

OPUS 2

INTERNATIONAL

Grenfell Tower Inquiry

Day 15

July 6, 2020

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1 Monday, 6 July 2020
 2 (10.03 am)
 3 SIR MARTIN MOORE-BICK: Good morning, everyone. Welcome to
 4 today's hearing.
 5 As you know, our hearings were suspended in March,
 6 when the Government made it clear that large gatherings
 7 were to be avoided if at all possible. At that stage,
 8 the number of coronavirus infections was rising
 9 steadily, and I took the view that the only responsible
 10 course was to call a halt to the hearings. About a week
 11 later, the country went into lockdown, from which it's
 12 only recently begun to emerge. Indeed, we don't even
 13 know now how matters will develop from here. What we do
 14 know is that the virus is still active and capable of
 15 spreading quickly if proper precautions are not taken.
 16 For the benefit of those who are not directly
 17 involved in the Inquiry, I would like to make it clear
 18 that the suspension of hearings has not meant that there
 19 has been any pause in any other aspects of our work.
 20 Members of the Inquiry team working from home have
 21 ensured that the process of gathering evidence, both in
 22 the form of documents and witness statements, and
 23 disclosing materials to core participants, has continued
 24 without interruption.
 25 Preparations for questioning those whom we intend to

1

1 call as witnesses have advanced steadily, and
 2 outstanding questions relating to the scope of
 3 the Attorney General's undertaking have been resolved.
 4 As a result, we are well placed to make steady
 5 progress now that it has become possible to resume
 6 hearings, albeit with a limited number of people in the
 7 hearing room.
 8 I know I speak for the whole Inquiry team when I say
 9 that we considered it essential in the public interest
 10 to start taking evidence again as soon as it was
 11 possible to do so. However, in order to comply with
 12 Government guidelines, which are designed to ensure the
 13 safety of all those who will be using our premises, it
 14 has been necessary to make a number of changes to the
 15 way in which we use the space at our disposal. I'm very
 16 grateful to the team and to those who advise us on
 17 health and safety matters for the work they have done to
 18 enable us to resume hearings today, just as lockdown is
 19 being eased.
 20 It is not possible, under present conditions, to
 21 allow members of the public in general, or even those
 22 core participants most directly affected by the fire, to
 23 attend the hearings in person. I greatly regret that,
 24 but the proceedings are being live streamed as before.
 25 Those who wish to do so can therefore follow them

2

1 minute-by-minute as they unfold.
 2 Legal representatives for core participants will be
 3 able to suggest questions for the witnesses to Counsel
 4 to the Inquiry or raise points as necessary by email.
 5 The panel will ensure that there are adequate breaks in
 6 order to collate and consider those questions.
 7 We shall continue to monitor closely the
 8 Government's advice and guidance on the response to the
 9 pandemic, and shall take whatever steps are open to us
 10 to ensure that our hearings are as accessible to the
 11 public as possible.
 12 When hearings were suspended, we had just heard the
 13 evidence of Ms Cate Cooney, the first of a number of
 14 witnesses from Exova, the fire consultants who were
 15 engaged to advise on the Grenfell Tower refurbishment
 16 project.
 17 Today we are going to hear evidence from the second
 18 of the Exova witnesses, Dr Clare Barker.
 19 Yes, Mr Millett.
 20 MR MILLETT: Mr Chairman, Ms Panel Member, thank you very
 21 much indeed.
 22 I now call Dr Clare Barker, please.
 23 DR CLARE BARKER (affirmed)
 24 SIR MARTIN MOORE-BICK: Thank you very much, Dr Barker, sit
 25 down and make yourself comfortable.

