

# OPUS2

Grenfell Tower Inquiry

Day 170

September 7, 2021

Opus 2 - Official Court Reporters

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Tuesday, 7 September 2021

1  
2 (2.00 pm)  
3 SIR MARTIN MOORE—BICK: Good afternoon, everyone. Welcome  
4 back to the Inquiry hearings.  
5 I'm very glad to say that, with the relaxation of  
6 the COVID restrictions, we are now able to invite  
7 members of the public to come and see our work, and so  
8 we look forward to hearing and seeing those who may want  
9 to come and hear what we're doing over the next few days  
10 and weeks.  
11 Today we're going to hear evidence from  
12 Dr Barbara Lane, one of the experts instructed by  
13 the Inquiry.  
14 So, if Dr Lane is there, would you ask her to come  
15 in, please.  
16 DR BARBARA LANE (sworn)  
17 SIR MARTIN MOORE—BICK: Thank you very much. Do sit down  
18 and make yourself comfortable, please.  
19 (Pause)  
20 Yes, Mr Millett, when you're ready.  
21 Questions from COUNSEL TO THE INQUIRY  
22 MR MILLETT: Mr Chairman, thank you very much, good  
23 afternoon. Good afternoon, members of the panel.  
24 Dr Lane, good afternoon to you. Thank you very much  
25 again for attending the Inquiry on I think what is your

1

1 fifth occasion to assist us with your opinions.  
2 A. Yes.  
3 Q. My questions are intended to be short and simple;  
4 sometimes they don't turn out that way, so if you want  
5 me to rephrase the question or put it in a different  
6 way, please just ask me.  
7 Also, if you need a break at any point other than  
8 the scheduled break that we will take during the middle  
9 of the afternoon or so, please let us know.  
10 A. Yes.  
11 Q. Now, you have prepared a report for Module 3 of Phase 2  
12 of the Inquiry entitled, "The management and maintenance  
13 of Grenfell Tower"; is that right?  
14 A. That's correct.  
15 Q. It's broken down, I think, into some 11 chapters.  
16 A. Yes.  
17 Q. What I'm going to do is just read the chapter numbers  
18 and references into the record so that everybody can  
19 find them if they need to, so bear with me if you would.  
20 The first is {BLARP20000023}, "The Regulatory Reform  
21 (Fire Safety) Order 2005 and its application to  
22 high-rise residential buildings". That's chapter 1 of  
23 your report, isn't it?  
24 A. That's correct.  
25 Q. And chapter 2, is this right, is at {BLARP20000024},

2

1 "Organising and planning a system of management that  
2 provides the fire safety arrangements required by the  
3 RRO(FS)O", or RRO, as we shall call it?  
4 A. Yes, that's correct.  
5 Q. Then at {BLARP20000029}, "The fire safety arrangements  
6 made by the KCTMO", that's chapter 3; yes?  
7 A. Correct.  
8 Q. Is it right chapter 4 is at {BLARP20000030}, "KCTMO's  
9 duty to provide protection measures to support the means  
10 of escape — fire doors"?  
11 A. Yes, that's correct.  
12 Q. Then chapter 5 at {BLARP20000031}, "KCTMO's duty to  
13 control the hazards from building works and  
14 alterations"; yes?  
15 A. Correct.  
16 Q. Then at {BLARP20000034}, "KCTMO's duty to provide  
17 adequate fire protection for vulnerable persons", that  
18 is chapter 6.  
19 A. That's correct, yes.  
20 Q. Chapter 7 is at {BLARP20000033}, "KCTMO's duty to  
21 provide a suitable system of maintenance for fire  
22 protection measures".  
23 A. Yes.  
24 Q. Then chapter 8 at {BLARP20000027}, "The adequacy of the  
25 advice provided by the fire risk assessor Carl Stokes of

3

1 CS Stokes & Associates Ltd to the KCTMO".  
2 A. Correct.  
3 Q. Then chapter 9 at {BLARP20000028}, "KCTMO's duty to  
4 create a system of emergency planning — the resulting  
5 emergency plan for Grenfell Tower".  
6 A. Correct.  
7 Q. And then chapter 10 at {BLARP20000032}, "The external  
8 wall construction — the hazard it posed to relevant  
9 persons".  
10 A. Yes, correct.  
11 Q. Finally, chapter 11, "Conclusions", at {BLARP20000040}.  
12 A. Correct.  
13 Q. Yes.  
14 Now, you have had cause to revisit the number of  
15 individuals that you have counted as vulnerable in  
16 chapter 6, I think, since you wrote that report.  
17 A. Yes, that's correct.  
18 Q. As a result of your review, is it right that you have  
19 increased the number of adults that you have counted as  
20 vulnerable?  
21 A. That's correct.  
22 Q. Yes, and that will be set out, I think — is this  
23 right? — in a second version of chapter 6, section 14,  
24 which will be finalised soon and disclosed to core  
25 participants?

4

1 A. Yes, that's correct.  
 2 Q. Yes, thank you.  
 3 Apart from those amendments to those aspects of  
 4 section 14 of chapter 6 that you propose to make in due  
 5 course, are the factual matters set out in your report  
 6 true to the best of your knowledge and belief?  
 7 A. Yes, they are.  
 8 Q. Yes. Can you confirm also that the report sets out your  
 9 true and complete professional opinion on the matters  
 10 that you have addressed in it?  
 11 A. Yes, it does.  
 12 Q. Yes. Can you confirm also that you have understood your  
 13 duty to the Inquiry as an expert to the Inquiry and that  
 14 you have complied with that duty?  
 15 A. Yes, I have.  
 16 Q. In particular, have you given the evidence and opinions  
 17 set out in your report in the same ways that you would  
 18 to a court and abided by the same principles?  
 19 A. Yes, I have.  
 20 Q. Now, your report stands as your evidence to the Inquiry.  
 21 Having addressed some matters of context, my questions  
 22 are going to focus principally on those matters which,  
 23 in respect of your report, are truly ones of expert  
 24 opinion, and where there have been material developments  
 25 in the evidence given to the Inquiry since your reports

5

1 as well, and I'm going to focus on the points of  
 2 relevant controversy; do you understand?  
 3 A. I think so. Well, am I allowed to ask a question,  
 4 sorry? So when you say expert opinion, just my normal  
 5 opinion here based on the work I have done?  
 6 Q. Yes, exactly.  
 7 A. Okay, yes. Okay, understood, yes.  
 8 Q. Yes, thank you.  
 9 Can I start by asking you some questions about your  
 10 qualifications and experience.  
 11 A. Yes.  
 12 Q. You have given some details of your relevant  
 13 qualifications and experience in the introduction to  
 14 your Phase 1 report in April 2018 --  
 15 A. Yes.  
 16 Q. -- paragraph 1.1.  
 17 A. Yes.  
 18 Q. I'll just read the reference: that's {BLAR0000001/6}.  
 19 To that report, you appended your CV as appendix A at  
 20 {BLAR00000016}. I'm going to look at that in a moment.  
 21 Before I do, I just want to read another document  
 22 into the record. You have given us a further document,  
 23 which is at {BLARP20000041}, which sets out your current  
 24 roles at Arup and your specific experience in respect of  
 25 fire risk assessments; is that right?

6

1 A. Yes, that's correct.  
 2 Q. Yes.  
 3 Now, before I go to that document, I want to ask one  
 4 or two questions about your CV which you appended to  
 5 your Phase 1 report from April 2018.  
 6 A. Yes.  
 7 Q. That's at {BLAR00000016}. Can we have that up, please.  
 8 There is page 1. Can we go to page 5  
 9 {BLAR00000016/5}.  
 10 On page 5, you will see a heading, "Current Arup  
 11 roles".  
 12 A. Yes.  
 13 Q. In the first paragraph there, it says:  
 14 "Director of Ove Arup & Partners Ltd. -- global fire  
 15 safety engineering technical Leader for 228 fire  
 16 engineers, 83 of whom are based in the UK."  
 17 A. Yes.  
 18 Q. Is it right that from April 2021, this year --  
 19 A. Yes.  
 20 Q. -- you were no longer carrying out those roles?  
 21 A. That's correct. I have a whole new set of roles in  
 22 Arup.  
 23 Q. A new set of roles?  
 24 A. Yes.  
 25 Q. We will look at those in a moment.

7

1 To what extent did those roles that you have  
 2 identified there on the page we're looking at involve  
 3 carrying out fire risk assessments under the RRO?  
 4 A. Well, it's as I've set out in my latest, more specific  
 5 fire risk assessment CV.  
 6 Q. Right. So those activities fell within the scope of  
 7 your role as a director?  
 8 A. Oh, no, sorry, no, no, no. So my role as a fire safety  
 9 engineer working on projects --  
 10 Q. Right.  
 11 A. -- I carry out fire risk assessments.  
 12 Q. Thank you, I see.  
 13 A. And despite -- regardless of any corporate role at  
 14 Arup -- so I have new corporate roles at Arup now --  
 15 I still work on projects as a competent fire safety  
 16 engineer.  
 17 Q. Yes, and to what extent did those roles, in relation to  
 18 fire risk assessments particularly, involve quality  
 19 assessment?  
 20 A. So my experience of quality assessment is both as  
 21 a project director for projects at Arup, for fire safety  
 22 engineering projects, where we do -- we have -- it's our  
 23 own work, so where the fire practice has a commercial  
 24 project on its own. But I also do quality assurance  
 25 checks and I'm involved in project reviews and more

8

1 extensive reviewing, as a director of the firm, on  
 2 multidisciplinary projects that Arup would produce. And  
 3 in the last two years particularly, because I was  
 4 a member of the region board of Arup, which is — it's  
 5 like a management executive, really, I was responsible  
 6 for advising the COO, who is our responsible person, on  
 7 how to comply with his duties.

8 Q. Right. I see.

9 Now, can we go to {BLARP20000041}, which is the  
 10 further document that you've now provided to us. We'll  
 11 just have the first page of that up. That's the first  
 12 page there.

13 Can we go to page 6 in that {BLARP20000041/6},  
 14 please. If you look at the top of that page, you can  
 15 see that it says:

16 "Current operational roles at Arup Group Ltd.  
 17 "Since 1st April 2021 my operating roles in Ove Arup  
 18 + Partners Ltd came to an end, and I commenced new  
 19 operational roles for the Arup Group Ltd, and have  
 20 various new responsibilities in that regard."

21 Then you've set them out underneath that.

22 A. Yes.

23 Q. To what extent do those roles that you have set out  
 24 there involve either carrying out or quality assessing  
 25 fire risk assessments?

9

1 A. Oh, quality assessing fire risk assessments. Okay, so  
 2 it's important to — all my fire work is done as  
 3 a project director in Arup Fire, and that's  
 4 an additional role to my quite — they're quite senior  
 5 corporate roles. Okay?

6 Q. Right.

7 A. But I have quite a substantial role — I wasn't planning  
 8 on talking about that today, actually, but in the roles  
 9 listed here, by being the director of the Arup  
 10 University, I'm responsible for the learning provision,  
 11 the skills provision and knowledge transfer processes in  
 12 the whole of the Arup group, which is the UK and the  
 13 whole company, and I also have responsibility for  
 14 certain risk zones in our own risk profiling exercise  
 15 for our own business.

16 Q. Right. Does that role in the learning provision, skills  
 17 provision and knowledge transfer process include  
 18 knowledge and understanding of how to carry out a fire  
 19 risk assessment under the RRO?

20 A. Yes, it does, because we have a large number of  
 21 fire safety engineers, and I myself am, you know,  
 22 a full-time fire safety engineer.

23 Q. Yes, thank you.

24 A. So I hope that's — I'm not entirely sure I'm answering  
 25 your question.

10

1 Q. Yes, you have, thank you.

2 A. Okay.

3 Q. We can answer it further, I think, by going to page 4 of  
 4 this document {BLARP20000041/4}, if we can.

5 A. Okay.

6 Q. If we go to the introduction, page 4, in the fourth  
 7 paragraph down you say:  
 8 "I have been carrying out ..."  
 9 Do you see?

10 A. Yes.

11 Q. "... fire risk assessments since my career started at  
 12 Arup in 1997, and I have latterly also been responsible  
 13 for the detailed checking and approval for issue, under  
 14 our quality management system, for fire risk assessments  
 15 produced by staff at Arup also."

16 A. Yes.

17 Q. Just one question on that.

18 You say latterly you have been responsible for  
 19 checking and approving FRAs —

20 A. Yes.

21 Q. — produced by Arup staff. Since when and in what role  
 22 have you been doing that?

23 A. Well, the more senior you get, the more work of others  
 24 you become responsible for, rather than just self-check.  
 25 I have no idea what year I became a formal approver at

11

1 Arup, it's a very long time ago.

2 Q. Right.

3 A. I can confirm the year somehow.

4 Q. So when you say "latterly", when are you referring to?  
 5 Do you just mean after 1997?

6 A. No, I think I was just trying to communicate that your  
 7 role — your responsibilities expand beyond your own  
 8 work only, where you are very intimately involved, and  
 9 increasingly there is an expectation and a requirement  
 10 to also, on top of your own work, your own projects,  
 11 make sure the work of others is fit for purpose. So it  
 12 wasn't meant to mean I did one thing and now I'm doing  
 13 another; I do both, but my responsibility for other  
 14 people is much more than it was when I first started  
 15 work.

16 Q. Yes, I see. It's just I wanted to understand what you  
 17 meant by "latterly" there. Do you mean recently —

18 A. Well, I wish I hadn't put that word in now, because it  
 19 wasn't meant to have a great meaning, other than the  
 20 more senior you are at Arup, the more work of others you  
 21 are responsible for, and that requires, you know,  
 22 a proper understanding of what a quality assurance  
 23 system is and being able to utilise it.

24 Q. In any given year in the period to which you're  
 25 referring there, how often would you check and approve

12

1 an FRA produced by your staff?  
 2 A. I have no idea. I would say to you, not at  
 3 a public inquiry, endlessly.  
 4 Q. Right.  
 5 A. But I don't know how many. I have no idea. I work very  
 6 long hours, endlessly checking and approving the work of  
 7 others, and being responsible for the very complex risk  
 8 assessments I do myself.  
 9 Q. You are likely to give a similar answer to my next  
 10 question.  
 11 A. Okay.  
 12 Q. So forgive the question.  
 13 A. Yes.  
 14 Q. If you go down to the next paragraph, you say:  
 15 "Since 2009 I have spent the substantial portion of  
 16 my professional time working on existing buildings,  
 17 refurbishments, and therefore occupied premises,  
 18 including construction sites within occupied premises.  
 19 In particular since 2011, the majority of my  
 20 professional time was spent on projects within the  
 21 framework of the Regulatory Reform (Fire Safety) Order  
 22 2005; and equivalent legislation."  
 23 As I say, forgive the question —  
 24 A. Yes.  
 25 Q. — but what do you mean by "the substantial portion"?

