What do you say the role of an employer's agent was?
 16 A. Well, I kind of explain that later in my report as well,
 17 that, again, my experience is, when the building manual
 18 is being handed over to a client, the employer's agent
 19 might check it for completeness, may check that it
 20 contained what the contract asked it to contain.
 21 Because the contract, as I read it technically, set out
 22 a list of information that was expected in each part.
 23 It was quite comprehensive and helpful, actually, in
 24 terms of what should go into each part of the building
 25 manual.

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1 Q. We can see your view at 16.3.61, which is on page 194
 2 {BLARP20000021/194}. You say there:
 3 "I acknowledge an Employer's Agent would not
 4 directly review the technical content of all parts of
 5 a Building Manual."
 6 But in your experience as a practising fire
 7 engineer, given that they're signing the practical
 8 completion certificate, you would expect them to satisfy
 9 themselves that O&M manuals were in place, complete and
 10 technically approved by the relevant consultant?
 11 A. Yes, because -- no, exactly, because the fear, remember,
 12 about handing over that certificate is everyone kind of
 13 packing up and leaving before the information has been
 14 gathered. So, you know, my experience is you do as much
 15 as possible before this certificate is issued, just to
 16 make sure all the companies take the time to put the
 17 information together.
 18 Q. And in broad terms -- it's dealt with in your report --
 19 did you see evidence of that checking process taking
 20 place by Artelia on this project?
 21 A. I was surprised to read, you know -- and, again, I've
 22 got the reference in the report -- at some point they
 23 said something like, "That's not part of our" -- I can't
 24 remember, sorry.
 25 Q. It's there at 16.3.62, there is an email which says, "We

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1 won't be reviewing the O&M manuals".

2 A. Oh, yes, sorry. No, sorry, excuse me. I was a bit

3 surprised to read that. I mean, I'm not making a big,

4 massive point about this, but I was surprised to read

5 that, because my experience is that, you know, the

6 certificate is issued obviously to do with the state of

7 the construction, but also that the information is in

8 good shape, and I have experience of giving a view,

9 for example, that the information is complete enough

10 that the missing pieces can be called, you know, a minor

11 defect, or that the information missing is a major

12 defect and we strongly recommend a certificate isn't

13 issued, and they really get everyone to focus on putting

14 that information together.

15 Q. Now, we know that Rydon subcontracted the preparation of

16 the O&M manual to a company called All Group Holdings.

17 A. Yes.

18 Q. How common is it for contractors to subcontract the

19 preparation of a building manual?

20 A. Yes, I have observed that happening, yes, and I don't

21 have any -- that's absolutely fine in my mind.

22 Q. How can the subcontracted company know enough about the

23 project to be able to compile fire safety information?

24 A. Well, typically they will have to be around for a while

25 and have to spend time understanding what each party is

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1 doing, and they will have a very -- my experience is,

2 you know, a very specific detailed list of things that

3 they will have worked on with the principal contractor

4 to compile, and then their job is hunting people down,

5 quite frankly. Yes.

6 Q. In your experience, do companies that are subcontracted

7 to do this kind of work advise on regulation 38, do they

8 tell the contractor what needs to be included?

9 A. No. No.

10 Q. So that's for the contractor, the contractor should know

11 already, in your view, what --

12 A. The person who's applied -- the person who's paid to get

13 the completion certificate needs to understand that,

14 who's paying the fee or ... yes.

15 Q. Have you seen any evidence that All Group Holdings were

16 specifically asked to consider or compile fire safety

17 information?

18 A. In the context of regulation 38? No. But were they

19 asked to get information about fire safety systems?

20 Yes.

21 Q. You have noted in your report that the instruction to

22 proceed to All Group Holdings came on 11 March 2016, and

23 at the time that was four weeks before scheduled

24 completion of the works, although completion did happen

25 later.

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1 In your experience, was that sufficient time to

2 compile a building manual for a project such as

3 Grenfell?

4 A. I think that's a very short period of time.

5 Q. Moving on now to your analysis of the building manual.

6 You have been provided with two versions of the

7 building manual, one provided by Rydon that you received

8 in 2017, and then one provided by the TMO that you

9 received in 2020. It's right that your report now

10 provides an in-depth analysis of the building manual

11 provided to you in February 2020, so that's the one from

12 the TMO.

13 A. Yes.

14 Q. We have already established that the Grenfell O&M manual

15 does not include a self-contained package of information

16 that purports to be regulation 38 information, does it?

17 A. Yes.

18 Q. And there is no index, as you have said, identifying

19 where the fire safety information is?

20 A. No.

21 Q. You have carried out a detailed analysis of the manual

22 in sections 18, 19, appendix B and section 20 of your

23 report. Is it right you have done that because you have

24 looked to see if, notwithstanding that there is no

25 index, the manual itself does in fact contain the

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1 relevant fire safety information?

2 A. Yes, I do, yes.

3 Q. I just want to highlight some of your key conclusions

4 arising out of that analysis, and I have a few specific

5 questions for you along the way.

6 If you go to page 233 {BLARP20000021/233} of your

7 report, and it's 19.2.2 and 19.2.3, you point out that

8 the manual did not contain an as-built fire safety

9 strategy and did not include Exova's outline fire safety

10 strategy.

11 We know that Exova's OFSS version 3 had already been

12 issued to the TMO. In those circumstances, did it need

13 to be in the O&M manual?

14 A. A fire strategy that reflected the as-built condition

15 needed to be in the building manual, and it was not.

16 Q. If it had been included, was the outline fire safety

17 strategy that Exova drafted adequate to satisfy the

18 requirements of regulation 38 or the guidance in

19 BS 9999?

20 A. No.

21 Q. At 19.2.9 which is on page 235 {BLARP20000021/235}, you

22 say that the information about active and passive fire

23 protection measures is spread across five different

24 parts of the manual containing 2,000 documents, some of

25 which are substantial in length; is that right?

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1 A. Yes.
2 Q. In the next paragraph, you identify that there are
3 sections of the building manual that are blank and
4 contain no information.
5 A. That's correct.
6 Q. Does that include sections where fire safety information
7 ought to have been provided?
8 A. I'd have to --
9 Q. Check?
10 A. No, so I did that summary table in the appendix just
11 showing where the empty files were. I don't know that
12 off by heart, no.
13 Q. We can go to the appendix in a moment.
14 At 19.2.13 you say that:
15 "Another issue is that a comprehensive Operation and
16 Maintenance manual is not provided for all fire safety
17 systems ... therefore, the responsible person is not
18 provided with the necessary fire safety information to
19 fulfil their duties ..."
20 A. Yes.
21 Q. At 19.2.14 you say:
22 "There are parts of the Building Manual which
23 contain what appears to be sufficient information, but
24 when I interrogated the fire safety information,
25 significant issues emerged."

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1 You have used the external wall information to
2 provide a more detailed example of this in section 20,
3 which we will come on to in a second.
4 Would it be fair to say as a way of summarising all
5 of that that the building manual is not complete with
6 regards to fire safety information?
7 A. Yes.
8 Q. To the extent that information is present, it's
9 difficult to locate within the manual?
10 A. Yes.
11 Q. And even where there is some information, it's often
12 inadequate to enable the responsible person to discharge
13 their duties?
14 A. Yes.
15 Q. Anything else by way of summary?
16 A. No.
17 Q. That encapsulates it.
18 At paragraph 19.2.15 you go on to say that that's
19 not unusual compared with your own professional
20 experience over many years.
21 A. Yes.
22 Q. How does the refurbishment O&M manual compare with
23 building manuals that you have seen for projects
24 similar? Is it of a piece or is it substantially better
25 or substantially worse?

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1 A. I think it's as bad as the bad manuals I have reviewed
2 in my life. But there are, you know, just -- it's this
3 thing, you know, I've also worked with lots of people
4 who have tried to do their best as well in the last
5 23 years, and so I've also seen building manuals that
6 were very clear and allowed me to make appropriate
7 decisions in a building when I needed to do some work.
8 Q. Now looking briefly at the external wall information.
9 A. Yes.
10 Q. You have analysed that in section 20 of your report, and
11 if we just go to your view at 20.6.1 which is on
12 page 285 [BLARP20000021/285].
13 A. Yes.
14 Q. You say there:
15 "On the basis of the evidence I have presented
16 above, I conclude that the person carrying out the work
17 did give some fire safety information to the responsible
18 person, but that information could not assist the
19 responsible person to operate and maintain the building
20 with reasonable safety."
21 A. Yes.
22 Q. In terms of the façade, that's because, as you say in
23 the next paragraph, you have shown that the information
24 provided did not describe or provide information about
25 the performance of each as installed component.