3

1 Now, Mr Millett, before you start with the witness,
 2 we shall need to take a break during the morning.
 3 MR MILLETT: Yes.
 4 SIR MARTIN MOORE-BICK: Can I leave it to you to identify
 5 a convenient point around about 11.15, or between 11.15
 6 and 11.30?
 7 MR MILLETT: Yes, Mr Chairman, certainly. Thank you very
 8 much.
 9 Questions from COUNSEL TO THE INQUIRY
 10 MR MILLETT: Dr Barker, good morning.
 11 A. Good morning.
 12 Q. Can I say, first of all, thank you very much to you for
 13 coming down to London to give evidence to us. We do
 14 very much appreciate it.
 15 If you have any difficulty understanding the
 16 questions I'm going to ask you, I can rephrase them or
 17 ask the question in a different way, so please do say.
 18 Also, if you could please keep your voice up, so
 19 that the transcribers to your right can get down
 20 accurately what you are saying, I would be very grateful
 21 for that too.
 22 Now, you have made one witness statement to
 23 the Inquiry, as I understand it, and that is
 24 {EX000001603}. Can I please take you to that. You will
 25 find it on the screen in front of you but also in

4

1 a folder on the desk there.
 2 It's dated 27 September 2018. Can I ask you,
 3 please, to go to page 5 {EXO00001603/5}, first of all,
 4 where there is a signature above your name.
 5 Is that your signature?
 6 A. It is.
 7 Q. Have you read this witness statement recently?
 8 A. Yes.
 9 Q. Can you confirm that the contents are true?
 10 A. I can.
 11 Q. Have you discussed your statement or your evidence with
 12 anybody before coming here today?
 13 A. Just the legal team.
 14 Q. Now, there are a number of exhibits to the statement
 15 which are shown on the schedule, which is at {IDX0057}.
 16 I don't think there is any need to go to those, but
 17 I just read them into the record so that they are
 18 publicly available, should anybody wish to see them.
 19 Could I then start with some questions about your
 20 background and your experience, if I may.
 21 If you go to your witness statement, please, at
 22 paragraph 2.1 on page 1 {EXO00001603/1}, you will see
 23 that you say there that you have an undergraduate degree
 24 in material science from Brunel University London, which
 25 you obtained in 1995. Is that right?

5

1 A. That's correct.
 2 Q. I think you also hold a PhD in carbon fibre composites
 3 from the University of Manchester Institute of Science
 4 and Technology?
 5 A. Yes.
 6 Q. When did you obtain that honour?
 7 A. The PhD?
 8 Q. Yes.
 9 A. 2000.
 10 Q. What CPD, professional development, or other
 11 professional development, have you undertaken in fire
 12 engineering since you obtained your PhD in 2000?
 13 A. I've done -- well, from starting work at
 14 Warringtonfire Research in 2003, I did mainly on-the-job
 15 training to gain knowledge of the codes. Then we had
 16 training days within the fire engineering team as well
 17 to look at different fire engineering techniques that
 18 could be applied.
 19 I've also attended conferences, seminars, on
 20 different subjects. I attended two seminars --
 21 conferences, sorry, on human behaviour in evacuation.
 22 But in terms of formal fire engineering education at
 23 an establishment, say a university, I haven't had any
 24 formal fire engineering.
 25 Q. Thank you.

6

1 At the time of the Grenfell Tower project, were you
 2 a member of any professional bodies or institutions?
 3 A. Yes.
 4 Q. Which ones were those?
 5 A. Member of the Institute of Fire Engineers.
 6 Q. I think you were at Exova from 2000 until 2015, working
 7 your way up to principal --
 8 A. No, sorry, I was at Exova from 2003 until 2015.
 9 Q. Yes.
 10 A. You said 2000.
 11 Q. I'm so sorry, my mistake. 2003 until 2015.
 12 Is it right that you worked your way up to the
 13 position of principal fire engineer?
 14 A. Yes, that's correct.
 15 Q. And you were principal fire engineer in and from 2009?
 16 A. Yes.
 17 Q. What did your role as principal fire engineer at Exova
 18 typically involve?
 19 A. The main day-to-day work involved writing fire
 20 strategies for different projects in all sorts of
 21 different purpose groups: residential, hospitals,
 22 schools, warehouses. It would also involve supervising
 23 more junior members of staff within the office. There
 24 were five of us in the office at the time. And it would
 25 involve also reviewing their work as well.