13

1 A. Yes, okay. So I was just trying to make the point  
 2 there — so I think — I'm aware that there is this  
 3 perception of Arup and Arup Fire that we specialise in  
 4 design and, you know, say, quite theoretical work, and  
 5 I wanted to make the point here, because I'm aware,  
 6 you know, of people querying my expertise, that  
 7 I personally have, as I understand it from other people,  
 8 quite unique experience, because I've done so much work  
 9 in construction, in construction in occupied buildings  
 10 and on refurbishment, and providing advice to clients  
 11 where it's in the occupied building condition, not in  
 12 those really early stages when one deals, you know,  
 13 particularly with an architect. So I just wanted to  
 14 draw that experience that I have out.  
 15 Q. Yes, thank you.  
 16 Now, in the last paragraph on that page, you say:  
 17 "My experience spans across multiple sectors, and  
 18 includes both public and private sector clients. I have  
 19 selected projects below, where I had a particular role  
 20 in fire risk management system analysis as well as  
 21 technical fire risk assessment activity, in premises  
 22 with a sleeping risk and with vulnerable people."  
 23 Do the selected projects that you have listed — and  
 24 we'll come to those in a minute — represent the  
 25 totality of the projects where you have carried out that

14

1 activity or only a selection, a proportion?  
 2 A. They don't represent the totality.  
 3 Q. Right. Can you give us some idea of the proportion?  
 4 A. No, I've never sat down and calculated it, I'm really  
 5 sorry.  
 6 Q. Let's look at page 7 {BLARP20000041/7}, then, and some  
 7 of those selected projects.  
 8 If we go to page 7 of this document and go to the  
 9 heading "2011–2017 Portfolio of multiple high rise  
 10 residential (dwellings) buildings".  
 11 A. Yes.  
 12 Q. It's the second section down. It says:  
 13 "Fire risk assessments 2013–2014.  
 14 "Independent review of existing fire risk  
 15 assessments including the significant findings and  
 16 action plans.  
 17 "Production of a new full fire risk assessment for  
 18 each building, based on a detailed inspection of the  
 19 active and passive fire protection measures."  
 20 Again, forgive the question in light of what you  
 21 have already told us, but can you tell us roughly even  
 22 how many fire risk assessments you carried out on  
 23 high-rise residential buildings before 14 June 2017?  
 24 A. I've no idea. There were 17 buildings here,  
 25 for example.

15

1 Q. So no idea because it's a lot; is that the —  
 2 A. Well, I don't know if it's a lot by other people's  
 3 standards, but I think I've worked on very many  
 4 high-rise residential buildings.  
 5 Actually, I probably should just say something.  
 6 I don't think the number of is important, it's more the  
 7 complexity and the work that I did. I don't agree that  
 8 chugging things out makes you more experienced or  
 9 competent.  
 10 Q. No.  
 11 A. So I'm not able to confirm. If someone needs me to do  
 12 an analysis of everything I've ever done at Arup and  
 13 confirm percentages, I'm happy to do that.  
 14 Q. No, that's all right.  
 15 If we go to page 9 {BLARP20000041/9}, please, you've  
 16 listed two projects at the top of the page there.  
 17 A. Yes.  
 18 Q. "2012 Purpose built blocks of flats, England (south  
 19 coast)" —  
 20 A. Yes.  
 21 Q. — and "2012–2017 Purpose built block of flats, England  
 22 (north west)".  
 23 A. Yes.  
 24 Q. Can you just clarify what work you were doing on those  
 25 particular projects?

16

1 A. The one in 2012 was to do with the construction of the  
2 single escape stair and how the relevant persons were  
3 utilising the public spaces available in those  
4 buildings.  
5 Q. Right.  
6 A. As well as complex matters of fire doors that had  
7 various defects to them.  
8 I'm just trying to think what else. I think that  
9 was about the extent of that.  
10 Q. I see.  
11 A. Yes.  
12 Q. What about the second set of buildings, is that the  
13 same?  
14 A. That was to do with the external wall, the structure of  
15 the building and the vulnerability of the persons living  
16 there.  
17 Q. Right. What was it about the external wall, do you  
18 recall?  
19 A. I very much recall. I think the best way to describe it  
20 here is that it was of very poor construction standard.  
21 There was no ACP or anything like that, just to be  
22 absolutely clear. It was of a very poor construction  
23 standard, and combined with serious concerns about the  
24 overall structural stability of this purpose-built block  
25 of flats, in combination with problems with faulty

17

1 internal compartment walls, faulty fire doors, and a few  
2 other issues, altogether it was quite an extreme  
3 situation.  
4 Q. Did those projects involve carrying out fire risk  
5 assessments for the purposes of the RRO?  
6 A. Absolutely.  
7 Q. They did?  
8 A. Yes.  
9 Q. Have you carried out fire risk assessments on existing  
10 purpose-built blocks of flats such as Grenfell Tower?  
11 A. I have never carried out a fire risk assessment on  
12 a block of flats built in 1971, no.  
13 Q. You say built in 1971. That's quite a specific --  
14 A. Oh, sorry, no. Sorry, that wasn't meant to be sinister.  
15 No, that was -- no, I haven't.  
16 Q. Right.  
17 A. But, sorry, just again, I think that I've carried out  
18 very many risk assessments on all different types of  
19 buildings, and I think I'm very familiar with  
20 residential buildings, and I'm not aware that there are  
21 different rules for different types of residential  
22 buildings.  
23 Q. Yes.  
24 Now, I'll just mention this rather than taking you  
25 to the part of your report. In your report at chapter 1

18

1 at paragraph 1.2.2 -- I had better show it to you, it's  
2 a quotation.  
3 A. Yes.  
4 Q. It's at {BLARP20000023/8}.  
5 At paragraph 1.2.2 there, halfway down the screen,  
6 you refer to Mr Todd's reference and reliance on  
7 PAS 79:2012.  
8 A. Yes.  
9 Q. And you say:  
10 "This includes carrying out fire risk assessments of  
11 high rise residential buildings with combustible  
12 materials in the external wall construction."  
13 A. Yes.  
14 Q. Can we take it that you're very familiar and have in  
15 your work been very familiar with PAS 79?  
16 A. Yes, you can.  
17 Q. Is PAS 79, or rather was PAS 79 as at June 2017, the  
18 leading guidance for fire risk assessors when carrying  
19 out fire risk assessments?  
20 A. I think it's the most robust publication available to  
21 people carrying out fire risk assessments to get  
22 a really clear understanding of what needs to be done,  
23 and I tend to rely on it as a checklist or, you know,  
24 quality check of my own work to make sure I haven't  
25 forgotten anything, and I really like the risk level

19

1 estimator particularly in PAS 79.  
2 Q. Right. So would you say that any fire risk assessor who  
3 relied on it wouldn't be going far wrong?  
4 A. I think that there's -- you know, I don't think using  
5 a pro forma as presented in PAS 79 automatically means  
6 that, you know, one can then add on all sorts of very  
7 positive effects. I think it's one part of the work  
8 needed to produce a fire risk assessment.  
9 Q. My question wasn't designed, I think, to elicit whether  
10 or not it was an adequate checklist exercise, but simply  
11 that the principles contained in it are principles  
12 which, if followed, meant that you wouldn't be falling  
13 into error as a fire risk assessor.  
14 A. No, sorry, I think that it describes the classic  
15 five-step health and safety risk assessment process in  
16 a much more, you know, expansive way for fire risk  
17 assessments.  
18 Q. Yes.  
19 A. And if, you know, you do what it says, and don't think  
20 any further, most of it will help you get there, yes.  
21 Q. Yes, okay, that's helpful.  
22 Can I then turn to a different topic, which is the  
23 duty to undertake a fire risk assessment and its  
24 purpose.  
25 Do you agree that Article 9(1) of the RRO imposes

20

1 a requirement on the responsible person to make  
 2 a "suitable and sufficient" fire risk assessment?  
 3 A. Yes, I do.  
 4 Q. Yes. Now, the term "suitable and sufficient" is not  
 5 defined in the RRO, is it?  
 6 A. No.  
 7 Q. No. Do you happen to know where it comes from?  
 8 A. Well, my understanding of where it comes from is I think  
 9 it's from the management regulations, and when I try to  
 10 understand what that means for me, I always refer to the  
 11 general health and safety publications written by the  
 12 HSE. They tend to give advice about what "suitable and  
 13 sufficient" could mean, but there is nowhere where  
 14 there's a formal definition of it.  
 15 Q. When you say the management regulations, do you mean the  
 16 management regulations promulgated under the health and  
 17 safety legislation --  
 18 A. Yes.  
 19 Q. -- before the RRO came into being?  
 20 A. From memory, I think it's -- just because I don't have  
 21 everything in front of me. It's definitely in 1999 and  
 22 I think it's in 1992. I'd need to check. Yes.  
 23 Q. Thank you.  
 24 Now, given that the term "suitable and sufficient"  
 25 isn't defined in the RRO, how would a responsible person

21

1 go about working out whether its fire risk assessment is  
 2 suitable and sufficient?  
 3 A. Yes. So I think probably the easiest way to do that is  
 4 to use something like PAS 79 as a check, but there's  
 5 always a certain portion of, you know, premises-specific  
 6 issues that the responsible person and the fire risk  
 7 assessor will have to exercise, you know, judgement  
 8 beyond the checklist in PAS 79.  
 9 Q. Yes, thank you.  
 10 Would you agree that a fire risk assessment done by  
 11 or on behalf of a responsible person should give  
 12 consideration to each of the matters set out in  
 13 Article 4 of the RRO?  
 14 A. In Article 4 ...  
 15 Q. Let me give you a shopping list.  
 16 A. Yes.  
 17 Q. Measures to prevent the outbreak of fire.  
 18 A. Oh, the general fire precautions. Sorry, okay, I'm not  
 19 as -- I don't whizz around the articles.  
 20 Q. Sorry.  
 21 A. So will you just ask that question again?  
 22 Q. Yes. Would you agree that a fire risk assessment done  
 23 by or on behalf of a responsible person ought to  
 24 include, first, measures to prevent the outbreak of  
 25 fire?

22

1 A. Yes.  
 2 Q. Second, compartmentation, firestopping and fire doors?  
 3 A. Measures to, sorry -- yes, it needs to look at it.  
 4 Sorry, I don't actually really understand what you mean.  
 5 Q. I'm really just seeing if we can agree the scope of --  
 6 A. The scope. So are you asking me about protection  
 7 measures that a fire risk assessor should look at when  
 8 trying to deal with Article 4?  
 9 Q. Let me try it differently.  
 10 Would you agree that Article 4 would include looking  
 11 at compartmentation?  
 12 A. Yes.  
 13 Q. And looking at firestopping?  
 14 A. Yes.  
 15 Q. Looking at fire doors?  
 16 A. Yes.  
 17 Q. Yes, and then the rest of the list would include things  
 18 like emergency escape lighting?  
 19 A. Yes.  
 20 Q. Yes?  
 21 A. Yes.  
 22 Q. Fire exit signage?  
 23 A. Yes, in certain places, yes.  
 24 Q. In certain places, yes. Smoke control?  
 25 A. If it's there, yes.

23

1 Q. If it's there. Fire extinguishers?  
 2 A. Not normally in public areas. Again, it depends what's  
 3 in the building. Yes.  
 4 Q. Right. Fire detection and fire alarm systems?  
 5 A. It depends where it is.  
 6 Q. Right.  
 7 A. Yes.  
 8 Q. Appropriately disseminated fire safety procedures?  
 9 A. Yes.  
 10 Q. Yes. Instruction and training of employees in  
 11 fire safety?  
 12 A. Where relevant.  
 13 Q. Where relevant. Arrangements for the management of  
 14 fire safety?  
 15 A. Yes.  
 16 Q. Yes. Have I missed anything out?  
 17 A. Well, I'm afraid to say yes or no.  
 18 Q. All right. I may have done.  
 19 A. Yes. So obviously I think -- on a more serious note,  
 20 I think I've been very clear in my report about the  
 21 basic principles and then the more detailed  
 22 protection -- protective and protective measures I would  
 23 expect and I've relied on.  
 24 Q. Yes.  
 25 Forgive me for saying this, and I should have said

24

1 this at the beginning, but your report is of course  
 2 quite long, and some of the questions I'm asking you are  
 3 really designed to summarise for people listening to  
 4 this exercise --  
 5 A. Yes.  
 6 Q. -- what's in it so that they can understand it.  
 7 A. Understood, and my report's very long because I was  
 8 given such extensive evidence to review.  
 9 Q. We are very grateful for every word of it.  
 10 A. You're welcome.  
 11 Q. Now, on those matters on the shopping list that we've  
 12 just discussed, should they be specific to the building  
 13 under assessment? In other words, you take your  
 14 building you're assessing and you go through that list?  
 15 A. Yes, exactly. So it's a bit like when we were speaking  
 16 about PAS 79. I think every building is meant to come  
 17 equipped with the set of fire safety provisions, so say  
 18 you take whatever's been provided under the  
 19 Building Regulations, whatever year that was, and you  
 20 need to understand what your building-specific  
 21 fire safety provisions are. They're not the same in  
 22 every building, even across residential buildings, so  
 23 it's important to understand the premises-specific  
 24 information.  
 25 Q. Yes.