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1 A. Yes.
2 Q. You also note that, most substantially, it's because the
3 materials themselves chosen were not compliant with the
4 requirements of Approved Document B.
5 A. Yes.
6 Q. My question is: is this a failure not so much
7 a regulation 38 failure, but more of a fundamental
8 failure to comply with B4 of the Building Regulations?
9 A. Yes, so I think the information ... so when a company
10 is, you know, submitting their information to the
11 building manual, so we would have to do that in Arup,
12 it's almost like the last time sometimes you have to
13 check that, you know, the advice was accurate, the
14 information reflects the advice, and that it all
15 complies then, say, with the fire safety objectives set.
16 So it's an important last set of checks, really, before
17 you hand over a building.
18 Q. So that was my next question: given the as-built
19 condition of the façade was what it was, and that
20 regulation 38 information could only reflect what was
21 as-built, if the O&M manual had sort of clearly
22 identified all of that, should it have prompted any
23 review of the design even at that late stage?
24 A. Okay, so I think you're asking me to contemplate when
25 Harley were assembling their part of the building

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1 manual, did they check each component of a final
 2 fire strategy that contained the performance criteria
 3 and do a final check that the certs and the information
 4 they had aligned with those performance requirements?
 5 Q. Yes, did that check --
 6 A. First of all, that couldn't happen because that wasn't
 7 written down anywhere, and then obviously I don't know
 8 what Harley did when they put their information
 9 together.
 10 Q. But as we have explored, given that you could only
 11 present as-built information, is it right that these are
 12 failures to comply with regulation 38?
 13 A. Oh, do you mean that you're allowed to provide as-built
 14 information that's wrong and you have still discharged
 15 your duty under regulation 38? Is that what you're
 16 asking me?
 17 Q. Well, how does that work in circumstances where you have
 18 a non-compliance?
 19 A. Well, you're not meant to hand over a non-compliant
 20 building in the first place.
 21 Q. Does the regulation 38 process provide any additional
 22 check or layer of protection against that?
 23 A. You might hope that it would.
 24 Actually, can I just add something to that?
 25 You know, I think I addressed this in this report. The

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1 TMO were asked about the cladding by the Fire Brigade,
 2 weren't they, in that letter --
 3 Q. Yes.
 4 A. -- a few months or weeks before the fire, and
 5 the Chairman was asking me about how the TMO --
 6 you know, if you've existing information and new
 7 information. I mean, from what I can see, the evidence
 8 I have is they didn't seem to go to any building manual
 9 when that question was asked, and I think that's another
 10 important point to make.
 11 Q. So when you refer to the letter from the LFB, that's
 12 a letter that was sent not just to the TMO but it was
 13 asking, after Lakanal House, for details --
 14 A. Yes. Because I think sometimes people go: why does this
 15 matter? Well, that was a really good example of where
 16 you would open up the building manual and again check
 17 the information you have, check that it is all accurate
 18 and compliant, and have another opportunity to work out
 19 what that might all mean, having been asked.
 20 SIR MARTIN MOORE-BICK: Ms Grogan, how are we getting on?
 21 I am thinking it's time we had a break soon.
 22 MS GROGAN: I was just thinking that myself. We have come
 23 to the end of regulation 38, actually, so now would be
 24 a great time.
 25 SIR MARTIN MOORE-BICK: That's a very good time, then, isn't

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1 it?
 2 THE WITNESS: Good, thank you.
 3 SIR MARTIN MOORE-BICK: We will take a short break. 3.30,
 4 please. No talking while you're out.
 5 THE WITNESS: I won't.
 6 SIR MARTIN MOORE-BICK: Thank you very much.
 7 (Pause)
 8 3.30, please. Thank you.
 9 (3.15 pm)
 10 (A short break)
 11 (3.30 pm)
 12 SIR MARTIN MOORE-BICK: Right, Dr Lane. Now, then, maybe
 13 the last lap.
 14 THE WITNESS: Hopefully.
 15 SIR MARTIN MOORE-BICK: Or at least the penultimate lap.
 16 Yes, Ms Grogan.
 17 MS GROGAN: One mini topic and then the last lap.
 18 We have finished regulation 38, but in your
 19 regulation 38 report you have also looked at the
 20 building control process in sections 14 and 15. We have
 21 not been through that with you today, but there's just
 22 one point I would like to pick up, which is about the
 23 consultation with the fire authority.
 24 So on page 149 of that report, which is the
 25 {BLARP20000021/149}, at 15.5.22, you talk about the

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1 consultation with the fire authority, and you say it's
 2 not clear to you why RBKC and the fire authority
 3 considered the terms of the consultation to be limited
 4 to matters to B1 and B5, and then you say it's not your
 5 experience of how fire strategies have been dealt with.
 6 A. Yes.
 7 Q. I just want to ask you about your experience.
 8 Can you tell us what your experience has been?
 9 A. Yes, so I hope this is my very latest version, because
 10 also I've written here Lynsey Seal produced a second
 11 witness statement and clarified the situation regarding
 12 a more encompassing need to consider all the parts
 13 together, and that is my experience, when I have been
 14 asked to participate in such consultations.
 15 Q. So just to summarise Ms Seal's evidence -- and we took
 16 Ms Menzies to it, because she hadn't updated her
 17 report --
 18 A. Yes.
 19 Q. -- inspecting officers are more likely to offer
 20 observations in relation to B1 and B5, but there is no
 21 restriction or limitation --
 22 A. Exactly.
 23 Q. -- on what they should consider.
 24 A. Yes.
 25 Q. She thinks it's more likely that the fire engineering

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1 group would comment on B4 rather than local officers .
 2 A. Understood.
 3 Q. And she said that, in the context of Grenfell, as no
 4 problem with B4 had been flagged in the consultation,
 5 because of what was said in the Exova outline fire
 6 safety strategy that you have been looking at for the
 7 last two days, there would be no reason for LFEPA to
 8 comment on that aspect of the design.
 9 A. Understood.
 10 Q. Does that reflect your experience, that if a problem
 11 with the design is not specifically flagged, then they
 12 won't comment on it?
 13 A. Well, I don't know that I would use the word "problem",
 14 but -- so we talked a lot about the fire strategy and
 15 this issue of writing down what's maybe a deviation or
 16 not, that's another reason why it's so important. So
 17 I have had really detailed discussions with the
 18 fire engineering group at LFB on the subject of B4
 19 because of some very specific reasons on a project I may
 20 be working, and I draw it to everybody's attention, and
 21 then we enter into technical conversations about it .
 22 That's why a fire strategy needs to be clear on complex
 23 issues, you know, or limits, particularly when you are
 24 working on an existing building and you're restricted
 25 sometimes on what you can achieve.

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1 Q. Thank you.
 2 Moving on then to CDM, and that's in your other
 3 report, which is {BLARP20000016}. We're going to start
 4 this topic by looking at an overview of how the
 5 CDM Regulations work with respect to the health and
 6 safety file .
 7 A. Okay.
 8 Q. So you set out the purpose of the CDM Regulations in
 9 1.1.3 of your report, which is on page 6
 10 {BLARP20000016/6}. You say there it's as described in
 11 the regulations, they're:
 12 "... intended to protect persons from health and
 13 safety risks arising from construction work through the
 14 establishment of a systematic framework for management
 15 of those risks."
 16 A. Yes.
 17 Q. In your experience, are they most relevant to health and
 18 safety and welfare during construction projects, or do
 19 they have an application after construction projects are
 20 finished? So is it just to focus on construction works
 21 while they're happening?
 22 A. They protect people during construction, and -- sorry,
 23 I'm just struggling a little bit with the question.
 24 They protect people during construction -- do you mean
 25 when there is no construction or ...?