7

1 Q. When you say the office, is that the Warrington office?
 2 A. Yes.
 3 Q. You just told us that the different purpose groups
 4 included residential, hospitals, schools and warehouses.
 5 Of residential, how much of your day-to-day work
 6 would have included, in general terms, after 2009,
 7 high-rise residential blocks?
 8 A. I had done two or three.
 9 Q. Two or three, in the period between 2009 and 2012, is
 10 that?
 11 A. I can't actually remember. I know I have worked on two
 12 or three, but one of them might have been before 2009.
 13 Q. Okay.
 14 As at mid-2012, how much experience had you had
 15 within Exova of carrying out a technical or peer review
 16 of a colleague's draft report for a client?
 17 A. A lot of experience, as I reviewed their work on a --
 18 for every project that they were working on, I would
 19 review a report that they had done.
 20 Q. How much experience had you had as at that time of
 21 establishing relevant fire safety issues for
 22 a particular building?
 23 A. I would have said I had had a lot of experience.
 24 Q. Same question again: how much experience at that time
 25 had you had of checking the adequacy of any fire safety

8

1 advice given by your junior staff against the scope of
 2 the instructions under which Exova was retained?
 3 A. I would have said I had had quite a lot of experience in
 4 doing that.
 5 Q. I'm going to turn just briefly to the subject of what
 6 a fire safety engineer involves.
 7 Just to set it in context, is it right that you
 8 became involved with Grenfell Tower for the first time
 9 in July 2012, when you were asked by Andrew McCracken of
 10 Exova to attend a meeting with Studio E?
 11 A. Yes, that's correct.
 12 Q. I'm going to come back to that, but can I just look at
 13 a document with you first. It's {EX000001613}, please.
 14 This is your email of 7 August 2012 to Cate Cooney from
 15 you, in which you say, "See below." Do you see that?
 16 A. Yes.
 17 Q. Underneath that, there is an email from Bruce Sounes to
 18 you of 30 July 2012 -- we're going to come back to that
 19 in more detail later on -- copied to Terry Ashton.
 20 The long and the short of the exchange is that you
 21 were instructing Cate Cooney to prepare a fire safety
 22 strategy report for the existing building, the building
 23 as it stood.
 24 A. Yes.
 25 Q. In doing that, were you acting as a fire safety

9

1 engineer?
 2 A. Yes.
 3 Q. Were you carrying out fire engineering services?
 4 A. In doing the reports?
 5 Q. Yes.
 6 A. Yes.
 7 Q. And in asking Cate Cooney to do what she was to do?
 8 A. Yes.
 9 Q. What do you understand to be a fire safety engineer?
 10 A. My understanding of it is somebody who assesses
 11 a building design and talks about its adequacy in terms
 12 of fire safety, in how it meets the functional
 13 requirements of the Building Regulations, B1 to B5.
 14 Q. What about the likely behaviour of materials and
 15 structures, would that also be involved in acting as
 16 a fire safety engineer?
 17 A. Yes, in that we -- the strategy would contain high-level
 18 advice as to the performance requirements of those
 19 materials.
 20 Q. You say high level; what do you mean by that?
 21 A. In terms of us, we would specify a fire resistance
 22 level, for example we would say the elements of
 23 structure need to provide two hours' fire resistance; we
 24 wouldn't necessarily include in the strategy how that is
 25 achieved.

10

1 Q. I follow.
 2 Perhaps I can take this a little bit more quickly.
 3 Can I ask you, please, to be shown a document:
 4 {MET00065130/2}. This is a witness statement given to
 5 the Metropolitan Police by Mr Robert Veitch of Exova.
 6 Are you familiar with Mr Veitch?
 7 A. Yes, yes.
 8 Q. This is paragraph 2 of his statement on that page.
 9 Although it's not numbered, it's the second paragraph
 10 down. He says there in the second sentence:
 11 "In preparing a fire safety strategy ..."
 12 Do you see that?
 13 A. Yes.
 14 Q. He says:
 15 "... the focus of the fire engineer is to try and
 16 understand what the safest means of escape is for people
 17 in that building and they do this by looking at the
 18 building procedures, building structure and the
 19 components within that building. This process is about
 20 life safety, it's not about property protection."
 21 My question is: would you agree with Mr Veitch about
 22 his description of a fire safety strategy there?
 23 A. I would agree with most of it. When we're doing a fire
 24 strategy to meet the requirements, the functional
 25 requirements, of the Building Regulations, we are