25

1 A. And that's why the pro forma in PAS 79 is useful, but  
 2 there may be something else for your building that you  
 3 have a duty to notice and include.  
 4 Q. Yes, thank you.  
 5 Now, bearing in mind PAS 79 and its contents, and  
 6 for the technicians here, specifically, as yourself,  
 7 page 18, clause 5(i) {CTA00000003/18} -- we don't need  
 8 to look at it -- do you agree that a fire risk  
 9 assessment should do four things particularly: first,  
 10 express the current level of risk?  
 11 A. Yes.  
 12 Q. Yes. Second, determine the adequacy of existing fire  
 13 precautions?  
 14 A. Yes.  
 15 Q. Third, determine the need for and the nature of any  
 16 additional fire precautions?  
 17 A. Yes.  
 18 Q. And fourth, then set out any additional fire precautions  
 19 required in the action plan?  
 20 A. Yes, I do, yes.  
 21 Q. Would an FRA need to do anything else in order to count  
 22 as suitable and sufficient, do you think?  
 23 A. Sorry, I'm just struggling a little bit with what you  
 24 mean. I mean, it needs to explain all sorts of  
 25 different things like the evacuation plan, explain about

26

1 the fire safety management system. Is that what you  
 2 mean? So there's other features beyond physical  
 3 features --  
 4 Q. Right, I see.  
 5 A. -- that a fire risk assessor has to consider.  
 6 Q. I see. And you say that includes fire risk --  
 7 A. Management.  
 8 Q. -- safety management?  
 9 A. Yes, so there's the physical aspect of the work, you go  
 10 to the building, you see the fire safety provisions, so  
 11 what the building comes with, how it's being used, what  
 12 hazards are introduced by the use of the building, and  
 13 then there's non-physical matters to do with fire safety  
 14 management and, you know, how these matters are dealt  
 15 with.  
 16 Q. Yes, I see. We're going to come to fire safety  
 17 management later in your evidence --  
 18 A. Yes, yes, yes.  
 19 Q. -- but I'm grateful for that addition to the list of  
 20 things I've referred to.  
 21 Can we then turn to the question of competence,  
 22 competence of fire risk assessors to carry out FRAs.  
 23 Again, do you agree that, under Article 9(1), indeed  
 24 any part of the RRO, there is no specific requirement  
 25 that a fire risk assessment should be carried out by

27

1 a specialist?  
 2 A. By a specialist?  
 3 Q. Yes. A specialist fire risk assessor, for example.  
 4 A. That there's no requirement to appoint a -- well,  
 5 I mean -- well, what's a specialist?  
 6 Q. Well, someone who --  
 7 A. Very competent.  
 8 Q. -- knows how to do a fire risk assessment.  
 9 A. Oh, okay. Well, that's a different matter, isn't it?  
 10 So I think that the use of the word "competent"  
 11 isn't used in the order, in the article about fire risk  
 12 assessments, I think, if that's what you're asking me,  
 13 and it is used elsewhere. I don't know why any -- I'm  
 14 just struggling a bit about why legislation would ask  
 15 for specialists anywhere.  
 16 Q. Well, you've answered both of the next questions I had.  
 17 A. Oh, okay, yes.  
 18 Q. I think you agree there is no provision in the RRO which  
 19 requires that an FRA should be carried out by  
 20 a competent person?  
 21 A. I can only agree that the article dealing with fire risk  
 22 assessment makes no mention of the word "competence".  
 23 Q. No, that's right.  
 24 Do you know --  
 25 SIR MARTIN MOORE-BICK: Well, it does use the words

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1 "suitable and sufficient", doesn't it?  
 2 A. Yes, it does, yes.  
 3 SIR MARTIN MOORE-BICK: It might be an interesting matter  
 4 for debate whether they in turn assume the existence of  
 5 a degree of competence necessary to carry out a suitable  
 6 and sufficient risk assessment.  
 7 A. Yes, and I was very interested in your exchange on that,  
 8 actually. You were talking about cooks and puddings,  
 9 that you can accidentally produce -- and it's actually  
 10 quite a serious point though, that can an incompetent --  
 11 or someone with less competence than somebody else  
 12 classified as having extreme competence end up producing  
 13 a suitable and sufficient risk assessment, and the  
 14 answer must be "probably". But I think where competence  
 15 comes in is, as a function of the hazards in the  
 16 building and the type of building you're looking at, the  
 17 less competence there, the less likely it is you will  
 18 find all the relevant hazards, which is the main point  
 19 of carrying out a risk assessment.  
 20 So I think it's about maybe likelihood of missing  
 21 something as opposed to -- I suppose I can turn the  
 22 argument around: can a very competent person end up  
 23 producing a risk assessment that others will conclude  
 24 was not suitable and sufficient? And the answer is yes.  
 25 SIR MARTIN MOORE-BICK: Can you just help me with this,

29

1 since I've interrupted your flow.  
 2 A. Sorry, yes, yes.  
 3 SIR MARTIN MOORE-BICK: It occurs to me that if you're going  
 4 to assess the risks relating to fire, you're going to  
 5 ask yourself: what are the risks of an outbreak of fire?  
 6 A. Yes.  
 7 SIR MARTIN MOORE-BICK: What is the possibility of  
 8 controlling a fire if it does occur?  
 9 A. Yes.  
 10 SIR MARTIN MOORE-BICK: And what are the prospects of  
 11 escaping from a fire if you can't control it?  
 12 A. Yes.  
 13 SIR MARTIN MOORE-BICK: Is there anything else that you're  
 14 looking at at the overall level?  
 15 A. Yes, I think there is. So that's the fire scenario  
 16 side, so what in the building can cause a fire to occur  
 17 in the first place, where will the fire spread, how does  
 18 that impact the people, okay? How it impacts the  
 19 people, and so what type of evacuation may be available  
 20 to them, is a function of your understanding of what,  
 21 you know, the Building Regulations, separate  
 22 legislation, but it calls fire safety provisions. So  
 23 what's in the building that's meant to make it safe when  
 24 the fire has broken out and if the fire is spreading?  
 25 So as well as those fire scenarios, you can't

30

1 determine that spread and, you know, consequences  
 2 without understanding what the building itself is  
 3 capable of in those scenarios.  
 4 SIR MARTIN MOORE-BICK: Well, that has a bearing on the  
 5 ability to escape from a fire, I assume?  
 6 A. Absolutely, yes, it has a bearing on how you escape,  
 7 you know, and the likelihood of being able to, and it  
 8 also has an impact on firefighting as well, noting that,  
 9 yes, I understand that that's separate. But it impacts  
 10 what's possible in those scenarios.  
 11 SIR MARTIN MOORE-BICK: Thank you.  
 12 MR MILLETT: Can we go to {CTA00000011/108}, please. What  
 13 I'm showing you is the competency criteria published by  
 14 the Competency Council in, I think, 2011. This is part  
 15 of Mr Todd's report.  
 16 If we go to page 109 in that document  
 17 {CTA00000011/109}, this is the foreword. It was  
 18 published on 21 December 2011.  
 19 If you go to the second paragraph under the  
 20 foreword, you can see that it says:  
 21 "There is no legislative requirement for the fire  
 22 risk assessment to be carried out by a competent person.  
 23 This is to avoid an implication that every duty holder  
 24 under the legislation needs to employ the services of  
 25 a fire safety specialist, such as a consultant, to carry

31

1 out their fire risk assessment."  
 2 Now, despite the fact that the dutyholder is not  
 3 obliged, it seems, to retain the services of a competent  
 4 fire safety specialist, is it the case that every fire  
 5 risk assessment must be carried out competently?  
 6 A. Yes, it is. Am I allowed to say something about that  
 7 sentence there, please?  
 8 Q. Yes.  
 9 A. Like, I think my experience of working with different  
 10 organisations is some of the best risk assessments and  
 11 fire risk management systems come when there's  
 12 a competent person embedded in the organisation, because  
 13 there's that bit of what really goes on every day in  
 14 an organisation and in a building that's really  
 15 important, okay? So I don't know why it kind of goes  
 16 from one extreme to another, that there's no competence  
 17 so you don't need to employ a specialist. I don't  
 18 understand why it's so linear, that description there.  
 19 Q. Right, I see. Because, of course, there is  
 20 an obligation to have a competent adviser, isn't there?  
 21 A. Yes, there is.  
 22 Q. A competent person within the organisation.  
 23 A. Yes, yes.  
 24 Q. So you say that there's an inconsistency there, is  
 25 there, between --

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1 A. Well, I don't understand why we go from -- well, I don't  
 2 understand why you don't need competence to do a fire  
 3 risk assessment, and you are required to have competence  
 4 to do any other risk assessment, and I've made it clear  
 5 that I don't understand that. But I don't understand  
 6 why that triggers this phrase about needing a specialist  
 7 and having to employ someone from outside. That's all.  
 8 I don't think it's a big point.  
 9 Q. Right, okay.  
 10 In a high-rise residential building, would it be  
 11 normal, in your experience, for a fire risk assessor --  
 12 I call them a specialist, someone who does it a lot --  
 13 A. Okay, yes.  
 14 Q. -- to be instructed, or would it be normal for the  
 15 responsible person to take on that obligation or that  
 16 function itself?  
 17 A. Well, I think I've seen both. I mean, sometimes I'm  
 18 brought in, you know, to review what's going on, okay?  
 19 And I can't speak for the thousands of people carrying  
 20 out this work. Yes.  
 21 Q. Right.  
 22 Would you expect anyone undertaking a fire risk  
 23 assessment, whether it was the responsible person itself  
 24 or on its behalf, to meet the standards of the  
 25 reasonably competent fire risk assessor as contained in

1 PAS 79 and in these criteria?  
 2 A. In PAS 79, and which criteria here on this page, sorry?  
 3 Oh, down at F -- the FRAC, the Fire Risk Assessment  
 4 Competency Council?  
 5 Q. Yes, the one that's on the screen.  
 6 A. I think, you know -- yes, I think that would be a fair  
 7 and reasonable thing for a responsible person to do.  
 8 Q. Right.  
 9 Other than the Fire Risk Assessment Competency  
 10 Council criteria published in December 2011, and PAS 79  
 11 published in August 2012, other than those two  
 12 documents, is there any other guidance document that you  
 13 would use to determine or enforce competency on the part  
 14 of a fire risk assessor?  
 15 A. Enforce competency ... I mean, I think they're very well  
 16 established. I mean, I think I'd be -- you know,  
 17 I think there's helpful guidance on competency generally  
 18 from the HSE. I quite like how they describe  
 19 competency.  
 20 Q. Right.  
 21 A. Okay.  
 22 Q. Now, forgive the generality of this question next, but  
 23 in light of some of Mr Todd's evidence, I feel bound to  
 24 ask you: do you agree or disagree that PAS 79 applies to  
 25 fire risk assessments of high-rise residential buildings

1 such as Grenfell Tower?  
 2 A. Well, I very much thought it was.  
 3 Q. Yes. Are you aware of any parts of PAS 79 that were  
 4 intended to apply only to commercial premises?  
 5 A. I don't know anything about that. I am a practitioner.  
 6 I read the document, I apply it, I ignore parts where  
 7 it's not relevant to my work. But as far as I'm  
 8 concerned, it's a perfectly appropriate document to use  
 9 any time I'm doing a risk assessment.  
 10 Q. Let me try this a different way.  
 11 During your time as practitioner, up to and  
 12 including June 2017, or even today for what it's worth,  
 13 were you or are you aware of any understanding or any  
 14 view in the fire risk assessment business that, when it  
 15 came to high-rise residential buildings, there were some  
 16 parts of PAS 79 that should be treated either as wholly  
 17 inapplicable or applied with less vigour than if the  
 18 building were a commercial building?  
 19 A. I don't know anything about that.  
 20 Q. When you say you don't know anything about --  
 21 A. I've never heard that, but I'm very uncomfortable kind  
 22 of representing people I've never met.  
 23 Q. No, but I'm asking you about what you --  
 24 A. No, no, so in my work and in the work of all the people  
 25 at Arup and the other people that we engage with,

1 including work that we have to review, that's not  
 2 a theme that I've ever had to tackle.  
 3 Q. Yes, and I think that answers my question, which was:  
 4 were you aware of any view floating around the business  
 5 that there were bits of PAS 79 that simply either didn't  
 6 apply to high-rise residential buildings or you could  
 7 sort of treat as secondary?  
 8 A. So I haven't heard that, but maybe someone else would  
 9 come in here and tell you they heard it every day. But  
 10 in my working environment, that's not something I've  
 11 ever been aware of or had to deal with.  
 12 SIR MARTIN MOORE-BICK: My recollection is that Mr Todd was  
 13 of the view that PAS 79 had been drafted principally  
 14 with commercial buildings in mind, and that, in his  
 15 view, some parts of it were not really very appropriate  
 16 to residential buildings. Is that something on which  
 17 you can comment?  
 18 A. Well, I think ... I think that if an author of  
 19 a document thinks that, they should say it at the front.  
 20 I'm sorry, I feel like I'm being a bit -- you know,  
 21 I would like to know that as a user of the document.  
 22 In terms of exercising my own judgement and  
 23 independent thought when I've used PAS 79, I've never  
 24 reached a point where it fell down for me when I was  
 25 risk assessing anything. I find it a very good method

1 to assist me in my work.  
 2 MR MILLETT: And following on from that, can I just show you  
 3 what you say in chapter 8 of your report.  
 4 A. Yes.  
 5 Q. Can we go to {BLARP20000027/60}, paragraph 5.5.12.  
 6 You say there:  
 7 "In my opinion PAS 79:2012 provides the most  
 8 comprehensive guidance on action plans therefore I have  
 9 used this document as the benchmark for my later  
 10 assessments."  
 11 A. Yes.  
 12 Q. One or two questions flowing on from that.  
 13 Do you agree that a fire risk assessor could use the  
 14 template in either annex B or annex E to PAS 79,  
 15 depending on whether they were carrying out a new FRA or  
 16 an FRA review?  
 17 A. Yes, they could.  
 18 Q. Yes, and if the format varied, they would need to make  
 19 sure — is this right, do you agree — that all the  
 20 recommendations of the current PAS 79 were satisfied?  
 21 A. Yes, because most people — I mean, I went back and had  
 22 a look at things, coming here. Most people actually  
 23 adapt it to make it premises-specific.  
 24 Q. Right.  
 25 Following on from that, given that a fire risk

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1 assessor isn't required to use any particular template  
 2 but makes it premises-specific, would you expect that  
 3 for FRAs on Grenfell done after August 2012, the  
 4 reasonable fire risk assessor would have used the  
 5 2012 version of PAS 79?  
 6 A. Yes.  
 7 Q. Yes.  
 8 A. Yes.  
 9 Q. Is it fair to say that if he or she did not use the  
 10 2012 version of PAS 79 but an earlier version, there  
 11 would be a risk that the fire risk assessor would not  
 12 necessarily be following the most up-to-date  
 13 British Standards or industry guidance?  
 14 A. They're not enormously different. I can provide  
 15 a comparison. But I think it's a sign of keeping up to  
 16 date on things, which is a very important part of  
 17 actually demonstrating competence to other people, even  
 18 if not to yourself, that you are aware that such  
 19 a significant document has been subject to a revision.  
 20 Q. Yes, thank you.  
 21 Now, I want to ask you some questions about other  
 22 guidance documents published relevant to the conduct of  
 23 fire risk assessments which you've referred to in your  
 24 report at chapter 8 at section 5.  
 25 Would you expect Mr Stokes, as the fire risk