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1 Q. You obviously have a system where you have construction
 2 works as they're happening, so whilst building work is
 3 going on.
 4 A. Yes.
 5 Q. Are they limited to that particular period, when
 6 building work is going on, or do they have relevance
 7 outside of that period?
 8 A. When there is no building work going on in an existing
 9 building?
 10 Q. Yes.
 11 A. No, but you -- no.
 12 Q. I just wanted to clarify what their scope is .
 13 A. Okay.
 14 Q. In section 2 of your report, which starts on page 11
 15 {BLARP20000016/11}, you give an overview of the history
 16 of the CDM Regulations, and this is relevant because
 17 your report looks at earlier works as well.
 18 A. Yes.
 19 Q. Just to summarise, and you can tell me if I've got this
 20 right: the first CDM Regulations were the
 21 CDM Regulations 1997 -- I think that might be a typo, it
 22 should be 1994. They were replaced by the
 23 CDM Regulations 2007.
 24 A. Yes.
 25 Q. And this is where we first see a reference to a health

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1 and safety file, is in those 2007 regulations.
 2 If you need to refresh your memory, it's at 2.13 of
 3 your report.
 4 A. I'm just frantically trying to read the regulations in
 5 my mind from before 2007. Do you want to --
 6 Q. Do you want to go to page 11 {BLARP20000016/11} of your
 7 report?
 8 A. Yes, please.
 9 SIR MARTIN MOORE-BICK: Do you think we need to spend too
 10 much time on the history?
 11 MS GROGAN: No, we don't. It's just to outline, the point
 12 is, and Dr Lane can confirm, that for the primary
 13 refurbishment, we started with the 2007 regulations
 14 applying --
 15 A. Yes.
 16 Q. -- and then there was a transitional period, and the
 17 2015 regulations applied before construction works
 18 finished .
 19 A. Yes.
 20 Q. Supporting the different versions of the CDM Regulations
 21 there are approved codes of practice .
 22 A. Yes.
 23 Q. For the 2007 regulations there was one approved code of
 24 practice, and you have provided an excerpt from that on
 25 page 15 {BLARP20000016/15} of your report at 2.4.6, and

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1 this is just to understand the status of an approved
2 code of practice. The second paragraph in italics there
3 says it has a special legal status:

4 "If you are prosecuted for breach of health and
5 safety law, and it is proved that you did not follow the
6 relevant provisions of the Code, you will need to show
7 that you have complied with the law in some other way or
8 a Court will find you at fault."

9 A. Yes.

10 Q. Was that your understanding at the time, they had
11 a special status?

12 A. Yes, that's my understanding.

13 Q. As explained there.

14 For the 2015 regulations, if we go to page 16
15 {BLARP20000016/16}, there was a Health and Safety
16 Executive guidance document, so not an approved code of
17 practice, called "Managing health and safety in
18 construction".

19 At 2.4.11, you have quoted there from its
20 explanation of its legal status. It says it is:

21 "... issued by the Health and Safety Executive.
22 Following the guidance is not compulsory, unless
23 specifically stated, and you are free to take other
24 action. But if you do follow the guidance you will
25 normally be doing enough to comply with the law. Health

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1 and safety inspectors seek to secure compliance with the
2 law and may refer to this guidance."

3 You have said elsewhere in your report that there
4 was an intention from the HSE to produce an approved
5 code of practice, but that didn't happen.

6 A. Yes.

7 Q. In your mind at the time, is there a difference between
8 the approved code of practice and this guidance, in
9 terms of how you should use it and whether you should
10 follow it?

11 A. Well, so I would reflect on what the HSE themselves say,
12 and in the absence of any other form of guidance,
13 I would still be quite focused on their non-ACOP
14 publication, waiting for the ACOP to arrive.

15 Q. Paragraph 2.4.16, so on the same page, just a bit
16 further down, you have said that in your report the
17 approach you have taken is, if the duties set out in the
18 CDM Regulations approved codes of practice or in the
19 2015 guidance document have not been discharged, you
20 will treat that as a breach of the CDM Regulations.

21 A. Yes.

22 Q. Again, can you just explain why you have taken that
23 approach?

24 A. I wanted to be clear the basis of my analysis, and the
25 technical opinions I gave in my report.

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1 Q. Is it your understanding that where somebody hasn't
2 complied with the guidance or an approved code of
3 practice, it is in theory possible to demonstrate
4 compliance by another means?

5 A. If they demonstrate compliance by another means, yes.

6 Q. With a health and safety file, how relevant is that
7 alternative route to compliance? Does it arise in
8 practice?

9 A. I honestly don't even understand the concept of
10 an alternative route to compliance when it comes to
11 a health and safety file. I don't even know what that
12 would be.

13 Q. That's helpful, thank you.

14 A. Yes.

15 Q. Have you seen any suggestion in the evidence that you
16 have reviewed that an alternative route to compliance
17 was contemplated by those working at Grenfell?

18 A. No. Can I just say something? So the ACOP and the
19 regulations are quite simple, in a way, with very simple
20 lists of things you need to provide in a health and
21 safety file, and it's literally about putting them into
22 a place together. I don't know what other alternative
23 there could be. So I don't want us to overcomplicate
24 putting information into a file, following a list.

25 Sorry, I probably just sounded very rude there,

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1 I didn't mean to sound rude.

2 Q. It's very helpful --

3 A. So I can't get into a big alternative compliance, like
4 we might about Approved Document B, where there are
5 other British Standards with some very complex numerical
6 analysis, for example, to comply. A health and safety
7 file, again, is just about relevant information being
8 gathered. I hope that's okay.

9 Q. That's very helpful, thank you.

10 So in your report you are focusing on the parts of
11 the CDM Regulations that deal with information related
12 to fire safety. So that's what you have been looking at
13 in your report. You have been looking at --

14 A. Yes.

15 Q. -- pre-construction information, you have mentioned the
16 construction phase plan but not looked at that in depth,
17 and then you have looked in depth at the health and
18 safety file.

19 A. Yes, so what you give at the end of the project.

20 Q. Just for reference, if we go to page 13
21 {BLARP20000016/13} of your report, there you explain
22 what these different things are. We don't need to look
23 at them in any great detail, but just to know that there
24 are three sets of information contemplated by the
25 CDM Regulations: pre-construction information,

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1 a construction phase plan and then, over the page
 2 {BLARP20000016/14}, you have explained what a health and
 3 safety file is.
 4 A. Yes.
 5 Q. In terms of terminology, again, for clarity, I just want
 6 to run through a few key terms and have you help
 7 identify what they are.
 8 A number of duties in the CDM Regulations, both 2007
 9 and 2015, apply to the client.
 10 A. Yes.
 11 Q. What is the client under CDM? So who is the client, in
 12 general terms?
 13 A. Well, will you put up what the CDM -- the
 14 CDM Regulations provide a definition.
 15 Q. Yes, we can do that.
 16 A. Yes, please.
 17 Q. Just a second, I'll find the reference.
 18 (Pause)
 19 Sorry, we can come back. Do you think if we scroll
 20 down we will find it in this section?
 21 A. Yes, because all the duty holders under the CDM have
 22 a definition, so I would prefer just not to paraphrase
 23 and get it wrong.
 24 Q. Yes, I think it will be in section 2 of your report.
 25 A. Yes.

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1 Q. Someone will find it for me. I will skip over, then,
 2 that kind of key terminology.
 3 A. Yes.
 4 Q. Going on then to the requirements of -- oh, here we go.
 5 If we go to {INQ00011316/2}, these are the
 6 CDM Regulations themselves, and you will see there it
 7 says:
 8 "client" means any person for whom a project is
 9 carried out."
 10 A. Yes.
 11 Q. For Grenfell, for the primary refurbishment, who was the
 12 client?
 13 A. The KCTMO, as I understand things.
 14 Q. It won't be in the 2015 regulations, but there's
 15 something in the 2007 regulations known as a CDM
 16 co-ordinator.
 17 A. Yes, so --
 18 Q. We will look specifically at their duties relating to
 19 the health and safety file, but who was that on
 20 Grenfell? Who held that role?
 21 A. It was Artelia.
 22 Q. If we go to page 4 of this document {INQ00011316/4},
 23 principal contractor, just at the top, means contractor
 24 appointed to perform the specified duties in
 25 regulations 12 to 14.