11

1 looking at life safety. However, it doesn't necessarily
 2 mean looking at building procedures. You do have
 3 an evacuation procedure, but it doesn't necessarily
 4 consider the management of the building.
 5 Q. You say it doesn't necessarily; would it, if the scope
 6 of services under which Exova was retained specified
 7 that it should?
 8 A. Yes. I think it would refer to certain aspects of the
 9 management, but it wouldn't be a full fire safety
 10 manual, which would be more of a management document.
 11 Q. Okay. So can I just, so that I understand to what
 12 extent you agree with Mr Veitch here, are you saying
 13 it's not always a given that in any fire safety strategy
 14 you are always looking at the safest means of escape, it
 15 depends on the scope?
 16 A. No, we are always looking at the safest means of escape
 17 because you are trying to ensure that the design
 18 complies with the requirements of the
 19 Building Regulations, which the requirement is that
 20 there is adequate means of warning and escape for the
 21 people in the building. So we would be looking at
 22 ensuring that there are safe means of escape for people
 23 from the building.
 24 Q. Right. So are you saying that you don't always look at
 25 building procedures unless you're told to or asked to?

12

1 A. Yeah. Yes.
 2 Q. I see. Would that depend on the scope of the
 3 instructions for a specific project?
 4 A. Yes.
 5 Q. I see.
 6 Now, can I then turn to relationships and
 7 responsibilities next, as the next topic.
 8 Exova were asked to draft a fire safety strategy for
 9 the existing building in the summer of 2012. We know
 10 that from the documents. Can we just look and see what
 11 a fire safety strategy is.
 12 Can I ask you: are you familiar with the
 13 British Standard published document -- {BSI00001716} --
 14 current as at August 2012?
 15 A. Sorry, could you repeat --
 16 Q. Let me show it to you, first of all. If you could be
 17 shown {BSI00001716}.
 18 A. Yes, I am familiar with that document.
 19 Q. You are familiar with the guidance, are you?
 20 A. Yes.
 21 Q. Were you familiar with it in 2012?
 22 A. Yes.
 23 Q. Can I then very quickly take you to page 7
 24 {BSI00001716/7}, which is section 3.16, where a fire
 25 safety strategy is defined. It's at the top of the page

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1 there:
 2 "Fire safety strategy.
 3 "Combination of fire safety measures that has been
 4 shown by reference to prescriptive codes or a fire
 5 engineering study to be capable of satisfying the
 6 specified fire safety objectives."
 7 Was that your understanding in mid-2012 of what
 8 a fire safety strategy was?
 9 A. Yes.
 10 Q. Thank you.
 11 Can I ask you then to move to page 44
 12 {BSI00001716/44} of the same document, which says, under
 13 paragraph 9.7, "Fire safety strategy", and I'll just
 14 read it to you:
 15 "The fire safety strategy for the building will be
 16 based on the successful trial design and is likely to
 17 comprise a range of physical fire safety measures and
 18 management procedures. A description of these measures
 19 should be provided, together with performance
 20 specifications and any recommended deviations from the
 21 relevant system codes ..."
 22 Do you see that?
 23 A. Mm-hm.
 24 Q. Again, as at mid-2012, was that your understanding of
 25 what a fire safety strategy should comprise?