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1 assessor on behalf of the TMO for Grenfell Tower in the  
 2 years 2010 to 2016, to have a reasonably thorough  
 3 knowledge of — and I'm going to give you a list —  
 4 first, what we call the Sleeping Guide, namely  
 5 HM Government "Fire safety risk assessment: sleeping  
 6 accommodation", published in 2006 —  
 7 A. Yes.  
 8 Q. — at {RBK00036722}? Yes?  
 9 A. Yes.  
 10 Q. Yes, you would.  
 11 The second document, would you expect Mr Stokes to  
 12 have a reasonably thorough knowledge of the  
 13 HM Government guide entitled, "Fire safety risk  
 14 assessment: means of escape for disabled people"  
 15 published in March 2007?  
 16 A. Yes.  
 17 Q. {INQ00014732}. You would.  
 18 Third document, the LACORS "Housing — fire safety —  
 19 guidance on fire safety provisions for certain types of  
 20 existing housing" published in 2008?  
 21 A. Yes.  
 22 Q. Yes, {CST00002516}.  
 23 Next document, the LGA "Fire safety in purpose-built  
 24 blocks of flats", first printed in July 2011 and then  
 25 reprinted without the error a little bit later that

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1 year?  
 2 A. Yes.  
 3 Q. {HOM00045964}.  
 4 Finally, would you expect the reasonably competent  
 5 fire risk assessor during that period for Grenfell Tower  
 6 to be familiar or reasonably familiar with the relevant  
 7 British Standards, so for example British Standard  
 8 9991:2015?  
 9 A. Yes, and probably more so the British Standards for the  
 10 systems in the building.  
 11 Q. So including lifts, for example?  
 12 A. Yes, all the different types of systems and all the  
 13 guidance documents refer you to those other standards.  
 14 Q. Yes, I see. Thank you.  
 15 Now, can we just look, then, at the LGA guide, and  
 16 I want to ask you about where it sits in the pantheon,  
 17 if you like, of guidance.  
 18 Can we go, please, to your chapter 11,  
 19 {BLARP20000040/7}. Here, at paragraph 3.1.5, you say:  
 20 "At Section 5.1 of the LGA Guide it states that,  
 21 with respect to purpose-built blocks of flats, it  
 22 'builds on the advice given' in the HM 'Sleeping  
 23 accommodation' guide, but it also states (two paragraphs  
 24 later) at Section 5.3 that the LGA Guide is 'the more  
 25 appropriate guide to use for purpose-built blocks of

40

1 flats .'"

2 If you go on the same page to paragraph 3.1.7, two

3 paragraphs down, you say:

4 "I have found no other publicly available evidence

5 that Fire safety risk assessment — sleeping

6 accommodation was superseded by the LGA Guide (which is

7 not a HM Government publication) and therefore that the

8 HM Government guides no longer applied to purpose built

9 blocks of flats , with respect to article 50."

10 Then if you go back to chapter 1 at

11 {BLARP2000023/68}, paragraph 5.1.24, you say:

12 "And I consider it reasonable to expect responsible

13 persons and their safety assistants to have considered

14 HM 'Sleeping accommodation' guide fully, not just the

15 LGA Guide in isolation, nor as a primary reference

16 source."

17 Now, I've shown you what you've said in your report

18 there in those places. Having heard the evidence in

19 this part of the Inquiry thus far, do you maintain the

20 opinions that you have set out in those parts I've just

21 shown you?

22 A. Yes, I do.

23 Q. You do.

24 Now, let's go, then, to the LGA guide at

25 {HOM00045964/14}.

1 There is a heading next to section 5, "Relationship

2 to other guidance", and it says in the second line:

3 "It builds on the advice given in the DCLG Sleeping

4 accommodation guide mentioned earlier."

5 That's what you have quoted. It goes on to say:

6 "That guide applies generically to all premises in

7 which people sleep, but, for purpose—built blocks of

8 flats, this guide is likely to be the more appropriate

9 one to use."

10 If you go to paragraph 5.3, two paragraphs down, it

11 says:

12 "This present guide covers all purpose—built blocks

13 of flats (both common parts and the flats themselves),

14 including those within the scope of the DCLG and LACoRS

15 guides. It is, therefore, the more appropriate guide to

16 use for purpose—built blocks of flats."

17 In light of those express statements in the

18 LGA guide, can you help us understand why it wasn't

19 reasonable for any fire risk assessor conducting an FRA

20 in the period 2012 to 2016, after the publication of the

21 LGA guide, on a block of flats in general needs housing,

22 to have regard only to the LGA guide on the basis that

23 it absorbed everything of relevance in the DCLG and

24 LACORS guides? Why was it unreasonable for a fire risk

25 assessor only to use this document?

1 A. Okay. Well, if we're talking about Grenfell Tower, all

2 the guidance documents were referred to, so it's not

3 relevant. If you're asking me to give a view on lots of

4 other people and what they did, which I've told you I'm

5 not comfortable doing, again I've gone back and looked

6 at all different documents that are available to me, and

7 what I see is most people list out all those guidance

8 documents and then state they've had to exercise

9 judgement. That is my experience.

10 Q. Right.

11 A. And I understand the language written here, okay? But

12 it does not say to me that I must ignore everything

13 else.

14 Q. Let me try --

15 A. Yes.

16 Q. Thank you, and I understand that. Let me see if I can

17 get an expansion on that a little bit.

18 A. Yes.

19 Q. If a fire risk assessor, assessing a building such as

20 Grenfell Tower in the period 2012 to 2016 --

21 A. Yes.

22 Q. -- used this guide, the LGA guide, only and didn't use

23 or look at the other guidance, such as the

24 Sleeping Guide --

25 A. Yes.

1 Q. -- would he or she be falling below the standards of the

2 reasonably competent fire risk assessor?

3 A. So that didn't happen at Grenfell, okay? If a person

4 read the LGA guide only, it still refers them out to all

5 the different British Standards and all the different

6 things. You can never, in my opinion, simply read the

7 LGA and carry out your work.

8 Q. So I think the answer to my question is that if you did

9 only read the LGA and carry out your work, you would be

10 falling below the standards of reasonable competence

11 expected of a fire risk assessor?

12 A. I think I'm being asked to give a view on a published

13 guidance document as if that's what the focus of my work

14 was. The focus of my work was on Grenfell Tower.

15 I think the LGA guide document is a summary of lots

16 of different publications, with other opinions there,

17 and, in my professional opinion, it requires a careful

18 reading and a careful assessment with other published

19 guidance documents.

20 Q. Would you criticise a responsible person or a fire risk

21 assessor for using the LGA guide as essentially what

22 I might call a one-stop shop and nothing else?

23 A. If the resulting risk assessment contained items that

24 I considered to pose a risk to life, or I considered to

25 be, from a technical perspective, not in compliance with

1 the order, yes, I would.  
 2 Q. Thank you. Thank you.  
 3 Now, turning to a totally different topic -- well,  
 4 not totally different, relatively different -- the scope  
 5 of an FRA and practical steps, including  
 6 evidence-gathering and frequency. That's what we're  
 7 going to look at next, Dr Lane.  
 8 First, can I show you -- and I'm not going to read  
 9 it all out -- chapter 11 of your report at  
 10 {BLARP20000040/5}. I'd like just to show you what's on  
 11 that page under the heading "The [RRO]".  
 12 At paragraph 2.1.4, four paragraphs down, you say:  
 13 "One central question which emerges is whether the  
 14 external wall is within the scope of the duties set out  
 15 in the RR(FS)O."  
 16 A. Yes.  
 17 Q. You proceed after that to set out, down to  
 18 subparagraph 14 on the next page {BLARP20000040/6}, if  
 19 we can just turn the page, your opinion there that the  
 20 external wall of a building with a stay-put policy or  
 21 stay-put strategy falls within the scope of the RRO.  
 22 Now, I'll show you what you do say expressly at  
 23 paragraph 2.1.14. You say:  
 24 "From that perspective, the KCTMO, should not have  
 25 omitted the external wall construction from its

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1 assessment of risk, as it was so interlinked with the  
 2 safety of relevant persons in Grenfell Tower and because  
 3 Grenfell Tower relied on the Stay Put strategy."  
 4 In understanding your evidence, do I summarise it  
 5 correctly by asking you that the gist of that evidence  
 6 or your opinion is that the external wall constitutes  
 7 a collective protective measure for relevant persons in  
 8 any building with a stay-put strategy?  
 9 A. Yes. So any building where the compartmentation abuts  
 10 the external wall --  
 11 Q. Yes.  
 12 A. -- it means the external wall is -- so when the internal  
 13 compartmentation abuts the external wall -- as you know,  
 14 the external wall in high-rise buildings is  
 15 a fire safety provision and has a section in the  
 16 building regs, just as internal compartmentation has  
 17 a section in the building regs, and so where you rely on  
 18 the protection afforded by the internal walls and the  
 19 external wall for your evacuation, it is a collective  
 20 protective measure.  
 21 Q. Can I just understand that a little bit more closely, on  
 22 your last answer.  
 23 A. Yes.  
 24 Q. You say that the external wall in high-rise buildings is  
 25 a fire safety provision and has a section in the

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1 building regs --  
 2 A. Yes.  
 3 Q. -- just as internal compartmentation.  
 4 A. Yes.  
 5 Q. Can you just explain what it is about the  
 6 Building Regulations that makes an external wall  
 7 a protection measure?  
 8 A. No, so I wasn't trying to imply some kind of ... that's  
 9 a different way of saying it. So what I was trying to  
 10 say is, I said a while ago, as a fire risk assessor, you  
 11 have to understand what's in the building and then what  
 12 happens when the fire starts, and I wanted to make the  
 13 point that the external wall is one of the fire safety  
 14 provisions that comes with, you know, a high-rise  
 15 residential building. So it has to perform to a certain  
 16 standard.  
 17 Q. Now --  
 18 A. Okay?  
 19 Q. Yes.  
 20 A. When you get under the order -- so I don't want everyone  
 21 saying, "Oh, she said the building regs equal this",  
 22 that's not what I mean. When you get to the order and  
 23 you're doing your risk assessment, you should be able to  
 24 rely on that external wall to perform as intended, when  
 25 considering, you know, how the compartmentation -- where

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1 it abuts that wall, how reliable it is, when you're  
 2 going to continue to rely on also the stay-put strategy.  
 3 Okay?  
 4 And it's a collective protective measure, because  
 5 the whole purpose of stay put is that once the people  
 6 who have to leave -- and there's always a cohort of  
 7 people that have to leave -- it should be safe for  
 8 everyone else to stay, and that means the  
 9 compartmentation they rely on, and I'll just keep using  
 10 this phrase, where it abuts the external wall, it  
 11 becomes reliant on that performing. Okay?  
 12 Q. Now, just to be absolutely precise, when you say the  
 13 external wall is a fire safety provision --  
 14 A. Yes.  
 15 Q. -- do you mean that it has fire safety rules about it,  
 16 including B4, the functional requirement in B4, and  
 17 section 12 of ADB?  
 18 A. Yes. There's a ... it's a fire safety provision, and  
 19 the rules are correct as you've described them, okay?  
 20 And it's part of the package. So when you design  
 21 a high-rise residential building, no matter what decade,  
 22 the external wall has always been, you know, assigned  
 23 a minimum performance, because it's a provision in  
 24 high-rise residential buildings, it's part of the  
 25 package of safety measures. And I think Ms Menzies is

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1 always really good at explaining about the  
 2 interconnectedness of things, okay? And the external  
 3 wall has always in high-rise buildings and high-rise  
 4 residential buildings, you know, been a fire safety  
 5 provision and something that's relied upon in high-rise  
 6 residential buildings.  
 7 Q. I see. So just to clarify -- it may just be me -- can  
 8 we agree this: the external wall is not itself  
 9 a component part of the compartment, but itself has  
 10 regulations applying to it?  
 11 A. Yes, I see what you mean, sorry. So that's true, okay?  
 12 That's correct, and -- because remember, it depends on  
 13 the layout of the space. So at Grenfell, all the flats  
 14 were on the perimeter. There will be other premises  
 15 where you have landlocked compartments that don't abut  
 16 the external wall, okay? So when the internal  
 17 compartmentation, you know, hits the external wall  
 18 together in those circumstances, you are reliant on the  
 19 performance of the wall as well in that capacity.  
 20 Q. So perhaps we can summarise your opinion like this: the  
 21 fire safety and the risks attendant on it of the  
 22 external wall is relevant to the fire risk assessor  
 23 because it is relevant to the maintenance of  
 24 compartmentation?  
 25 A. Exactly, because without it, the internal

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1 compartmentation can't carry on. So I'm not saying  
 2 an external wall is a compartment wall, because that has  
 3 a really formal definition.  
 4 Q. Yes.  
 5 A. But when the internal compartmentation meets the  
 6 external wall and the six-sided box -- I've been kind of  
 7 going on about this since the very start -- where they  
 8 meet together, one is reliant on the performance of that  
 9 wall in maintaining this overall compartmentation  
 10 strategy to allow people to stay in their flats and not  
 11 be forced to evacuate.  
 12 Q. Yes.  
 13 A. Okay? Probably I'm not being clear now, but ...  
 14 Q. No, that's very clear.  
 15 A. Yes.  
 16 Q. So does it follow from that that it was your view and is  
 17 your view that the external wall falls within the scope  
 18 of the obligations imposed on the responsible person by  
 19 the RRO when it comes to the fire risk assessment?  
 20 A. Yes. So the internal walls and the external wall, where  
 21 they're relied upon for protection, by definition, in my  
 22 mind, that requires consideration in a fire risk  
 23 assessment.  
 24 Q. Now, you may have heard --  
 25 SIR MARTIN MOORE-BICK: Can you help me with this, because