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1 Again, on Grenfell, who was the principal
 2 contractor?
 3 A. Rydon.
 4 Q. In 2015, the role of CDM co-ordinator ceased to exist
 5 and there became something known as a principal
 6 designer.
 7 Again, just to summarise, we know, and it's set out
 8 in your report in detail, that ultimately the TMO took
 9 on that role of principal designer.
 10 A. Yes, they did, yes.
 11 Q. You have already been through with Ms Grange earlier
 12 today about the idea of a designer under the
 13 CDM Regulations.
 14 A. Yes.
 15 Q. And you have explained who may or may not have that
 16 role.
 17 A. Yes.
 18 Q. Going on, then, to the health and safety file itself,
 19 can you just summarise what the purpose of a health and
 20 safety file is? So why do we have health and safety
 21 files?
 22 A. So when you go to do other work in the building, you can
 23 safely do so, and there's different types of work that
 24 you might need to do. So I'll just talk about my own
 25 experience, if that's okay.

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1 So if I'm sending a team of people to do an existing
 2 building inspection, we will need the health and safety
 3 file to understand, for example, if or where the
 4 asbestos is located, and we would read about that in the
 5 health and safety file when we are preparing our own
 6 risk assessment to attend site.
 7 Other parties, if they're doing minor or major
 8 works, need to understand where different components of
 9 the building are located, including fire safety
 10 features, so that they can either rely on them or not
 11 disturb them when they're doing the work.
 12 Q. You have explained in your reports -- and I'll just give
 13 the reference for the transcript, at 4.3.10 to 12 on
 14 page 31 {BLARP20000016/31} -- that CDM 2007 required
 15 preparation of a health and safety file where a project
 16 is notifiable.
 17 A. Yes.
 18 Q. And that has a specific concept in the regulations.
 19 A. Yes.
 20 Q. And Grenfell was a notifiable project.
 21 A. Yes.
 22 Q. So a health and safety file was required.
 23 A. Yes.
 24 Q. And it was the duty of the CDM co-ordinator to produce
 25 that health and safety file and to liaise with the

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1 principal contractor regarding the contents of the file
 2 and the information that the principal contractor needs
 3 to provide.
 4 A. Yes.
 5 Q. If there is no health and safety file at the start of
 6 a project, the CDM Regulations required the CDM
 7 co-ordinator to prepare one.
 8 A. To start preparing one, yes.
 9 Q. The client, designer and contractor all have duties
 10 under CDM to provide the CDM co-ordinator with relevant
 11 information.
 12 A. Yes.
 13 Q. So they work together to produce --
 14 A. Exactly, each duty holder has to play their relevant
 15 part, and that's defined in the regulations.
 16 Q. Then we know that after 2007, CDM 2015 comes in and has
 17 transitional provisions in place.
 18 A. Yes.
 19 Q. Again, just some basic structural points that we all
 20 understand.
 21 A. Understood, yes.
 22 Q. Under those regulations, the CDM co-ordinator remained
 23 in position until a principal designer was appointed or
 24 the project came to an end.
 25 A. Yes.

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1 Q. And there's a duty on the client -- and this is, again,
 2 for the transcript, in your report on page 42
 3 {BLARP20000016/42} -- to appoint a principal designer
 4 before 6 October 2015, and if they fail to make that
 5 appointment, then the client themselves becomes the
 6 principal designer.
 7 A. Yes.
 8 Q. At 5.5.17 of your report, which is again on page 42,
 9 there were duties on the CDM co-ordinator during that
 10 period, including to liaise with the principal
 11 contractor over the contents of the health and safety
 12 file, and if there was no health and safety file, then
 13 to prepare it. So even during that transitional period,
 14 there was an obligation on the CDM co-ordinator before
 15 they stopped being in that role.
 16 A. Yes, exactly, getting everything ready, yes.
 17 Q. Great.
 18 Now, looking at the contents of a health and safety
 19 file, you have identified in your report, in
 20 section 5.7, that the guidance from the Health and
 21 Safety Executive about what it should contain hasn't
 22 changed from 1994.
 23 A. Not really, no, no.
 24 Q. If we go to page 48 {BLARP20000016/48} of your report,
 25 please, at 5.7.16, you set out -- if we just pause with

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1 the page zoomed out like that, that's the big list of
 2 information you need to have in your health and safety
 3 file.
 4 A. Yes.
 5 Q. Then at 5.7.16, if we go over the page
 6 {BLARP20000016/49}, the most relevant requirements to
 7 fire safety are:
 8 "(b) any hazards that have not been eliminated
 9 through the design and construction processes, and how
 10 they have been addressed ..."
 11 A. Yes.
 12 Q. "(g) the nature, location and markings of significant
 13 services, including underground cables; gas supply
 14 equipment; fire-fighting services ..."
 15 A. Yes.
 16 Q. And:
 17 "(h) information and as-built drawings of the
 18 building, its plant and equipment ..."
 19 A. Yes.
 20 Q. Those are the features of a health and safety file that
 21 you focused on in your analysis?
 22 A. Yes.
 23 Q. Can you briefly explain how the obligation to produce
 24 a health and safety file ties in with the obligations
 25 we've just been looking at under regulation 13. So is

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1 there an overlap in the kind of information that you
 2 should be providing?
 3 A. In regulation 13?
 4 Q. Sorry, 38, I misspoke.
 5 A. Overlap with the duties in regulation 38 ...
 6 Q. So how does the health and safety file fit with
 7 regulation 38, if at all?
 8 A. Well, it doesn't. So they're two different things.
 9 They both need some form of fire safety information.
 10 Q. If we just go to page 8 {BLARP20000016/8} of your
 11 report, you set this out in a little bit more detail.
 12 At 1.2.9 you say both the fire safety manual that we
 13 have been talking about and the health and safety file
 14 should have been kept available.
 15 A. Yes.
 16 Q. At 1.2.10, BS 9999 gives a bit of guidance and says:
 17 "Depending on circumstances, the fire safety manual
 18 might need to be separate from the safety plan required
 19 by the Construction (Design and Management) Regulations
 20 2007, in which case the information from this should be
 21 duplicated in the fire safety manual."
 22 A. Yes, I think it means physically separate for whatever
 23 reason in a company, yes.
 24 Q. Then we have 1.2.11, so just zoom down the page a little
 25 bit. The approved code of practice again talks about

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1 the relationship between the two, and it says here about
 2 the health and safety file it can be:
 3 "... combined with the Building Regulations Log
 4 Book, or a maintenance manual providing this does not
 5 result in the health and safety file being lost or
 6 buried."
 7 A. Exactly. So it's as we spoke about in regulation 38.
 8 It's not about having whole bundles of the same
 9 information with different titles; you can have one
 10 source and just clearly reference it. The health and
 11 safety file, by my experience -- and that's why I wrote
 12 that specifically in my CV -- tends to be a separate
 13 formal part of the building manual and they are there
 14 together.
 15 Q. I'm now going to move on and look at what happened in
 16 the Grenfell primary refurbishment, and you deal with
 17 that in chapter 9 of your report. We probably don't
 18 need to go there, but to understand how the whole story
 19 works, you need to first look back at what happened
 20 before the primary refurbishment to the previous set of
 21 works, which was the fire door replacement works, and
 22 what we know -- and it's set out on page 78
 23 {BLARP20000016/78} of your report -- is that there was
 24 no health and safety file for that set of works.
 25 A. There was no health and safety file for Grenfell Tower,

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1 not for that set of works.
 2 Q. For Grenfell Tower. So as at the time of the primary
 3 refurbishment, there was no health and safety file.
 4 A. Exactly.
 5 Q. And that triggered the requirement for the CDM
 6 co-ordinator to prepare one, because none existed.
 7 A. Yes, so it was required to exist, it didn't exist, and
 8 so, at the primary refurbishment, now there was a duty
 9 to commence that process.
 10 Q. You have said at 9.7.4 on page 105 {BLARP20000016/105}
 11 of your report that Artelia noted that in their
 12 pre-construction information --
 13 A. That's correct.
 14 Q. -- and said there was no existing health and safety
 15 file.
 16 A. Yes.
 17 Q. Should that have raised any alarm bells with them at the
 18 time? Should that have concerned Artelia, that there
 19 wasn't one, or was that a relatively common occurrence
 20 at the time?
 21 A. But I think they were very clear that there was none,
 22 and then they did set out the contents of one.
 23 Q. In your experience, was it common for health and safety
 24 files to be absent at this time, so in 2012? Was that
 25 common across the industry?