14

1 A. Yes. However, I wouldn't have used BS 7974 or the
 2 published documents that went with it to do the fire
 3 safety strategy for Grenfell; we used the prescriptive
 4 code, Approved Document B.
 5 Q. All right. Can I just focus on the words "and
 6 management procedures" in the second line of that
 7 section.
 8 A. Mm-hm.
 9 Q. You will see that it says:
 10 "... likely to comprise a range of physical fire
 11 safety measures and management procedures."
 12 So as at mid-2012, was it your understanding that
 13 a fire safety strategy which complied with this guidance
 14 should comprise management procedures?
 15 A. If it was complying with that guidance, yes.
 16 Q. Right.
 17 What was it in general about the instructions that
 18 you received in the summer of 2012 in relation to the
 19 fire safety strategy for Grenfell Tower that you were to
 20 do, that Exova was to do, which meant that you weren't
 21 to look at management procedures or weren't to look at
 22 or use this guidance?
 23 A. The 7974 standard basically provides a framework for how
 24 you would go about doing a fire engineering strategy
 25 that is performance-based instead of being prescriptive.

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1 So there are essentially three different methods to go
 2 about the fire safety design for a building: you could
 3 use the guidance in Approved Document B, which is very
 4 general; or you could use the guidance that's now
 5 available in another standard, BS 9999; or you could use
 6 the performance-based approach, which you use the
 7 framework that's described in the BS 7974 document, and
 8 you would use the techniques described in the published
 9 documents that go along with that standard.
 10 For example, there is a published document about how you
 11 can look at how a fire develops; there is a published
 12 document that goes along with it that describes how
 13 smoke moves and how you can then calculate the
 14 requirements for smoke clearance systems; and there is
 15 another published document which talks about human
 16 behaviour. So you could use that in an analysis.
 17 The prescriptive framework recommends that you have
 18 a meeting beforehand with all the stakeholders where you
 19 discuss the performance criteria, and then you provide
 20 your fire engineering analysis in your strategy to show
 21 that you have essentially met those conditions and the
 22 acceptance criteria have been met.
 23 That's not the same procedure as when you do
 24 a fire strategy using Approved Document B, which is what
 25 we did.

16

1 Q. What was it that told you that you should use Approved
2 Document B when doing your strategy as the framework for
3 it, as opposed to PD 7974?
4 A. Because Approved Document B is a very commonly used
5 document, it's what most of the people in the regulatory
6 authorities are familiar with. It's a general guidance
7 document that's used a lot.
8 Q. Let me just repeat my question: what was it about your
9 instructions that led you to use Approved Document B
10 when doing your strategy as the framework, as opposed to
11 PD 7974?
12 A. I don't think there was anything specific in the scope
13 which said --
14 Q. No.
15 A. -- which documents I should use, I just decided that
16 Approved Document B would be the most appropriate one to
17 assess the building against.
18 Q. I see. You decided that, did you?
19 A. Yes.
20 Q. We will come back to that in due course, then,
21 Dr Barker.
22 Can I then turn to your initial involvement in the
23 Grenfell Tower project.
24 We mentioned a moment ago Andrew McCracken. Can
25 I ask you, please, to look at {EX000000242}. This is

17

1 an email from him to you of 24 July 2012. Do you see
2 that, "Clare, as discussed. Ta, Andrew."
3 Under it, he forwards to you an email from
4 Margaret Treanor to David Harries and him of the same
5 date. Do you see that?
6 A. Mm-hm.
7 Q. He simply says in his email to you "As discussed", and
8 underneath it you can see Ms Treanor's email. We will
9 look at that in a moment.
10 Was this your first involvement with Grenfell Tower?
11 A. Yes.
12 Q. Right.
13 What was discussed between Andrew McCracken and you,
14 do you remember?
15 A. My recollection of it was I received a telephone call
16 from him where he explained that he was unable to attend
17 the meeting himself, Terry Ashton was unable to attend
18 the meeting himself, and David Harries, who is referred
19 to as Dai here, was also unable to go to the meeting.
20 So they wanted somebody to attend from Exova.
21 Q. I see.
22 A. And asked that I go.
23 Q. I see. Did you read Ms Treanor's email?
24 A. Yes.
25 Q. Doing so, you can see that she says -- and let's look at