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1 I think I'm having a little difficulty. I'm just  
 2 thinking of the external walls at Grenfell Tower before  
 3 the refurbishment.  
 4 A. Yes.  
 5 SIR MARTIN MOORE-BICK: You had concrete spandrels which  
 6 were, by definition, not combustible.  
 7 A. Yes.  
 8 SIR MARTIN MOORE-BICK: And between them you had window  
 9 spandrels or window pieces --  
 10 A. Yes.  
 11 SIR MARTIN MOORE-BICK: -- which were not fireproof, and  
 12 were either composed of glass fittings or infill panels,  
 13 which may or may not have been very substantial.  
 14 A. Yes.  
 15 SIR MARTIN MOORE-BICK: Now, in the case of a fire within  
 16 a flat --  
 17 A. Yes.  
 18 SIR MARTIN MOORE-BICK: -- depending on its severity, that  
 19 part of the external wall would be likely to fail very  
 20 quickly.  
 21 A. Yes.  
 22 SIR MARTIN MOORE-BICK: So --  
 23 A. Potentially. I'm just struggling to remember what the  
 24 infill panels were made from originally. I thought it  
 25 was some kind of asbestos-type material. But anyway,

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1 I can't remember right now. Yes, anyway --  
 2 SIR MARTIN MOORE-BICK: I'm not quite sure, but I don't  
 3 think the window sections were regarded as, as you say,  
 4 part of a compartmentation or as a non-combustible --  
 5 A. Well, it's the glass --  
 6 SIR MARTIN MOORE-BICK: Exactly, the glass --  
 7 A. Well, you know, it's the glass part, and it breaks  
 8 quickly, absolutely.  
 9 SIR MARTIN MOORE-BICK: The glass will go very quickly.  
 10 A. Yes.  
 11 SIR MARTIN MOORE-BICK: So you haven't got any form of real  
 12 fire protection on the outside wall, have you?  
 13 A. Yes. Correct, so it's not a compartment wall, which  
 14 would require fire rated glazing.  
 15 SIR MARTIN MOORE-BICK: Right.  
 16 A. Okay? But what it's meant to do is to not, you know,  
 17 promote substantial spread of flame beyond that flat.  
 18 So I'm not saying that there will not be a fire breaking  
 19 out of the first flat, okay? But the idea is that it  
 20 doesn't promote fire spread to multiple other  
 21 compartments, okay?  
 22 SIR MARTIN MOORE-BICK: Right. So would it be fair to say  
 23 that, in your view, the fire risk assessor should be  
 24 interested in the external wall to the extent that it  
 25 might promote fire?

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1 A. Yes, exactly, that it's become a hazard. So you've  
2 actually touched on something really important. So when  
3 stay put was created, the rules for the materials in the  
4 external wall were totally different, okay? So you  
5 might say, in a way, you didn't need to think about it.  
6 You might call that not suitable and sufficient, but if  
7 you didn't think about it, you were more likely --  
8 you know, it was probably more likely to be okay because  
9 the wall was not a hazard.  
10 So in my mind, and I've been very -- as clear as  
11 I possibly can in my report, I understand everything  
12 that's written down, I know what I did and I know what  
13 was happening, but when you think about the wall in  
14 a building with a stay-put strategy, or other buildings  
15 with very complex evacuation strategies, you need to  
16 know if the wall is a protective measure in some form,  
17 or if in itself it's become a hazard in the event of  
18 a fire.  
19 SIR MARTIN MOORE-BICK: That I do understand.  
20 A. Yes, sorry, okay.  
21 SIR MARTIN MOORE-BICK: Thank you very much.  
22 MR MILLETT: The view that you have just expressed in answer  
23 to the Chairman's question just now, namely that -- and  
24 I hope I've summarised it correctly as follows -- the  
25 fire risk assessor should be interested in the external

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1 wall at least to the extent that it might promote fire,  
2 was that an approach or view that you heard in the  
3 industry generally from your work? In other words, was  
4 that a commonly shared view to the best of your  
5 knowledge and experience?  
6 A. So I just -- all I can say to you is that my experience  
7 is from 2013, I was being asked by people with existing  
8 buildings and experiencing difficulties on my own  
9 projects with the hazard the external wall posed, and  
10 that's all I can say.  
11 Q. Now, let's look, then, at that opinion against the  
12 question of what I'm going to loosely call common parts.  
13 Can we go to {BLARP20000023/5}, and this is  
14 chapter 1 of your report. Let's look at  
15 paragraph 1.1.11 towards the middle of the page, a third  
16 of the way down your screen, and you say this:  
17 "The RR(FS)O expressly excludes premises defined as  
18 domestic premises (such as flats). Common practice  
19 became therefore to consider areas 'outside' the  
20 domestic premises, as so called 'common parts'. I deal  
21 with this later in Section 6.2."  
22 If we look at section 6 of chapter 1 -- can we go to  
23 page 76, please, of this same document  
24 {BLARP20000023/76} -- you say there at paragraph 6.1.5:  
25 "I am aware for example there is a body of opinion

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1 that because external walls are not 'within the common  
2 parts', nor part of a workplace, by these definitions  
3 the external wall falls outside the scope of the  
4 RR(FS)O. I do not agree."  
5 Are you referring here, when you say there is a body  
6 of opinion, to a body of opinion before or after the  
7 Grenfell Tower fire, or perhaps both?  
8 A. After.  
9 Q. After. Right. Are you able to assist us with how, in  
10 your experience or knowledge, that body of opinion grew  
11 up after the fire?  
12 A. No, I can't assist you.  
13 Q. You can't.  
14 When you say body of opinion, was that the body of  
15 opinion, to the best of your knowledge, held by the  
16 majority of fire risk assessors in the industry, or  
17 other people --  
18 A. I can't say that.  
19 Q. Right.  
20 A. Yes.  
21 Q. For example, whose opinion was it, do you know? I mean,  
22 was it government or --  
23 A. Well, as I went on to do in chapter 10, I looked at the  
24 FIA document.  
25 Q. I see.

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1 Are you able to explain the rationale for that  
2 opinion?  
3 A. No.  
4 Q. No. We know you disagree with it.  
5 A. No, well, I can't explain it at all. But, I mean,  
6 I feel like I'm straying a little bit off me having  
7 analysed Grenfell Tower, which is why I'm here.  
8 Q. All right.  
9 A. But I hope that the technical information I've provided,  
10 and we might hopefully get to talk about the order  
11 a little bit more, I haven't been able to  
12 retrospectively prove that the external wall was right  
13 to be excluded.  
14 Q. I see what you mean.  
15 A. I've done a double or triple negative there. But  
16 I haven't been able to prove that, no.  
17 Q. No, thank you. And in fact, taking that a little bit  
18 further, isn't it right that both the Sleeping Guide and  
19 the LACORS guide, and indeed the LGA guide, all said in  
20 their different ways that the RRO applied only to the  
21 common parts of blocks of flats or common areas?  
22 A. Yes, so I think that is true, that's absolutely correct,  
23 but that doesn't remove or directly cause the omission  
24 of looking at a hazard. I think --  
25 Q. Yes.

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1 A. So it's kind of hard to explain this, actually, but  
 2 a hazard is a hazard in a building, and I can't find  
 3 anywhere that any type of wall was expressly categorised  
 4 as being in or out.  
 5 Q. Right.  
 6 Before the fire, was there a body of opinion, to  
 7 your knowledge, that the external wall was or should be  
 8 excluded from the scope of a fire risk assessment  
 9 because it wasn't ---  
 10 A. Part ---  
 11 Q. --- outside the private dwelling or appurtenant thereto?  
 12 A. I was surprised to hear that, and I think we were  
 13 surprised to hear that, I can say as well.  
 14 Q. Right. So is it your ---  
 15 A. I mean, I understand --- I mean, I don't want to sound ---  
 16 you know, I think there's always that kind of remark  
 17 about hindsight. I understand what the guidance  
 18 document said, and I'm absolutely clear that  
 19 explanations of what the external wall is for in  
 20 a high-rise residential building are omitted from all  
 21 the guidance documents. I mean, it's important to make  
 22 that absolutely clear. There is no explanation of the  
 23 external wall as a fire safety provision and the  
 24 importance of it particularly in high-rise residential  
 25 buildings, just for balance. So I'm clear that none of

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1 that was expressed.  
 2 Q. Yes. I mean, you know, because you're familiar with the  
 3 RRO, that by virtue of Article 6 and the definition of  
 4 domestic premises, domestic premises are excluded ---  
 5 A. Yes.  
 6 Q. --- from its scope, except parts used in common.  
 7 A. Well, parts of the domestic premises --- yes.  
 8 Q. How do you square your opinion that the external wall is  
 9 or may present a hazard which should be assessed ---  
 10 A. Okay.  
 11 Q. --- with the exclusion of domestic premises, save parts  
 12 used in common and parts appurtenant thereto?  
 13 A. So my understanding of the RRO, as a fire safety  
 14 engineer, is it actually splits things into three types  
 15 of --- I don't know if the right word is demise or not,  
 16 but you have domestic, workplace, and not a workplace.  
 17 That's how it goes about things in the order. And  
 18 I understand the domestic premises are excluded with  
 19 respect to hazard and control, but I don't understand  
 20 how that makes the external wall or the internal wall  
 21 outside the scope. I don't understand how you  
 22 immediately go there.  
 23 Q. I think some people might say that the external wall  
 24 isn't part of the common parts and therefore doesn't  
 25 fall within the scope of the RRO.

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1 A. Understood, but the RRO doesn't say, "Please do a risk  
 2 assessment in the common parts". The RRO asks the  
 3 responsible person to deliver general fire precautions  
 4 by means of protective and preventative measures,  
 5 you know, depending on the type of responsible person  
 6 they are, for workplaces, not workplaces, and, yes,  
 7 exclude the domestic premise. I understand that. But  
 8 it doesn't say, "Please carry out fire risk assessments  
 9 in the common parts and exclude external walls and  
 10 include internal walls". Because I think it's important  
 11 to also realise now that, you know, I tried to look at  
 12 all the ways common parts are referred to, you know, the  
 13 same is true of the internal wall. It's not included  
 14 because the wall is the workplace, it's included in that  
 15 risk assessment because it's a protective measure. It's  
 16 one of the fire safety provisions in a building.  
 17 Q. I see. I see.  
 18 A. Is that --- because I know this is a very controversial  
 19 subject, so I hope I'm being clear enough.  
 20 Q. It is. I just want to understand your understanding.  
 21 A. Yes.  
 22 Q. Before the break, can I just see if we can leave it this  
 23 way: you include the external wall as within the scope  
 24 of a fire risk assessment because it's part of the  
 25 protective measures which fall within Article 4?

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1 A. Yes, exactly. I can't ---  
 2 Q. As opposed to not being outside the ---  
 3 A. Exactly. I can't say to a client, "We've sorted out  
 4 your general fire precautions for this high-rise  
 5 residential building, I haven't looked at the wall,  
 6 here's hoping it doesn't cause extensive fire spread".  
 7 Because, you know, the truth is that if extensive  
 8 fire spread can be supported in a wall --- not all  
 9 external walls are a hazard, okay? But if it supports  
 10 fire spread, I'm unable to say to the responsible person  
 11 the classic evacuation strategy remains suitable. I may  
 12 have to change my evacuation strategy because I can't  
 13 rely on that wall.  
 14 MR MILLETT: Yes, thank you, and that actually takes me very  
 15 neatly to my next question and the break.  
 16 SIR MARTIN MOORE-BICK: The break before your next question?  
 17 MR MILLETT: Yes.  
 18 SIR MARTIN MOORE-BICK: We will have the break now. We'll  
 19 come back, please, at 3.35. You know --- I've said this  
 20 to you many times already --- please don't talk to  
 21 anybody.  
 22 THE WITNESS: I don't talk to anybody anymore.  
 23 SIR MARTIN MOORE-BICK: Very wise. Good. Thank you very  
 24 much.  
 25 (Pause)

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1 Thank you. 3.35.  
 2 (3.20 pm)  
 3 (A short break)  
 4 (3.35 pm)  
 5 SIR MARTIN MOORE—BICK: Right, Dr Lane, happy to carry on?  
 6 THE WITNESS: No, yes, of course.  
 7 SIR MARTIN MOORE—BICK: Thank you very much.  
 8 Yes, Mr Millett.  
 9 MR MILLETT: Thank you, Mr Chairman.  
 10 Dr Lane, can I look with you at the LGA guide,  
 11 please, {HOM00045964/111}, paragraph 72.  
 12 Under the heading "External fire—spread" at 72.1, it  
 13 says:  
 14 "The external façades of blocks of flats should not  
 15 provide potential for extensive fire—spread. When  
 16 assessing existing blocks of flats, particular attention  
 17 should be given to any rainscreen or other external  
 18 cladding system that has been applied and to façades  
 19 that have been replaced."  
 20 Then 72.2 says:  
 21 "The use of combustible cladding materials and  
 22 extensive cavities can present a risk, particularly in  
 23 high—rise blocks. Restrictions are normally applied to  
 24 the nature of such materials and in particular their  
 25 surface spread of flame characteristics. Cavity

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1 barriers are also required in some circumstances.  
 2 Assistance from specialists may be required to determine  
 3 if the external surfaces of walls are satisfactory and  
 4 whether there is adequate provision of cavity barriers."  
 5 Now, just looking at that, and reminding ourselves  
 6 that that is the LGA guide 2011, who was it who was  
 7 supposed to assess — using the word there — existing  
 8 blocks of flats and pay particular attention — using  
 9 the words there — to any rainscreen or other external  
 10 cladding system and façades?  
 11 A. So I think there is a perfectly sensible warning about  
 12 a hazard emanating from the construction industry. And  
 13 who was it? Well, the reader of the LGA guide, and so  
 14 the responsible person and their in—house or  
 15 out—of—house fire risk assessor.  
 16 Actually, sorry, Mr Millett, is it okay if I just  
 17 say something else, because I was thinking over the  
 18 break, about walls?  
 19 Q. Yes, of course.  
 20 A. This thing about in and out. So the common lobby in  
 21 Grenfell was landlocked, so it doesn't touch the  
 22 external wall. But other buildings, the common lobby,  
 23 you know, again abuts the external wall. So by that  
 24 definition, does that mean those walls are in and not  
 25 other external walls? This is where I couldn't square