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1 A. I have no idea about the whole industry and health and
 2 safety files.
 3 Q. Have you ever come on to a project where there has been
 4 no health and safety file in existence?
 5 A. I have, I have been asked to send staff to buildings
 6 with no health and safety file, and then I have to
 7 obtain the information a different way so it is safe for
 8 them to enter.
 9 Q. Turning to the relevant guidance, you have set out
 10 a quote from the approved code of practice on page 106
 11 of your report {BLARP20000016/106}, so that's 9.7.14.
 12 It's the text in bold, it says:
 13 "For this to happen, CDM co-ordinators need to make
 14 appropriate arrangements at the beginning of the project
 15 to collect and compile the information that is likely to
 16 be needed for the file as work progresses."
 17 So in layman's terms, they need to get started on
 18 a health and safety file as soon as they're appointed.
 19 A. Yes.
 20 Q. At 9.7.16 you quote from regulation 22. You say that
 21 the approved code of practice makes it clear that KCTMO
 22 as client should make sure that the CDM co-ordinator
 23 compiles the file.
 24 A. Yes.
 25 Q. Is there evidence of Artelia taking steps to compile the

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1 file at the outset of their appointment?
 2 A. Not that I could find in the evidence.
 3 Q. Was there a file in place at the time the regulations
 4 changed in 2015?
 5 A. Not that I could find in the evidence.
 6 Q. Should there have been a file in place at this stage, or
 7 was it acceptable to wait until completion to finalise
 8 it?
 9 A. My understanding of the six-month transitional
 10 arrangements was actually to stop that from occurring.
 11 So instead of having one regulation on a Friday, jumping
 12 straight to the next regulation on a Monday, and,
 13 you know, the complexity that would cause on a project,
 14 the HSE brought in the six-month transition to allow
 15 that preparation, so --
 16 Q. So was the idea that you would have, during this
 17 six-month period, if you didn't have a health and safety
 18 file already --
 19 A. You had time to prepare.
 20 Q. -- you'd have time?
 21 A. Yes, you had time to prepare, because the duty holder
 22 definitions were changing and that was complicated.
 23 Q. So the idea was that a principal designer, once they
 24 came into existence, should have had a health and safety
 25 file to work from --

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1 A. Yes.
 2 Q. -- if there were works ongoing at that point?
 3 A. Yes, that's correct, yes.
 4 Q. If we could go to {ART00006299}, this is an email from
 5 Paul Burrows to Claire Williams dated 28 April 2015, and
 6 he says he will be managing the process, but that the
 7 health and safety file may be completed by one of his
 8 colleagues, because you will see the subject line says
 9 "RE: Grenfell H&S File".
 10 He then goes on to say:
 11 "... to be honest, it is rare to receive information
 12 during the project - it usually comes through at the end
 13 when there is little or no likelihood of it changing."
 14 Does that reflect your professional experience of
 15 how health and safety files would be prepared at the
 16 time?
 17 A. It can be last minute. Let's say the as-built
 18 information you would need in the health and safety
 19 file. However, I am used to -- there's something called
 20 the CDM register where designers raise, you know, risks
 21 they may not be able to mitigate or require attention
 22 even after handover. My experience is that I have been
 23 asked by CDM co-ordinators throughout a project to keep
 24 that part up to date.
 25 Q. So that was that first chunk of text we saw when we

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1 looked at what needs to be in a health and safety file,
 2 and the information that's particularly relevant to fire
 3 is risks that haven't been mitigated?
 4 A. Yes, so the health and safety file will contain as-built
 5 information, so obviously there's no -- you know, it has
 6 to be built to become as-built to go into the file.
 7 There are some more dynamic processes around tracking
 8 residual risks throughout the design period that I would
 9 expect to be more accurate, and the preparation of the
 10 file, getting ready for the as-built information, again,
 11 remember, there's lots of information, lots of parties,
 12 so there is work needed setting up the structure, who's
 13 going to be responsible for what, and getting ready to
 14 obtain any last-minute information as well. You don't
 15 do it in the last week because there's too much to do.
 16 Q. I just want to look at some of the oral evidence, and
 17 Mr Cash's evidence on {Day49/80}, please.
 18 As it's loading, he is being asked questions by
 19 Mr Millett about 2013, so that initial stage when there
 20 wasn't a health and safety file before these
 21 transitional provisions kicked in. At line 10 he says:
 22 "Question: Now, in the circumstances where there
 23 was no health and safety file for Grenfell Tower at that
 24 time, so November 2013, would you have expected Artelia
 25 to produce one?"

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1 "Answer: No.
 2 "Question: Why not?
 3 "Answer: Because those regulations refer to not
 4 only refurbishment projects, but also to new
 5 construction projects where there wouldn't have been
 6 a health and safety file. What it is saying is that the
 7 obligation is to produce one, but it doesn't say when,
 8 and as is normally the practice, the information for the
 9 health and safety file is amassed during the project,
 10 and the health and safety file is produced at the end of
 11 the project when all the information is available and
 12 there are no further changes to be made to that
 13 information."
 14 Is it your understanding of the regulations and
 15 guidance that there is a distinction between new-build
 16 and refurbishments in terms of when a health and safety
 17 file --
 18 A. I think the regulations themselves make that clear.
 19 Q. And that's that there is no distinction between the two
 20 if you required --
 21 A. It says the health and safety file has ... there has to
 22 be a health and safety file for an existing building, by
 23 the very nature of the fact that work was done, the
 24 building now exists, there needs to be a health and
 25 safety file.

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1 Q. But if there isn't one, there is no difference for
 2 a refurbishment project; you have to do one and, as we
 3 have been through, the guidance says you should get on
 4 with it.
 5 A. Yes.
 6 Q. Is that your understanding?
 7 A. Okay, so, sorry, do the regulations say for
 8 a refurbishment you can wait to the end for --
 9 Q. Yes.
 10 A. No, it doesn't say that at all.
 11 Q. Mr Cash's evidence was that he didn't think one had to
 12 produce one until the end, you just answered that
 13 question.
 14 A. Yes.
 15 Q. Again, you have answered this question in part: what
 16 kind of information would have been available during the
 17 course of the project --
 18 A. Yes.
 19 Q. -- and, in particular, before Artelia ceased to be CDM
 20 co-ordinator, that they could have put in a draft health
 21 and safety file?
 22 A. What --
 23 Q. What types of information? So I'm not asking for you to
 24 identify specific documents but, in principle, was there
 25 information out there that could have been compiled at

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1 an earlier stage?

2 A. I have not looked at what everybody was doing every

3 week, the state of completeness of the construction and

4 which documents should have been ready in what week.

5 Q. Okay.

6 A. Yes.

7 Q. Moving on now to the appointment of principal designer.

8 We have been through how that worked in principle and

9 also that ultimately the TMO concluded that it would

10 fulfil the principal designer role. You have looked at

11 that chronology in quite a bit of detail in your report.

12 A. Yes.

13 Q. For the transcript, it's 9.8.22 to 9.8.53 of your

14 report. We don't need to go to it, and we have got the

15 ultimate conclusion.

16 If we go to page 115 {BLARP20000016/115} we see

17 there you have provided a little summary of what

18 happened.

19 A. Yes.

20 Q. That goes over the page.

21 A. Yes.

22 Q. Through that process, you have noted various internal

23 communications within Artelia about this issue.

24 A. Yes.

25 Q. Are you critical of Artelia's handling of the process of

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1 handover to the TMO?

2 A. Can we go back to the page?

3 Q. So back to page 115.

4 A. Am I critical? Well, I set out what I observe in the

5 evidence. I believe that -- you see point (a)?

6 Q. Yes.

7 A. That 2 February email, I think that's the Keith Bushell

8 email to his colleague saying, "This project is not

9 going to be handed over before 6 October".

10 Q. Yes.

11 A. Okay? So there's an awareness, the transition period is

12 coming and that work needs to be done, and I reviewed

13 the evidence to understand what work was done, and

14 I couldn't find any.

15 Q. Is that something you feel you are able to give

16 an expert opinion on, whether that falls below the

17 standard of a CDM co-ordinator, or is that something

18 that's outwith your expertise?

19 A. As I said in my report, I recommended the Inquiry took

20 advice from a CDM expert if they wanted to explore that

21 any further.

22 Q. Thank you.

23 Later in your report at 12.2.7 on page 170

24 {BLARP20000016/170}, you note that:

25 "It is of concern that KCTMO accepted the role of

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1 Principal Designer when Claire Williams retrospectively

2 acknowledges ... 'I would not have had the technical

3 expertise to assess whether it complied with the

4 statutory guidance."