18

1 it together -- underneath that:
2 "I'm afraid you've drawn the short straw again due
3 to Dai going off tomorrow."
4 Then she says in the second paragraph:
5 "We have not been as involved I don't think as we
6 should have and Bruce is wondering whether we want to be
7 involved (is my impression which could be wrong)."
8 Do you see that?
9 A. Mm-hm.
10 Q. Do you know what was the reason that Ms Treanor thought
11 that Exova had not been as involved as it should have
12 been?
13 A. I think it was possibly due to Terry's absence from
14 work.
15 Q. I see. Did you discuss that with Ms Treanor or
16 Mr McCracken?
17 A. I can't remember.
18 Q. Right.
19 When you say you think, is that you remembering now,
20 or was that your thought at the time?
21 A. That was my thought at the time, because Terry had been
22 absent for a lot longer than we initially anticipated.
23 Q. I see, all right.
24 Now, in the first sentence, as I've read it to you,
25 Ms Treanor suggests that the person dealing with the

19

1 Grenfell Tower fire safety strategy has, she says,
2 "drawn the short straw".
3 Why was working on this project a short straw?
4 A. Possibly because of the distance from Warrington to
5 London. We have a London office, but nobody was
6 available from that office to attend the meeting, which
7 meant that somebody had to travel down from Warrington.
8 Q. I see. You say "possibly"; is that you speculating now
9 or was that your thought at the time, that that was the
10 reason?
11 A. That was the reason at the time.
12 Q. Okay. I see.
13 So the distance between Warrington and London
14 presented -- is this right, I don't want to put words in
15 your mouth, but is this the way you saw it -- a bit of
16 an inherent problem in producing the existing fire
17 safety strategy for Grenfell Tower?
18 A. I don't think the distance presented a problem. I think
19 people's workload and capacity at the time was a factor.
20 Q. I understand, workload and capacity.
21 You mentioned distance, so do we add to the list
22 distance as well?
23 A. Yes.
24 Q. Yes.
25 Now, you then attended a project meeting on

20

1 26 July 2012. Do you remember that?
 2 A. Yes, I have a recollection of it.
 3 Q. Okay. Now, the minutes are at {EXO00001620}, if we can
 4 please have those up. This is project meeting number 5
 5 at 2 o'clock in the afternoon at Appleyards, who became
 6 known not long after this as Artelia.
 7 If you look at the list of those present, you can
 8 see, three from the bottom, that you are there. At the
 9 bottom of the list, Mr Sounes is there as well from
 10 Studio E.
 11 Now, there is no need to look at it, but your
 12 statement at paragraph 3.4 {EXO00001603/2} says that
 13 this meeting was the only meeting in relation to
 14 Grenfell Tower that you attended; is that right?
 15 A. Yes.
 16 Q. When you attended this meeting on 26 July 2012, had you
 17 seen the Exova fee proposal of 11 June 2012?
 18 A. Yes.
 19 Q. You had. Do you remember when you first saw that
 20 document?
 21 A. I think it was when Andrew forwarded me Margaret's
 22 email, because I think from that email they were
 23 attached.
 24 Q. Yes, I see. So that would have been two days before?
 25 A. Yes.

21

1 Q. Perhaps we could just verify that and chase that up. If
 2 you could go back to it, please, it's {EXO00000242}.
 3 Let's just double check, if we can.
 4 It does look as if the attachments comprise two fee
 5 proposals there, so one of them --
 6 A. Yes.
 7 Q. Yes. We can chase those up if we need to, but we know
 8 there were two.
 9 A. Yes.
 10 Q. One for the existing and one for the outline proposed.
 11 A. Yes.
 12 Q. And one of them would have been that. So 24 July 2012.
 13 Now, if you go to the minutes, they record
 14 discussions relating to the design for the
 15 refurbishment, if we can just go back to this again at
 16 {EXO00001620}, and if you look down, we can see that the
 17 general discussion, if you are just shown the next page
 18 or two, is the design for the refurbishment of
 19 Grenfell Tower.
 20 So can we take it that you knew by 26 July that
 21 Grenfell Tower was to be refurbished?
 22 A. Yes.
 23 Q. Yes. Can we go to page 4 {EXO00001620/4} of this
 24 document, please, under the heading "Quantity surveyor".
 25 You can see at the bottom there, just above "Next