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1 the whole thing away in the end.  
 2 Q. Yes.  
 3 A. I know you can't answer that question, but I think  
 4 that's something that should be considered. Does what  
 5 I've said make any sense?  
 6 Q. Yes. So to take that point and perhaps bring it back to  
 7 you, are you saying that the external wall would or may  
 8 represent a hazard to be assessed by the responsible  
 9 person —  
 10 A. Yes.  
 11 Q. — and/or their fire risk assessor whether or not it  
 12 abuts a compartment or a common part?  
 13 A. Yes, exactly, exactly.  
 14 Sorry, so back to this. This is a sensible warning  
 15 about a hazard because of a trend in the industry.  
 16 Q. Yes. That's very helpful.  
 17 Now, on the basis of the answer before last, the  
 18 responsible person or their in—house or out—of—house  
 19 fire risk assessor is supposed to do the assessment, how  
 20 were fire risk assessors, before 2017, meant to  
 21 incorporate their knowledge of the building envelope  
 22 into their fire risk assessments?  
 23 A. So in this case, this is about a refurbishment, but —  
 24 well, "has been applied and to façades that have been  
 25 replaced". So this is focusing particularly on

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1 replacements. So a fire risk assessor would be reliant  
 2 on fire safety information that they could obtain  
 3 through the responsible person, from the parties  
 4 responsible for designing and installing that particular  
 5 type of external wall.  
 6 Q. And would you have expected the responsible person or  
 7 the fire risk assessor, as the case may be, to be  
 8 reasonably sufficiently experienced and trained to be  
 9 able to carry out a proper assessment within the meaning  
 10 of section or paragraph 72.1?  
 11 A. Yes. So I think ... I think for this circumstance,  
 12 where there's new materials, I'm going to assume they  
 13 should be compliant with Approved Document B during  
 14 design. In an ideal world, there should be a fire  
 15 safety strategy that would provide some simple  
 16 description of the performance, which should be enough,  
 17 in my opinion, or else you would have to look at some of  
 18 the basic component fire safety information yourself,  
 19 okay? But I have to say in an ideal world, because  
 20 obviously there wasn't a prevalence of that information  
 21 available, in the spirit of balance.  
 22 But there's kind of all different extremes when it  
 23 comes to risk assessing cladding — I have to be very  
 24 careful now — and I think there is a way where it can  
 25 be quite simple if it's described adequately in

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1 a fire strategy document, instead of having to escalate  
2 into a scenario of detailed reviewing of a building  
3 manual or even having to do some kind of major  
4 inspection.

5 But there should be sufficient paper-based  
6 information to enable you to understand the  
7 combustibility of the main components of the cladding.

8 Q. Yes, thank you.

9 A. Okay?

10 Q. Would it be enough for a fire risk assessor, when --  
11 using the words in 72.2 -- determining if the external  
12 surfaces of walls are satisfactory --

13 A. Yes.

14 Q. -- simply to say that it had been signed off by  
15 building control?

16 A. Absolutely not, no. And I think -- so if a person isn't  
17 skilled to review a certain level of detailed drawing,  
18 or doesn't have access to a fire strategy where it's  
19 explained, the safest thing to do and the most accurate  
20 thing to do is to explain the building has been re-clad,  
21 that you cannot ascertain if it is a hazard or not, and  
22 you strongly advise the responsible person, within  
23 a specific timeframe, that they urgently, through  
24 whatever means available to them, determine the  
25 materials that have been used in that refurbishment.

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

2 Can I then, just to back this up a little bit, go to  
3 the competency criteria again at {CTA00000003/73},  
4 please. This is part of appendix H, and if we look  
5 together at appendix H, "Fire protection", H1 on the  
6 right-hand side, "Passive fire protection", if you look  
7 a little bit lower down, it says there under the heading  
8 "Passive fire protection":

9 "The fire risk assessor should have a knowledge and  
10 understanding of the role in the provision of  
11 fire safety, including the types of fire performance  
12 requirements (load-bearing capacity, integrity,  
13 insulation, reaction to fire performance etc.) of the  
14 following ..."

15 A. Yes.

16 Q. And then if you go to page 74 {CTA00000003/74}, in the  
17 final section on the left-hand side:

18 "The building envelope, e.g. fire-resisting external  
19 walls, curtain walls.

20 "▪ The significance of their role in protecting  
21 escape routes at boundaries.

22 "▪ The significance of any immediately visible  
23 damage."

24 Then a reference to sandwich panel constructions  
25 with a combustible insulating core.

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1 Does that reference there, in your opinion, support  
2 the idea that a fire risk assessor should be examining  
3 and forming a risk view about the hazards presented by  
4 the building envelope?

5 A. So actually, yes, but also the text you showed me before  
6 you went to the building envelope, and you listed out  
7 loadbearing capacity, insulation --

8 Q. Page 73 {CTA00000003/73}.

9 A. Yes, I'm sorry, I'm not --

10 Q. We can flip the page back.

11 A. Yes, is that okay?

12 Q. Yes, page 73.

13 A. I think that's really important, actually. So it says:

14 "... fire performance requirements (load-bearing  
15 capacity, integrity, insulation, reaction to fire  
16 performance ..."

17 So in the Approved Document B, in the fire strategy,  
18 it should list the insulation and its performance, the  
19 reaction to fire performance, particularly when it comes  
20 to the external wall, and so there is a level of  
21 understanding needed of that fire safety provision, not  
22 necessarily a vastly in-depth understanding down to the  
23 tiny little gubbins that go into cladding, but that  
24 basic main component fire performance as written there,  
25 first of all, and then we go to your wall section on the

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1 other page.

2 Q. Can we turn the page, please, to page 74  
3 {CTA00000003/74}.

4 A. Yes.

5 Q. Bottom left.

6 A. So, "The significance of their role in protecting escape  
7 routes at boundaries", you know, that's to do with  
8 escaping past a wall and it having to have  
9 fire resisting properties, okay? Which is different to  
10 reaction to fire properties.

11 "The significance of any immediately visible damage"  
12 is relevant to sandwich panels used in external walls,  
13 because once they're damaged or have any kind of --  
14 you know, it means their risk of ignition rises because  
15 the combustible material within them is exposed.

16 So I see those two separate things, one about  
17 a fire resisting wall and the other about a wall  
18 requiring reaction to fire performance, the classic  
19 external wall performance, very helpful advice about  
20 considering those two things.

21 Q. How much would you need to know, as a reasonably  
22 competent fire risk assessor, about the requirements of  
23 Approved Document B, section 12, and fire performance  
24 classifications?

25 A. How much would you need to know? Well, you need to know

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1 what the standard is.  
 2 Q. For example, would you need to know whether or not your  
 3 external wall complies with diagram 40?  
 4 A. Oh. Would you need to know if it --  
 5 Q. In order to be able to --  
 6 A. No, because --  
 7 Q. -- discharge its obligation.  
 8 A. Because when a risk assessor is relying on the building,  
 9 they have to understand its performance as the original  
 10 fire safety provision. So, yes, they do need to  
 11 understand -- if it's a modern building, yes, they need  
 12 to have some understanding of the performance  
 13 requirements, one of which is diagram 40, yes.  
 14 Q. Right. So therefore would you expect the reasonably  
 15 competent fire risk assessor to have sufficient training  
 16 to be able to understand what it is he is looking at  
 17 from that perspective?  
 18 A. Yes, I think it's incredibly difficult to provide  
 19 an adequate description of hazards without understanding  
 20 fire safety provisions. So I think that means yes,  
 21 I think.  
 22 Q. Thank you.  
 23 A. Yes.  
 24 Q. In your experience, in the industry generally, did fire  
 25 risk assessors, your run of the mill fire risk assessor,

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1 have that kind of training?  
 2 A. No.  
 3 Q. Moving to April 2017, I just want to ask you a question  
 4 about the LFB's approach in that year?  
 5 A. Yes.  
 6 Q. This is {CST00003138}, and it's the letter of  
 7 6 April 2017 from Assistant Commissioner Dan Daly to  
 8 chief executives of London boroughs. It went widely,  
 9 and it's entitled "Tall buildings -- external fire  
 10 spread". It's a document on this occasion addressed to  
 11 Laura Johnson at RBKC, but it went, as I say, widely,  
 12 and it's a document we've looked at a number of times in  
 13 the course of Phase 2 of this Inquiry.  
 14 Can we go to the second page of this letter  
 15 {CST00003138/2}, please, the last paragraph, first two  
 16 sentences. Assistant Commissioner Daly says this:  
 17 "I would therefore strongly urge that you consider  
 18 this issue as part of the risk assessment process for  
 19 premises under your control. I suggest that you make  
 20 sure all relevant information about any replacement  
 21 window and facade schemes is fully available to fire  
 22 risk assessors."  
 23 First, do you agree with the approach urged by  
 24 Assistant Commissioner Daly here?  
 25 A. Yes, I do. I think it's another -- just as the LGA

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1 provides helpful information about the hazard a wall can  
 2 pose, I think this is a very sensible letter warning  
 3 people about a hazard emanating from the materials being  
 4 used by the construction industry.  
 5 Q. Yes.  
 6 Are you able, from what you know, from your  
 7 experience at the time rather than reading documents in  
 8 the Inquiry, to explain the basis on which Mr Daly  
 9 formed the view and told Laura Johnson that fire risk  
 10 assessors should be assessing the fire safety of facade  
 11 schemes?  
 12 A. Well, I mean, I don't know why -- I don't think I've  
 13 ever met Mr Daly and I don't know why he wrote this  
 14 letter, but I think -- this is 2017, isn't it?  
 15 Q. Yes, it is.  
 16 A. And I've made it clear to you that from 2013, my own  
 17 personal experience was the prevalent use of those  
 18 materials and a rising sense of concern in certain  
 19 parts, in my experience about insulation, but I was  
 20 aware of other people's concerns about materials beyond  
 21 insulation. So if, you know, I had read that letter on  
 22 the day, it would simply have reflected ...  
 23 Q. Your view?  
 24 A. What do you say, you know, that moment in time,  
 25 whatever, yes.

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1 Q. How, in practice, at the time would fire risk assessors  
 2 address the information set out in Mr Daly's letter?  
 3 What would a fire risk assessor do, do you know?  
 4 A. Well, I know what they should do, but I've never spoken  
 5 to someone who did do it, if that's what you're asking  
 6 me.  
 7 Q. That's helpful, but can you tell us in brief what they  
 8 should do?  
 9 A. Well, I think I kind of tried to explain that in  
 10 chapter 10. So it depends on the number of buildings.  
 11 I've explained about what KCTMO did, and Mr Stokes did,  
 12 but because a lot of this ends up becoming about  
 13 information, making sure you have the information to  
 14 determine if it's a hazard or not, and then if you don't  
 15 have the information, my reading of the letter was  
 16 a warning that you needed to go about getting that  
 17 information, and therefore be in a position to confirm  
 18 if that hazard existed in the building the responsible  
 19 person was responsible for.  
 20 So it was about information and taking the time to  
 21 start doing -- you know, starting to categorise,  
 22 you know, starting to understand if that hazard existed  
 23 in your portfolio or building or if it did not.  
 24 Q. Yes.  
 25 A. And, you know, there was nothing unsensible -- you know,

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1 "short, medium and long term actions to address the  
2 risk". So it was about preparation and understanding  
3 and then taking sensible steps to resolve a hazard if  
4 a hazard was found.

5 Q. Thank you.

6 Can I then turn to the next topic, which is  
7 gathering information, arising out of your last answer  
8 in fact, but a different topic.

9 Would you expect the responsible person to be  
10 sufficiently familiar with its obligations under the  
11 RRO, as identified in the relevant guidance, to know  
12 that it had to provide the fire risk assessor with all  
13 up-to-date information relevant to the FRA that they are  
14 about to undertake?

15 A. Would I expect that? Yes, I would, yes.

16 Q. And you would expect that, would you, in just the same  
17 way as if it were carrying out the risk assessment  
18 itself in-house?

19 A. Absolutely, because you can't do a suitable and  
20 sufficient risk assessment without information.

21 Q. No.

22 Now, can I show you what Janice Wray said on  
23 {Day142/135:6-10}.

24 At line 6 she is asked:

25 "Question: Do you recall whether, before or after

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1 his visit to carry out a fire risk assessment, Mr Stokes  
2 ever asked you for up-to-date information about disabled  
3 persons at Grenfell Tower?

4 "Answer: I don't recall him asking me."

5 If you go on to {Day142/137:14}:

6 "Question: I think from your earlier evidence this  
7 morning, but just confirm, it's right, isn't it, that  
8 you never actually considered telling Carl Stokes that  
9 before he carried out each FRA, or rather when you gave  
10 him the list of FRAs to do, you never told him about the  
11 number of vulnerable residents that the TMO had  
12 identified in those buildings?

13 "Answer: I don't believe I did, no.

14 "Question: And why is that?

15 "Answer: It was clearly a major oversight. I can't  
16 give you any other explanation, I'm sorry."

17 Just on that evidence, if a fire risk assessor in  
18 the position of Carl Stokes wasn't given the information  
19 that we looked at with Ms Wray there, would you have  
20 expected them to ask for it?

21 A. Yes.

22 Q. Yes, and if not given it despite asking for it, what  
23 would you expect a fire risk assessor to do about it?

24 A. Produce a risk assessment on the basis of a clear  
25 explanation of what information they had and what

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1 information they did not have, and the consequences of  
2 the missing information. So a clear explanation of the  
3 information forming the basis of the risk assessment.

4 Q. And the consequences of not having that information?

5 A. Yes. So, I mean, this particular — we've jumped from  
6 cladding to, in this particular case, regarding  
7 vulnerable residents in Grenfell Tower.

8 Q. Yes, it's an example.

9 A. As an example, there were statements made as if  
10 information had been considered quite thoroughly,  
11 actually, when that's not the case, as we now know.

12 Q. And we'll come to that.

13 A. Yes.

14 Q. But I'm using that as an example here.

15 Would it be normally accepted practice for the  
16 responsible person to rely on the fire risk assessor,  
17 the appointed fire risk assessor, to identify  
18 information needed for them to complete the fire risk  
19 assessment?

20 A. Yes, I think so, because sometimes people aren't quite  
21 sure what it is that you need to do your job properly,  
22 for them, so there's an exchange at the start. That's  
23 my experience. We would issue a list of documents as  
24 a minimum we require before we start, and if they're not  
25 available, something has to be done. Sometimes that

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1 means the inspection you do has to be well beyond the  
2 inspection of, you know, a classic risk assessment,  
3 because there is no other information to rely on.