5 A. Yes.

6 Q. Did you hear Ms Williams' oral evidence?

7 A. I mean, I did listen to her, but I, you know ...

8 Q. Has your view changed at all on that?

9 A. Look, now, I didn't listen to her evidence in full and

10 have a big think about how it impacted my report, so if

11 you need me to do that, I shall.

12 Q. Some related questions to that.

13 Is it fair to say that the TMO had to take on this

14 role by default because nobody else on the project had

15 agreed to take it on?

16 (Pause)

17 Perhaps if I put it another way. Were there other

18 options --

19 A. Sorry, I was just trying to think, sorry, I wanted to --

20 so, as a director of a multidisciplinary design company,

21 you know, I have to talk to my clients about

22 CDM Regulations, you know, beyond, say, fire safety

23 information, and I and others would really strongly

24 advise our client not to take on that role. I was

25 trying to think of a way of putting that.

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1 Q. In those circumstances, were there other options

2 available to the TMO? So where the other members of the

3 professional team -- so Rydon, Studio E, Artelia -- had

4 all said, "We don't want to take on this role", was

5 there another option, a third party for example?

6 A. So I'm not going to stretch into anything like that,

7 except to say to you what I said in my report.

8 Remember, I listed out all the other companies they

9 contacted who the TMO considered to have the skills to

10 help them, and that was another approach they could have

11 taken.

12 Q. So we have already noted that there was no health and

13 safety file handed over to the TMO at the end of that

14 transitional period.

15 A. Yes.

16 Q. At 9.3.37 of your report, which is on page 119

17 {BLARP20000016/119} -- and I know we're jumping around

18 a bit in the report.

19 A. No, it's okay. Yes.

20 Q. You say there the ACOP made it clear that KCTMO, as

21 client, should make sure the CDM co-ordinator compiles

22 the file.

23 A. Yes.

24 Q. Therefore, it's your opinion that the TMO were also

25 responsible for the lack of a health and safety file at

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1 the end of the transition period.
 2 A. Yes.
 3 Q. Could you just expand on that?
 4 A. Expand on that?
 5 Q. Why do you say they were also responsible?
 6 A. Because they were the client.
 7 Q. And that's because they have duties under the
 8 CDM Regulations to ensure that things are done?
 9 A. Yes, exactly, and the CDM Regulations -- I mean, I think
 10 maybe I might add to my report with a table showing all
 11 the different things that's assigned to the client
 12 uniquely in each set of regulations.
 13 Q. It's a distinction, as we have explored, from
 14 regulation 38 that the client here actually has
 15 a regulatory set of duties.
 16 A. Yes, they're a duty holder under these regulations, and
 17 they have a really central role as defined within the
 18 regulations. It's not my opinion. Yes.
 19 Q. We have already looked that the TMO asked Rydon to
 20 collate the health and safety file and Rydon then
 21 subcontracted that work out as well to
 22 All Group Holdings.
 23 A. Yes.
 24 Q. Is it your understanding that, whilst Rydon agreed to
 25 carry out this work and to engage an external company to

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1 collate that information, the statutory duty to produce
 2 the file at that stage, so after the expiry of the
 3 transitional period, rested with the TMO --
 4 A. Yes.
 5 Q. -- because they were principal designer?
 6 A. They made themselves principal designer and, by doing
 7 that, they gave themselves that duty.
 8 Q. I have already asked you these questions with respect to
 9 regulation 38 information.
 10 A. Yes.
 11 Q. But, for clarity, how common is it for third parties to
 12 be engaged to collate information for a health and
 13 safety file, in your experience?
 14 A. Yes, so as I have explained, my experience is the health
 15 and safety file is a part of the building manual, and
 16 I have worked with principal contractors where they've
 17 employed another organisation for information
 18 collection.
 19 Q. You say information collection; is that they go about
 20 finding the relevant bits of information? Do they also
 21 review it or express any views about it, in your
 22 experience?
 23 A. It depends on their appointment.
 24 Q. You say at 9.3.26 on page 84 {BLARP20000016/84} of your
 25 report that the arrangement between Rydon and

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1 All Group Holdings is outside of your realm of expertise
 2 to provide an opinion on whether this was an appropriate
 3 arrangement, and can you just explain again what you
 4 mean by that. Is that another area where you advise
 5 the Inquiry to obtain --
 6 A. I just meant that -- I don't mean anything other than
 7 what I've said. I wasn't trying to imply anything else,
 8 sinister or otherwise.
 9 Q. Just you were not able to comment on it because it's not
 10 within your area of expertise?
 11 A. Well, I don't, you know, run -- I'm not an employer's
 12 agent, I'm not a client. I can only tell you what
 13 happens to me on a project. Yes.
 14 Q. In your opinion -- and you may say this also falls
 15 outside your expertise -- what skills would a principal
 16 designer need to be able to scrutinise a health and
 17 safety file once it had been provided?
 18 A. Yes, so I think I've made -- I really hope I've made it
 19 clear in my report, and I haven't strayed into what
 20 a principal designer should do. I have only
 21 explained -- I've only given my views on fire safety
 22 information. But the principal designer role, again, is
 23 defined in the regulations, and it has become a very
 24 substantial role as defined in the regulation. I can
 25 say that because, as a director of a multidisciplinary

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1 company, we have to make decisions regularly about if
 2 we're going to take on that role. But for this Inquiry
 3 I'm giving fire safety advice.
 4 Q. Let's move on, then, and look at that aspect of the
 5 health and safety file and your opinions on that.
 6 If we can look at the health and safety file itself,
 7 it's {TMOM00001932}. So we have heard about it. This
 8 is it: the health and safety file. It's three pages
 9 long, and it's a series of cross-references back to the
 10 building manual.
 11 A. Yes.
 12 Q. You reviewed those cross-references and we can see that
 13 in table 10.1 on page 129 {BLARP20000016/129} of your
 14 report.
 15 A. Yes.
 16 Q. I just want to look at the top three references there.
 17 On the left we've got "A Brief Project Description &
 18 Project Team", and you say you have looked and no
 19 cross-references are provided because there are separate
 20 files in the folder on the USB stick --
 21 A. Yes.
 22 Q. -- containing the building manual that contains that
 23 information.
 24 "B1 Architects As Built Drawings", that cross-refers
 25 to part 2, section 2.1.2.2 of building manual, and you

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1 say, "however this section does not exist".
 2 A. Yes.
 3 Q. Again, B1, pre-construction information, the
 4 cross-reference doesn't exist.
 5 C1, again, the cross-reference doesn't exist.
 6 A. Yes.
 7 Q. That's your analysis again of the building manual handed
 8 over to the TMO provided to you in February 2020.
 9 A. Yes.
 10 Q. So it's that USB stick.
 11 A. Yes.
 12 Q. That's a theme, isn't it, of your analysis, that the
 13 cross-references don't actually relate to sections in
 14 the building manual?
 15 A. Yes.
 16 Q. You then give your conclusions from your analysis at
 17 10.3.16 on page 130 {BLARP20000016/130}, and I'll just
 18 read those. It says:
 19 "It can be seen in Table 10.1 that the majority of
 20 the cross references do not exist or link to incorrect
 21 sections of the Building Manual."
 22 A. Yes.
 23 Q. You have noted there the guidance from the Health and
 24 Safety Executive says that information must be in
 25 a convenient form, clear concise and easily

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1 understandable.
 2 A. Yes.
 3 Q. Then you say:
 4 "Based on the inaccuracy of the referencing alone,
 5 and also the scale of documentation provided where the
 6 referencing is correct, in my opinion this health and
 7 safety file, is not in a convenient form, nor clear or
 8 concise, nor easily understandable."
 9 A. Yes.
 10 Q. In your opinion, was it appropriate to have a health and
 11 safety file that took the format of a reference
 12 document? Or perhaps I should ask: in your experience,
 13 is that something that was done, this referencing type
 14 of health and safety file?
 15 A. Typically I'm given a building manual and I go to
 16 a section of it to get relevant health and safety
 17 information, and so, yes, it might reference other parts
 18 of the building manual. I'm thinking about other health
 19 and safety files I use, and, you know, they are actually
 20 complete. So I've seen both forms.
 21 Q. At 10.5.5 on page 145 {BLARP20000016/145} you give your
 22 overall conclusion that the health and safety file was
 23 substantially non-compliant. Does that remain your
 24 view?
 25 A. Yes.