4 Q. Right.

5 A. So I see it as two ways, is that okay: I think it's the  
6 responsible person and the risk assessor together need  
7 to come to a conclusion on the information forming the  
8 basis of the risk assessment.

9 Q. Right.

10 Would it follow from that — perhaps it doesn't —  
11 that where the fire risk assessor doesn't ask for  
12 information or advise that he should be given  
13 information relevant to the fire risk assessment, then  
14 the responsible person can safely assume that it's  
15 unnecessary or irrelevant?

16 A. Safely assume? So I don't think a competent fire risk  
17 assessor should conduct themselves like that. If they  
18 do, you know, I have some sympathy with the responsible  
19 person, but I would expect the person representing —  
20 I'm thinking about Grenfell Tower particularly now —  
21 I would expect the person representing the responsible  
22 person there to be very familiar with the information  
23 required. They had a warning before, as we know now.

24 Q. Yes. Yes. You're referring — well, what are you  
25 referring to?

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1 A. I'm referring to the Salvus audit, where they set out  
 2 really clearly that each building in KCTMO's property  
 3 needed its own fire safety file, or they might have used  
 4 a different word. There is just a basic level of  
 5 information any person responsible for a building needs,  
 6 you know, for maintenance purposes, risk assessment  
 7 purposes, all different purposes.

8 Q. Well, we'll come back to the September 2009 Salvus  
 9 report later in your evidence.

10 Can I then ask you some questions about frequency.  
 11 We can proceed, I think, on the basis that  
 12 Article 9(3) of the RRO requires that fire risk  
 13 assessments should be reviewed regularly so as to keep  
 14 it up to date.

15 A. Yes.

16 Q. Yes.

17 A. Yes.

18 Q. And particularly if there is a reason to suspect that  
 19 it's no longer valid or there has been a significant  
 20 change.

21 A. Yes.

22 Q. Can I just show you {BLARP20000027/139},  
 23 paragraph 8.2.23 of your report at chapter 8. Here it  
 24 is that you address the TMO's arrangements for carrying  
 25 out reviews of their fire risk assessments and new fire

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1 risk assessments, as set out in section 14.3 of their  
 2 fire safety strategy of November 2013. You quote from  
 3 it there.

4 If you go over the page in this report to page 140  
 5 {BLARP20000027/140}, you set out at the very top of the  
 6 page, still within paragraph 8.2.24, paragraph 14.3.4,  
 7 which says:

8 "The FRA will usually set out the timescale within  
 9 which the regular review will be required – generally  
 10 for properties assessed by us as being 'potentially high  
 11 risk' this will be required on an annual basis. We  
 12 would aim to carry out a new FRA on a 3-yearly basis."

13 If you look below that, you say at 8.2.25:

14 "In my opinion, these arrangements, if properly  
 15 implemented, would adequately enable compliance with  
 16 article 9 of the RR(FS)O."

17 Now, Mr Todd says that it's commonly considered that  
 18 the best practice is for FRAs for most buildings to be  
 19 reviewed annually. Just for our reference that's  
 20 paragraph 3.25 of his main report {CTA00000011/24}. Do  
 21 you agree with him?

22 A. Sorry, I thought you were talking about the new on the  
 23 three-yearly. So we're on review now. So I think a new  
 24 FRA on a three-yearly basis, I'm aware that that was  
 25 actually quite common practice, although I've always

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1 thought it should be two, and a review every year in  
 2 high-rise residential buildings I would agree is  
 3 adequate, yes.

4 Q. Yes.

5 Now, we know for a fact that the FRAs for  
 6 Grenfell Tower were done irregularly, at irregular  
 7 intervals, so September 2009, December 2010,  
 8 November 2012, October 2014 and April and June 2016.

9 A. Yes.

10 Q. In your opinion, would the fire risk assessment trade  
 11 regard those frequencies as regular?

12 A. For a full fire risk assessment or —

13 Q. Yes.

14 A. So I think every two years for a full fire risk  
 15 assessment is quite common. Doing a review in between  
 16 is also common.

17 Q. I see. So you agree that if there had been spot checks  
 18 annually by the TMO to ensure that FRA actions were  
 19 being completed, is it your opinion that that would be  
 20 regarded as satisfying the requirements?

21 A. It could be, if everything is happening — if the  
 22 actions are being closed out and things are being done  
 23 thoroughly, yes. I wouldn't criticise that timing, no,  
 24 on its own.

25 Q. Right.

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1 A. But it's the effectiveness of what's done each year and  
 2 the effectiveness of the full risk assessment every  
 3 two years.

4 Q. Yes.

5 A. But I wouldn't criticise a really well done system like  
 6 that, simply because of time, no.

7 Q. I see. So you don't criticise the frequency —

8 A. No.

9 Q. — for Grenfell Tower?

10 A. I haven't criticised the frequency of every two years,  
 11 no.

12 Q. Can I ask you then to look at the same part of this  
 13 report at page 425 {BLARP20000027/425},  
 14 paragraph 17.8.1, still within chapter 8.

15 You say, and this is under the heading, "Mr Stokes'  
 16 understanding of the preventive and protective measures  
 17 in Grenfell Tower after handover":

18 "Finally, KCTMO as responsible person had a critical  
 19 activity once the primary refurbishment works were  
 20 complete — and that was to ensure a fire risk assessment  
 21 for Grenfell Tower was carried out, capturing the effect  
 22 of the new works, and formulating the resulting general  
 23 fire precautions by means of a suitable and sufficient  
 24 risk assessment."

25 Then at 17.8.2:

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1 "Once practical completion occurred in July 2016,  
2 this was a moment in time, based on my own professional  
3 experience, to carry out a thorough fire risk  
4 assessment, taking into account all the new systems,  
5 fixtures and fittings in Grenfell Tower."

6 Then over the top of the page at page 427  
7 {BLARP20000027/427}, two pages on, you say there at  
8 paragraph 17.8.8:

9 "Yet the evidence shows [that] Mr Stokes only  
10 provided a summary update to his previous fire risk  
11 assessment documents in June 2016 only."

12 Now, just to be clear, if we can, is it your opinion  
13 that Carl Stokes should have been instructed to carry  
14 out a new FRA on Grenfell Tower after practical  
15 completion in July 2016?

16 A. Yes.

17 Q. And not earlier than 20 June 2016, when he was in fact  
18 instructed?

19 A. If the KCTMO thought they had another reason for doing  
20 a risk assessment at that time, I understand there may  
21 have been some other reason, but in terms of the final  
22 condition of the building, it needed to also occur after  
23 practical completion.

24 Q. Can you explain why?

25 A. Because there was so much work done in Grenfell Tower to

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1 passive and active protection measures, it wasn't  
2 possible to rely on old descriptions or theoretically  
3 old drawings. But as we know, there is no evidence that  
4 drawings were used anyway. So there was a need to  
5 understand the performance of all the new active and  
6 passive systems, and record them, and explain how they  
7 would be relied upon in the event of a fire.

8 I mean, are you asking me in the sense of review  
9 versus full or just the timing?

10 Q. I'm asking you full.

11 A. Yes, no, absolutely, because so many things have  
12 changed, you know, the smoke control system, you know,  
13 there was all sorts of things had changed, were  
14 different, required consideration.

15 Q. Yes. When you say he only provided a summary update to  
16 his previous fire risk assessment, which was April 2016,  
17 why do you say that it was only a summary update?

18 A. Because it didn't explain the resulting protective  
19 measures from the refurbishment works.

20 Q. Right.

21 A. And, you know, what was meant to happen or not with  
22 respect to the tower, okay?

23 Q. I see.

24 In your opinion, should Carl Stokes have told  
25 Janice Wray that a new FRA was needed after completion

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1 of the refurbishment?

2 A. Yes, I think he should have known that and raised it,  
3 yes, and equally Ms Wray, the responsible person, should  
4 know that. And it's something that's actually quite  
5 commonly documented as well, if one didn't know.

6 Q. Thank you.

7 Can I then turn to a different topic, which is FRA  
8 actions.

9 A. Yes.

10 Q. I just want to ask you first about the general recording  
11 of risk in action plans.

12 A. Yes.

13 Q. We can stick within chapter 8 of your report, where we  
14 are, and go, please, back to page 184  
15 {BLARP20000027/184}.

16 At page 184, paragraphs 9.1.14 and 15, you say this:

17 "9.1.14. The most significant purpose of a fire  
18 risk assessment is to estimate the level of risk, and  
19 provide clear guidance on any actions required, to  
20 reduce or maintain that level of risk as trivial or  
21 tolerable.

22 "9.1.15. Mr Stokes did not explain or record the  
23 purpose of any action derived by him, as a result of his  
24 risk assessment, as being relevant to the control of  
25 a specific hazard. By this I mean he did not record how

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1 any action or a failure to complete any specific action  
2 would impact the risk level for the premises."

3 Now, a number of questions flow from that.

4 First, should the connection between each risk and  
5 each action be explained, one by one, in the main body  
6 of a fire risk assessment?

7 A. Yes, I think so, yes.

8 Q. Can you just explain why it was important for a fire  
9 risk assessor to do that?

10 A. Because it helps the responsible person understand which  
11 actions are a risk — you know, which actions are the  
12 most serious risk to life or not, and a timed programme  
13 of work can be developed between them. Because  
14 a specific identified risk may pose, say, a very high  
15 level of harm to the relevant people, but may not be  
16 something that can be dealt with very honestly and  
17 practically in the short term, okay? So that's why the  
18 risk levels of each one, it's important to understand  
19 them, and then the timing possible, practically and  
20 honestly, of each one, they need to be separated, and so  
21 a sensible action plan exists on the record and  
22 a sensible risk level can be agreed for that moment, and  
23 how it will change for the building as you move through  
24 closing out your actions. So I see it as quite dynamic.

25 Q. Is that a reason why one shouldn't do a risk assessment

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1 generically or cumulatively?  
 2 A. I'm sorry, I don't actually know what you mean by that.  
 3 Q. Okay, let me try it a different way.  
 4 Would it be reasonable for a fire risk assessor to  
 5 lump all the risks together and produce a generic risk  
 6 assessment or a cumulative risk assessment?  
 7 A. You mean a final risk level?  
 8 Q. Yes.  
 9 A. No, I don't agree with that, because the whole point of  
 10 bringing risk assessments into the fire space in the  
 11 first place was for the responsible person to have  
 12 a more active part in controlling risk in the building.  
 13 It's an ongoing matter. In a way, it never ends. And  
 14 they have to have clear help about, you know, what can  
 15 happen in the short, medium and long term, and what risk  
 16 they continue to carry until those actions are closed  
 17 out. Because if a specific hazard can cause significant  
 18 harm but you genuinely can't fix that, let's say it's  
 19 going to take you three years to fix it, the responsible  
 20 person has to understand that they are carrying that  
 21 risk and that risk exists to the relevant people in  
 22 their building, and they have to make a decision if  
 23 they're prepared to accept that risk level or they're  
 24 going to do something else in the interim. So -- sorry.  
 25 Q. That's very helpful, thank you, you have explained it

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1 very fully, I think.  
 2 If we go on, please, in this report to page 206  
 3 {BLARP20000027/206}, and let's look together at  
 4 paragraph 9.8.18, you say there:  
 5 "His failure [that's Mr Stokes] to connect the  
 6 actions required to a potential consequence for the  
 7 relevant persons in his technical method, and more  
 8 importantly his failure to communicate the connection to  
 9 consequences in his documentation, was a significant  
 10 one."  
 11 A. Yes.  
 12 Q. Now, just again a clarificatory question from me: are  
 13 you saying that Mr Stokes should have spelt out to the  
 14 TMO the particular possible consequences of not taking  
 15 each of the remedial actions that he was advising should  
 16 be taken?  
 17 A. Yes, because risk is formulated from two parameters:  
 18 probability and consequence. So by assigning a risk  
 19 level to each hazard, that's basically what you're  
 20 doing.  
 21 Q. I see.  
 22 A. So he needed to explain that.  
 23 When you step right back and think about  
 24 Grenfell Tower, the KCTMO were in a position where it  
 25 was tolerable every year and sometimes 90% of their

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1 actions were high priority. Okay? And I think,  
 2 you know, I would like to be a bit clearer about that.  
 3 If you're a responsible person and you have a building  
 4 stock where everything is apparently high priority all  
 5 the time, you need to sit down and actually understand:  
 6 what does that really mean? How much risk am I carrying  
 7 here, and how much risk am I causing to my relevant  
 8 persons? Okay?  
 9 So that's why splitting the risk level for the  
 10 different types of hazards one finds, some of them are  
 11 quite trivial, some of them can be quite serious, and  
 12 then formulating action plans and measuring oneself on  
 13 a sensible action plan, is my understanding of what the  
 14 order was asking everybody to do.  
 15 Q. I see. And from the TMO's perspective, is it right that  
 16 it would gain, from a risk-by-risk approach rather than  
 17 a cumulative approach, enough information to be able to  
 18 understand the probability and the consequence --  
 19 A. Exactly.  
 20 Q. -- so that it could decide in an informed way whether to  
 21 accept that risk?  
 22 A. Exactly, and that's a really important part, a really  
 23 important outcome from a risk assessment.  
 24 Q. Yes, I see.  
 25 A. Okay.

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1 Q. Can I then turn to the question of timescales for FRA  
 2 actions, and let's start with PAS 79, which is at  
 3 {CTA00000003/59}, please.  
 4 This is the commentary in PAS 79 to clause 19.2, and  
 5 if we look at the left-hand side of the page there,  
 6 there it is, you can see (ii) there, and it says:  
 7 "In formulating an action plan for premises in which  
 8 the fire risk has been assessed as unacceptably high,  
 9 the analytical approach to fire risk assessment permits  
 10 backtracking to determine whether, in effect, the  
 11 problem arises from inadequate fire prevention (i.e.  
 12 inadequate means for control or elimination of fire  
 13 hazards), inadequate fire protection (e.g.  
 14 unsatisfactory means of escape or fire warning systems),  
 15 shortcomings in fire safety management, or a combination  
 16 of these."  
 17 A. Yes, yes.  
 18 Q. Focusing on shortcomings in fire safety management  
 19 there --  
 20 A. Yes.  
 21 Q. -- how would you expect a reasonably competent fire risk  
 22 assessor, or rather a fire risk assessor aiming to  
 23 produce a reasonably competent fire risk assessment, to  
 24 assess shortcomings in fire safety management?  
 25 A. So, first of all, they have to understand the

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1 arrangements in place, and then, in the position  
 2 Mr Stokes was in, where he had the benefit of inspecting  
 3 so many premises, he had the practical means to  
 4 understand how those arrangements were being implemented  
 5 in very many buildings, including Grenfell Tower. So  
 6 I would expect a review of the arrangements as the  
 7 responsible person planned or understood them to be, and  
 8 then, you know, one's observations in practice of what  
 9 was really happening in the building. And, you know,  
 10 you can work that out from, say, the repetitiveness of  
 11 a defect or not, and there's other signs in a building  
 12 that the arrangements are being consistently implemented  
 13 or not.

14 Q. I see.

15 What kinds of shortcomings — if you can just give  
 16 us an example — in fire safety management would you  
 17 expect a fire risk assessor aiming to produce  
 18 a reasonably competent assessment to identify?

19 A. What kind of shortcomings? Okay, well, so —

20 Q. It's an open-ended question, I accept, but can you give  
 21 us some examples?

22 A. I'll give you some examples. So the routine inspections  
 23 of critical fire safety systems don't appear to be  
 24 happening, or the quality of fire door, say, closing and  
 25 closer seems to be deteriorating with time, you know.

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1 So either changes in the protective measures relied upon  
 2 or consistent failures to inspect them, something like  
 3 that.

4 Q. Thank you. That's helpful.

5 Does the paragraph that we're looking at tell us —  
 6 and we can read it and work it out — that a fire risk  
 7 assessor should work back from the problem to the source  
 8 of the problem and to work out whether one of the  
 9 reasons for the problem which leads to the unacceptably  
 10 high risk is defects in the fire safety management  
 11 system?

12 A. Yes, yes, and that's exactly why you deal with each  
 13 hazard in turn, because some of them may be a one-off  
 14 and if the responsible person — you just say, "Look,  
 15 that just can never happen again", or some of them will  
 16 be caused by either an absence of something in the  
 17 management system or the failure to do something  
 18 properly.

19 So, yes, that's why splitting them out is so  
 20 important, and again it means then the responsible  
 21 person can do a sensible action plan: what's wrong in my  
 22 organisation, versus what's the problem with the type of  
 23 fire door I've installed?

24 So, yes, it's a very broad range of issues that  
 25 cause risk levels to rise in a building.

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1 Q. And you're saying, I think, from your answer a minute or  
 2 two ago, that a fire risk assessor in the position of  
 3 Carl Stokes, who had a view of very many buildings  
 4 within his instructions, was in a better position to  
 5 form a clear view about fire safety management?

6 A. Yes. I mean, in my mind he was in a great position,  
 7 because one of the really useful things when you're  
 8 doing a risk assessment is actually getting to talk to  
 9 people who have responsibilities day to day, and by my  
 10 experience also talking to residents, and you get to  
 11 hear about the reality of things as opposed to the nice  
 12 policy written on the paper.

13 Mr Stokes got to see all different types of  
 14 properties, got to meet all different types of people,  
 15 and he could form a — he should have been able to form  
 16 a really thorough view on how the organisational  
 17 arrangements were genuinely being implemented in each  
 18 property.

19 Q. Yes.

20 Can we then stick with this page of PAS 79  
 21 {CTA00000003/59} and look at (iii) on this page in the  
 22 left-hand column. It says:

23 "The action plan is an inventory of actions,  
 24 normally prioritized and time restrained, to devise,  
 25 maintain or improve controls."

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1 When it says time restrained, what do you take that  
 2 to mean there?

3 A. So time restrained means there is a start and finish  
 4 date, and that's relevant to this issue of risk  
 5 acceptance, which I think is a very important point to  
 6 bring out.

7 Q. What would you say was the purpose of adding  
 8 a timescale, a time limit?

9 A. Because that risk may only be suitable to carry for  
 10 a very specific period of time.

11 Q. Yes, and would the —

12 A. And to ensure — sorry, also to ensure, you know, that  
 13 you can't carry the risk longer than that timeframe, and  
 14 if I come back and find it again, now we're entering  
 15 into very different territory, because it means your  
 16 fire safety management system is not able to close out  
 17 these issues when they're notified to you. So that's  
 18 the point of having these deadlines, but the deadlines  
 19 being sensible as a function of the hazard.

20 Q. Yes. So the deadline would be an indication, would it,  
 21 of the gravity or the seriousness of the risk?

22 A. The seriousness of the risk and the practicality of  
 23 dealing with the risk, because some risks are  
 24 extraordinarily complex to deal with.

25 Q. On that note, would a fire risk assessor normally take

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1 account of the expense of the remedial action when  
 2 recommending a deadline?  
 3 A. When recommending a deadline? In my mind, the  
 4 deadlines — I work with the responsible person to  
 5 derive deadlines for very complex issues, and complexity  
 6 can be driven by cost constraints as one parameter  
 7 driving complexity, yes.  
 8 Q. What about complexity of the remedy?  
 9 A. Yes, but that's what I mean. So the remedy may be very  
 10 expensive and time-consuming, and so it has to be  
 11 planned out as a function of budget availability ,  
 12 et cetera.  
 13 Q. Right, I see, and that would produce a particular risk,  
 14 and then the question — is this right? — for the  
 15 responsible person is whether that risk should be  
 16 carried for that period or whether there should be some  
 17 mitigating measures?  
 18 A. So then if you've agreed: the earliest I can get this  
 19 thing sorted out is three years, but you've told me it's  
 20 causing, let's say, medium to high — it may cause  
 21 medium to high harm to the people in my building, it  
 22 might be for that three-year period you need to  
 23 introduce another control into the building until that  
 24 particular action is closed out.  
 25 Q. Yes, thank you.

1 If you look, please, at (iv), a little bit lower  
 2 down the screen on the same page in PAS 79, item (c)  
 3 there, and also (v) on the right-hand side of the page  
 4 I'll show you in a moment, it says that the FRA must opt  
 5 for the most cost-effective solution. The question:  
 6 "Have the most cost-effective solutions been  
 7 chosen?"  
 8 If you go to (v) on the right-hand side of the page,  
 9 it also makes the same point there in the second  
 10 sentence:  
 11 "The fire precautions proposed ought to be the most  
 12 cost-effective available ..."  
 13 Would that mean that an otherwise urgent remedial  
 14 action should get a longer period for cure for purely  
 15 financial reasons?  
 16 A. Sorry, say that last bit again, sorry.  
 17 Q. Does the reference there to looking for the most  
 18 cost-effective solution possible mean that it would be  
 19 reasonable for the responsible person or the FRA to  
 20 allocate a longer period for remedy for financial  
 21 reasons on what is otherwise an urgent remedial action?  
 22 A. Oh, yes, I'm not sure I agree with that. You see, what  
 23 does cost-effective mean? Anyway, sorry. So  
 24 cost-effective is more than how much cash I'm going to  
 25 spend. I mean, in my mind, in a risk assessment, it has

1 to be balanced with consequences. Okay?  
 2 Q. Yes.  
 3 A. So there will be different ways to solve a problem. You  
 4 see, we have to be careful about what problem we mean.  
 5 But if that's meant to read — and I don't read it that  
 6 way — that you must always pick the cheapest solution,  
 7 I don't agree. Cost-effective has other parameters  
 8 associated with it.  
 9 If an action can cause extreme harm and it's  
 10 genuinely going to take a few years to resolve, then  
 11 other control measures will be required and they will  
 12 have cost associated with them.  
 13 Q. I see.  
 14 Can we then look at Mr Stokes' timescale in his  
 15 action plans for Grenfell Tower in December 2010 and  
 16 November 2012.  
 17 First, {CST00003165/1}. This is his  
 18 29 December 2010 action plan, and if you look at page 1  
 19 there, you can see that his timescales there are high,  
 20 two to three weeks; medium, one to two months; low,  
 21 three to six months. You see that?  
 22 A. Yes.  
 23 Q. Then if we go to the November 2012 action plan at  
 24 {CST00003083/1}, you can see there that they are now  
 25 high, two to three weeks; medium, two to three months;

1 low, six to 12 months. So the medium and low have been  
 2 extended out a bit from one to two months to two to  
 3 three months, and from three to six months to six to  
 4 12 months.  
 5 Those changes there in the medium and the low, were  
 6 those timescales recommended by any government guidance  
 7 or any version of PAS 79 that you know about?  
 8 A. Yes, like, I think the government — some of the  
 9 guidance documents suggest some timeframes, yes, but  
 10 I think they're all very clear that — well, my  
 11 understanding of them is they're still quite clear that  
 12 they're not — you know, everything can't fit into those  
 13 timescales, okay?  
 14 Q. No. Perhaps we're at slightly cross-purposes.  
 15 Mr Stokes told us — for our reference, this is at  
 16 {Day137/34} and {Day137/36} — that he had got the 2010  
 17 timescales from the Sleeping Guide and the 2012  
 18 timescales from the LGA guide.  
 19 A. Yes.  
 20 Q. We're not sure we can find those there.  
 21 A. That's correct, yes.  
 22 Q. Can you help us with whether he's right about that?  
 23 A. No, I don't know how we would find them.  
 24 Q. Right, so you don't know about that.  
 25 A. Yes.

1 Q. Are timescales or were timescales routinely something  
2 for the decision of the individual fire risk assessor on  
3 a case-by-case basis?  
4 A. Yes, that would be my understanding. I mean, some risk  
5 assessors have a "today" band, so they say, "Before we  
6 leave today, this has to be resolved". So I think there  
7 are no rules on timing for the very good reason the  
8 hazards -- you know, it depends what's happening in the  
9 building.  
10 Q. I see.  
11 Are you able to help us on whether there is any  
12 government guidance at all or any other document which  
13 would have prompted a change in the timescales between  
14 December 2010 and November 2012 --  
15 A. I don't know, I haven't thought about that, I'm really  
16 sorry. I'd have to go and read -- I didn't think about  
17 the change and I didn't check if it came from somewhere,  
18 so I can't answer that question.  
19 Q. Mr Colin Todd told us that he wasn't aware of any  
20 such --  
21 A. Yes, I mean, I'm not aware day-to-day, but I'm not aware  
22 of a change in the rules for timing because there are no  
23 rules for timing.  
24 Q. Right.  
25 SIR MARTIN MOORE-BICK: Can I just ask, do you have any

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1 comment on what might appear to be a rather mechanistic  
2 way of setting these time limits? I understood the  
3 force of what you said about making the responsible  
4 person aware of the risk that's being carried --  
5 A. Yes.  
6 SIR MARTIN MOORE-BICK: -- and so on. That would suggest  
7 that each risk ought to be considered individually --  
8 A. Yes.  
9 SIR MARTIN MOORE-BICK: -- and a timescale for its remedy  
10 being based on the nature and severity of that risk.  
11 A. That's correct.  
12 SIR MARTIN MOORE-BICK: Which is rather inconsistent with  
13 having a sort of set of blocks like this.  
14 A. Exactly.  
15 SIR MARTIN MOORE-BICK: But is this a common way of doing  
16 it?  
17 A. So I agree with you fully and that's why we do them  
18 individually, okay? I think there are examples of time  
19 limits to get actions closed out in other people's risk  
20 assessments, yes, there are time limits, but I think  
21 I said earlier, I mean, over 90% of Mr Stokes' actions  
22 on Grenfell Tower were high priority, you know, all the  
23 time, and that's where this system falls down without  
24 thinking about the individual risk items.  
25 SIR MARTIN MOORE-BICK: I mean, one might have thought that

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1 there would be a process of consultation in that the  
2 fire risk assessor would say, "I've discovered this  
3 problem" --  
4 A. Exactly.  
5 SIR MARTIN MOORE-BICK: -- "I think it ought to be done  
6 fairly soon" --  
7 A. Yes.  
8 SIR MARTIN MOORE-BICK: -- then have a discussion with the  
9 responsible person about the nature of the risk, and --  
10 A. Exactly.  
11 SIR MARTIN MOORE-BICK: -- either agree on a time limit, or,  
12 if the responsible person doesn't agree with the fire  
13 risk assessor, he notes his advice, and --  
14 A. Exactly, yes, and that's exactly what we do, and,  
15 you know, I've had plenty of arguments with people about  
16 timing, and that's when cost comes in, and this is why  
17 this whole thing about risk acceptance is so important.  
18 We might say, "We strongly advise you to get this thing  
19 done in two years". The responsible person would say,  
20 "You just don't understand, I cannot get it done in less  
21 than four years", okay, for whatever reason, and you  
22 have to describe that, and you say, "If you go past  
23 two years, we strongly advise you to implement this  
24 control mechanism". Responsible persons will say no or  
25 sack you, you know, if agreement can't be reached.

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1 Okay?  
2 So it is a very interactive process -- it should  
3 be -- between the responsible person and the risk  
4 assessor, and for the KCTMO at the Grenfell Tower and  
5 what it was part of, that was something that could have  
6 been enormously beneficial to them.  
7 SIR MARTIN MOORE-BICK: Right, thank you very much.  
8 I'm sorry, I rather interrupted your flow,  
9 Mr Millett, but it may be that that's a point at which  
10 we could interrupt it overnight.  
11 MR MILLETT: We could. It gives rise to a number of  
12 questions which would take about five minutes to finish  
13 off the line, but we've gone past the hour and I can  
14 happily do it in the morning, and we're making good  
15 progress.  
16 SIR MARTIN MOORE-BICK: Are we?  
17 MR MILLETT: Yes.  
18 SIR MARTIN MOORE-BICK: Well, you probably wouldn't mind  
19 stopping at this point, would you?  
20 THE WITNESS: That's fine, yes.  
21 SIR MARTIN MOORE-BICK: All right. Well, we'll stop there  
22 for the afternoon. We'll resume at 10 o'clock tomorrow,  
23 please, and we'll see you then. Thank you.  
24 (Pause)  
25 Right. Well, thank you very much, Mr Millett. I'm

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1 sorry if I rather truncated your questions.  
2 MR MILLETT: No, not at all.  
3 SIR MARTIN MOORE-BICK: But you can come back to it with  
4 a fresh eye tomorrow.  
5 MR MILLETT: Yes, thank you very much.  
6 SIR MARTIN MOORE-BICK: 10 o'clock tomorrow, then, please.  
7 Thank you.  
8 (4.32 pm)  
9 (The hearing adjourned until 10 am  
10 on Wednesday, 8 September 2021)  
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