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1 Q. This is a summary here of your analysis in particular of
 2 the items relevant to fire safety. So at point (a) you
 3 say:
 4 "No residual hazard registers are provided and
 5 therefore the reader cannot understand what hazards may
 6 remain that must then be managed over the future life of
 7 the building."
 8 A. Yes.
 9 Q. We looked at that earlier in the list of things that
 10 needed to be provided. You singled that out as one of
 11 the items relevant to fire safety.
 12 A. Yes. Because -- yes.
 13 Q. We've tracked that through now to your conclusion.
 14 A. Yes.
 15 Q. There was nothing there addressing that.
 16 A. I haven't found one in the health and safety file and
 17 it's a duty to have one in the file.
 18 Q. I just want to look at the evidence of Ms Williams on
 19 this point. It's {Day56/132:19}, and she says:
 20 "... but can I point out: the issue with our
 21 building was that we had an existing part of the
 22 building that Rydon were not involved with. They were
 23 not involved with water tanks in the roof, they were not
 24 involved with several ... let me just think.
 25 "There was areas of the building that were existing,

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1 so whatever Rydon provided would only be partial
 2 information in terms of the health and safety file ..."
 3 Then she goes on and says at line 6 {Day56/133:6}:
 4 "So Rydon were never going to provide complete
 5 information for that health and safety file.
 6 "I think that's quite important to mention, because
 7 the building contract, as I say, only covered elements
 8 of the building, it didn't cover the whole building."
 9 So her evidence is she wasn't expecting complete
 10 information from Rydon.
 11 A. Yes.
 12 Q. If you focus only on the Rydon works -- sorry, let me
 13 just ask these questions in a slightly different way.
 14 Having reviewed the documentation and evidence, the
 15 building manual that you have looked at, was it your
 16 understanding when preparing the report that Rydon was
 17 only providing information relevant to its scope of
 18 work?
 19 A. So all I've done is understood fire safety matters that
 20 are part of the primary refurbishment, which was
 21 extensive and don't include water tanks, and then gone
 22 to look for that information in the health and safety
 23 file. If Ms Williams had health and safety file
 24 information available to her, I would have to ask why it
 25 wasn't provided to Artelia when they drafted the

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1 document they did at the start of the project.
 2 Probably it's worth me saying now that I listened
 3 very carefully to that part of Ms Williams' evidence,
 4 and I am currently investigating Keystone and the other
 5 servers at the TMO to try and find all this information
 6 that was apparently not provided to the professional
 7 design team at the time, even though it was a duty of
 8 the client to do so at the time.
 9 Q. So that's something that the Inquiry might have to come
 10 back to with you, once you have completed that
 11 investigation.
 12 A. Yes, because it's relevant -- yes, that's correct, yes.
 13 Q. If the panel accepts the evidence that the health and
 14 safety file produced by Rydon or on Rydon's behalf was
 15 only intended to cover Rydon's own works, does that
 16 affect your conclusion that the health and safety file
 17 was substantially non-compliant?
 18 A. No, because I was thinking about Rydon's health and
 19 safety file.
 20 Q. Now, in a number of places in your report you said that
 21 matters were presided over by the TMO.
 22 A. Yes.
 23 Q. What do you mean by this?
 24 A. Because the KCTMO are the client, and the
 25 CDM Regulations puts the client -- the client is

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1 a duty holder, but it's a very specific type of
 2 duty holder. They make the appointments, they set up
 3 the other duty holders, they make the appointments, they
 4 have to have information available to them, they have to
 5 track what's happening, so they have a distinct role,
 6 and for the KCTMO, any project, not just the primary
 7 refurbishment, that fell under those regulations --
 8 there may have been different CDM co-ordinators over the
 9 years, so CDM co-ordinators come and go, the client is
 10 the client and has been the client, and that's what
 11 I mean when I chose the word "presided".
 12 Q. We can see that at 13.6.12 of your report on page 191
 13 {BLARP20000016/191}, you make this point, and you say
 14 there:
 15 "However, the common duty holder for all the works
 16 was the KCTMO and they consistently failed to create or
 17 enable a process that complied with the CDM
 18 Regulations."
 19 A. Yes, that's my reading of the evidence, yes.
 20 Q. From a fire safety perspective, that's your opinion as
 21 well, that they were --
 22 A. Yes, that is my opinion, I've made that clear. For each
 23 one of the works I've looked for the relevant
 24 fire safety information in the health and safety file
 25 and tried to find it and have not found it.

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1 Q. The next and final topic we're going to look at is the
 2 question of availability --
 3 SIR MARTIN MOORE-BICK: How are you getting on? I have one
 4 eye on the clock.
 5 MS GROGAN: I do as well, Mr Chairman. I will be finished
 6 by 4.30 with these questions.
 7 SIR MARTIN MOORE-BICK: Then we shall have the usual --
 8 MS GROGAN: We shall have the break, and I'm sorry to have
 9 to overrun.
 10 SIR MARTIN MOORE-BICK: It's all right.
 11 MS GROGAN: But it is a short topic.
 12 SIR MARTIN MOORE-BICK: Good, yes, thank you.
 13 MS GROGAN: In this next topic we're looking at the issue of
 14 what documentation you consider should have been
 15 available on the night of the fire.
 16 A. Yes.
 17 Q. Going back to the regulation 38 information, and if we
 18 go back to the words of regulation 38 first, which is on
 19 page 9 of your BLARP2/21 report {BLARP20000021/9}.
 20 We have already discussed that regulation 38 is for
 21 the purpose of assisting the responsible person
 22 discharging their duties and to understand the operation
 23 and maintenance of the building.
 24 The regulation itself doesn't say that fire safety
 25 information needs to be available for the purposes of

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1 operational firefighting, does it?
 2 A. No.
 3 Q. If we now go to your CDM report, {BLARP20000016/8}, you
 4 have quoted from BS 9999, paragraph H.3, and it says at
 5 the top:
 6 "The fire safety manual should be made available for
 7 inspection or tests by auditors and regulators and for
 8 operational purposes by the fire and rescue service."
 9 So that's where you get the concept that the
 10 regulation 38 information should be available for the
 11 fire service.
 12 A. Yes, so I just think it's worth me explaining that the
 13 operate and maintain under the Regulatory Reform (Fire
 14 Safety) Order, there is a duty there around emergency
 15 planning, and it requires the responsible person to
 16 communicate with the Brigade in that specific regard,
 17 and that's why the British Standard would remind people
 18 why the manual needs to be available for the Brigade in
 19 that context.
 20 Q. You then say at 1.2.7 that the TMO had a statutory duty
 21 to make the fire safety manual available on the night of
 22 the fire. Is that your understanding of how BS 9999
 23 works together with regulation 38?
 24 A. So under the RRO, you have a duty to provide fire safety
 25 information to the Brigade for the purposes of emergency

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1 planning. That's in a very particular context. It's
 2 not the context that was dealt with in Phase 1, so I'm
 3 not going back there. It's about communicating
 4 information in a particular way to make arrangements
 5 before a fire occurs.
 6 Q. Is it your understanding that where there is a fire, so
 7 where operational firefighting is taking place, the fire
 8 safety manual should be available for the purposes of
 9 the LFB?
 10 A. If the Fire Brigade call for information related to
 11 fire safety for the building that they're in, the
 12 responsible person needs to be able to communicate that.
 13 Q. That comes from their duties under the RRO --
 14 A. Yes, it does.
 15 Q. -- it doesn't come from regulation 38?
 16 A. Yes.
 17 Q. I'm just trying to understand how you understand this
 18 all works based on what you have said in your report.
 19 A. Yes, it's to do with the RRO, and regulation 38 is all
 20 about connecting to the RRO.
 21 Q. With regard to whether the health and safety file should
 22 have been available to the LFB, you set out your opinion
 23 on page 9 of this report {BLARP20000016/9}, at 1.3.7 and
 24 1.3.10. To summarise what you say there, there is no
 25 obligation in CDM that the health and safety file must

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1 be available for the operational purposes of the fire
 2 and rescue service.
 3 A. That's correct, yes.
 4 Q. There is nothing in the approved codes of practice or
 5 the HSE guidance that says it should be available.
 6 A. That's correct.
 7 Q. But you don't think it's unreasonable to expect that, if
 8 the fire safety manual was not available, for whatever
 9 reason, the health and safety file could be made
 10 available and relied upon instead?
 11 A. Yes. So at Grenfell Tower, they had one source of
 12 information, which was the building manual, and it was
 13 meant to contain fire safety information, for whatever
 14 particular regulation you're thinking about, the
 15 fire safety information was relevant to the Brigade.
 16 Q. In your opinion, information relating to
 17 compartmentation, location of firefighting equipment,
 18 fire protection measures provided and gas supply
 19 equipment was information relevant to the Fire Brigade
 20 on the night of the fire and should have been
 21 immediately available by means of the health and safety
 22 file?
 23 A. As was a building description, which would include the
 24 flat numbering system, the storey numbers. Yes.
 25 Q. When you say "immediately available", the word

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1 "immediately" doesn't feature in the guidance. Is that
 2 just a practical point you're making, that it should
 3 have been something at the TMO's fingertips?
 4 A. Yes.
 5 SIR MARTIN MOORE-BICK: In the middle of the night, without
 6 any prior warning?
 7 A. If a responsible person is asked for information, why
 8 would you not know where the information was?
 9 SIR MARTIN MOORE-BICK: What's turning through my mind is
 10 that making the file available to the Fire Brigade for
 11 operational purposes is likely to be more usefully done
 12 well ahead of any fire, so that they can extract the
 13 information --
 14 A. Yes.
 15 SIR MARTIN MOORE-BICK: -- that is really likely to be
 16 useful to crews on the ground --
 17 A. Yes, agreed.
 18 SIR MARTIN MOORE-BICK: -- which they can then feed into
 19 their systems and have it immediately available.
 20 A. So the whole file. In my mind --
 21 SIR MARTIN MOORE-BICK: Well, the whole file is very large,
 22 isn't it?
 23 A. Exactly, it's very large. In my mind, I was thinking
 24 very particularly about the drawings which, as you know,
 25 I explain in my report and how long it took to find

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1 them, which I don't understand, including in the middle
 2 of the night, in the middle of a fire. And in Module 3,
 3 we will be talking about KCTMO's emergency planning
 4 arrangements, and we will need to come back to this.
 5 So I don't mean arrive with a big massive file in
 6 the middle of the night at all, but I'm talking about
 7 very basic information being available rapidly, and,
 8 yes, what's the point in having the information if you
 9 couldn't make it available in the middle of
 10 an emergency? Because that's exactly what the
 11 information is for.
 12 SIR MARTIN MOORE-BICK: Yes.
 13 MS GROGAN: That's helpful, thank you.
 14 But it's right we can't take it any further than
 15 that. It's not for you to speculate on what the effects
 16 might have been had that been available. So you can say
 17 you think it should have been available; you can't go
 18 any further and say: if it had been available, this
 19 would have happened differently or --
 20 A. I haven't said that. You've said that.
 21 Q. And I am confirming with you that you haven't said that.
 22 A. No, I'm not planning on saying anything else other than
 23 what's in my report.
 24 Q. Just one final question from me.
 25 Bearing in mind your conclusions on the adequacy of

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1 the health and safety file and compliance with
 2 regulation 38 in terms of fire safety information, why
 3 is it that you think it's important for these failures
 4 to be investigated by the Inquiry?
 5 A. I was trying to explain that there's -- it's like
 6 a circle of compliance. You have got your CDM
 7 Regulations, you have got regulation 38, then you have
 8 got the Regulatory Reform Order, and what it's trying to
 9 do is transfer relevant fire safety information around
 10 that circle to protect people, and there's two types of
 11 people: the people who live or work in a building and
 12 the Fire Brigade. And it's all -- and I hate the phrase
 13 "golden thread", but that's exactly what it's about:
 14 that it's simple, easy to find and clear, a narrative
 15 about what's in the building to help people during
 16 an emergency. That's what it's all about. And that's
 17 why I insisted I write another very long report on the
 18 health and safety file, because it's another place
 19 where, you know, the law asks of us to provide useful
 20 information in the event of a fire.
 21 That's all I was trying to do. Hopefully somebody
 22 will listen.
 23 MS GROGAN: Thank you, Dr Lane, those are all of my
 24 questions.
 25 SIR MARTIN MOORE-BICK: Right, thank you very much.

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1 Well, at this point we have to have another short
 2 break.
 3 THE WITNESS: Am I allowed to just go home at this point?
 4 No.
 5 SIR MARTIN MOORE-BICK: You will be going home shortly.
 6 I'm going to say that we will come back at 4.40, but
 7 if you need more time, just let us know.
 8 MS GROGAN: Yes, and thank you for bearing with me.
 9 THE WITNESS: Okay, thank you.
 10 SIR MARTIN MOORE-BICK: 4.40, please.
 11 (4.32 pm)
 12 (A short break)
 13 (4.40 pm)
 14 SIR MARTIN MOORE-BICK: Right, let's see if there are more
 15 questions for you.
 16 Ms Grogan?
 17 MS GROGAN: Just one, and it's more of a correction than
 18 a question, so it should be quick.
 19 SIR MARTIN MOORE-BICK: There we are.
 20 MS GROGAN: You mentioned in your evidence on regulation 38
 21 a letter from the LFB, and I said that it was a letter
 22 sent round to the TMO following the Lakanal House fire.
 23 That was wrong, it's the Shepherds Court fire.
 24 A. It was, yes. Because it's later. It's much closer to
 25 the fire.

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1 Q. Yes, so if we just go to it, it's {RBK00054198}. So is
 2 that the letter you were referring to dated May 2017?
 3 A. Yes.
 4 Q. "Tall buildings - external fire spread".
 5 A. Yes.
 6 Q. If we just go on to page 2 {RBK00054198/2}, you will see
 7 there the advice from the LFB is:
 8 "I would therefore strongly urge that you consider
 9 this issue as part of the risk assessment process for
 10 premises ... I suggest that you make sure all relevant
 11 information about any replacement window and facade
 12 schemes is fully available to fire risk assessors."
 13 A. Yes.
 14 Q. Is it right that it's that information that you are
 15 saying the TMO did not have in its possession to be able
 16 to ...?
 17 A. I said that, in the evidence I've looked at so far,
 18 I didn't see them go to the building manual when this
 19 very important question was asked --
 20 Q. Yes.
 21 A. -- and that's where that information needed to be.
 22 MS GROGAN: Yes. Thank you. That's it.
 23 SIR MARTIN MOORE-BICK: All right?
 24 MS GROGAN: Yes, thank you very much.
 25 SIR MARTIN MOORE-BICK: Good, well done.

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1 MS GROGAN: We would like to -- I know you would as well --
 2 thank Dr Lane very much for coming and assisting us with
 3 our investigations.
 4 THE WITNESS: No problem.
 5 SIR MARTIN MOORE-BICK: Yes, well, I would certainly endorse
 6 that, Dr Lane. Anyone who has seen any of your reports
 7 will realise how much work has been put into this. It's
 8 a tremendous effort and we're very grateful to you.
 9 THE WITNESS: No problem, and just to acknowledge as always
 10 the named people who have assisted in all the
 11 investigations incredibly. Yes.
 12 SIR MARTIN MOORE-BICK: We have seen that. But as team
 13 leader, I think you can take credit on their behalf.
 14 THE WITNESS: Thank you very much, yes.
 15 SIR MARTIN MOORE-BICK: Thank you for being here. We will
 16 no doubt see you again at some stage.
 17 THE WITNESS: I'm sure you will.
 18 SIR MARTIN MOORE-BICK: Now you are free to go home.
 19 THE WITNESS: Thank you.
 20 (The witness withdrew)
 21 SIR MARTIN MOORE-BICK: Well, that's it for today.
 22 MS GROGAN: That is.
 23 SIR MARTIN MOORE-BICK: We resume on Monday at 10 o'clock?
 24 MS GROGAN: It's the afternoon that we're resuming, so we
 25 have Mr Hyett, and there has been that timetable change.

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1 SIR MARTIN MOORE-BICK: You're quite right, so 2 o'clock.

2 MS GROGAN: Yes.

3 SIR MARTIN MOORE-BICK: That's the end of the hearing for
4 today. We shall resume on Monday at 2 o'clock.

5 Thank you.

6 (4.45 pm)

7 (The hearing adjourned until 2 pm
8 on Monday, 2 November 2020)

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