22

1 meeting", it records that:
 2 "There is no existing fire strategy for the
 3 building. Exova to proceed."
 4 And then in the action list, "Exova".
 5 Was there any discussion at the meeting about the
 6 absence of any existing fire strategy for the building,
 7 do you remember?
 8 A. There may have been, but I don't remember.
 9 Q. Did it surprise you that a high-rise residential
 10 building in use since 1974 had no existing fire strategy
 11 at all?
 12 A. No, not really, because of the age of it.
 13 Q. Because of the age of it?
 14 A. Because it was a considerably old building.
 15 Q. If it had been a younger building, what date of
 16 construction would it have had to have in order to have
 17 an existing fire safety strategy?
 18 A. I would have expected something that was constructed in
 19 the 1990s to have had a strategy.
 20 Q. Right. So was it your understanding that existing fire
 21 safety strategies came with the building when
 22 constructed as opposed to being done later in relation
 23 to an existing building?
 24 A. It possibly could have had one if it had been
 25 refurbished over the life of its -- over the life of the

23

1 building.
 2 Q. Can I just ask a side question here: what influence on
 3 your thinking did the existence of the Regulatory Reform
 4 Order from 2004 have on the need to have a fire safety
 5 strategy in multi-occupancy buildings, whenever they
 6 were instructed?
 7 A. Sorry, could you repeat the question?
 8 Q. Yes. What influence on your thinking did the
 9 requirements of the Regulatory Reform Order have on the
 10 need to have a fire strategy for the building,
 11 regardless of when it was constructed?
 12 A. I don't think it had much influence.
 13 Q. All right.
 14 Were you given any instructions at this meeting or
 15 any guidance as to the scope of work?
 16 A. I don't remember.
 17 Q. Were you given any indication as to the purpose of
 18 producing the existing fire safety strategy in relation
 19 to the refurbishment works?
 20 A. I don't remember being given any instruction at that
 21 meeting, with regard to that.
 22 Q. When it said "Exova to proceed", was that recording you
 23 agreeing to proceed to produce an existing fire safety
 24 strategy?
 25 A. Yes.

24

1 Q. Right.
 2 A. Once we had received the fee acceptance.
 3 Q. I see.
 4 So when it says "Exova to proceed", can we take it
 5 that you agreed to proceed on the basis of the
 6 instructions contained in the 11 June 2012 fee proposal?
 7 A. Yes.
 8 Q. Thank you.
 9 Now, let's look and see what was discussed during
 10 the meeting. If you go to page 2 {EXO00001620/2},
 11 please, first of all, back two pages, you can see that
 12 it says, under "Architecture" in the second paragraph:
 13 "Window samples and possible insulated brick slip
 14 system tabled. Proposal to clad over the columns at
 15 ground with in-situ high quality concrete finish."
 16 Do you remember what that was about?
 17 A. No.
 18 Q. On page 3 {EXO00001620/3}, under "Services", and
 19 "Services" starts at the bottom of the previous page on
 20 the screen, it says:
 21 "Co-ordination of cladding ..."
 22 Do you see that?
 23 A. Yes.
 24 Q. "... heating and seasons critical. Input required from
 25 Leadbitter."

25

1 Where it says, "Co-ordination of cladding", do we
 2 take it from that that you understood that part of the
 3 refurbishment would include overcladding the exterior of
 4 Grenfell Tower?
 5 A. Yes, but I don't remember ... I don't remember that
 6 discussion from the meeting.
 7 Q. You don't remember the discussion, okay. Well, let's
 8 just finish this off and see if the next thing I'm going
 9 to show you triggers a recollection.
 10 Page 3, same page, under "Contractor":
 11 "Leadbitter have considered option of being able to
 12 complete overcladding before and independent of removal
 13 of existing windows."
 14 Does that trigger a recollection that there was at
 15 that point, or from that point, a proposal to overclad
 16 Grenfell Tower as part of the refurbishment?
 17 A. No, I really can't remember.
 18 Q. All right.
 19 At the time, did you consider that cladding this
 20 building would present any particular issues or problems
 21 with regard to fire safety?
 22 A. No, I didn't.
 23 Q. Now, Mr Sounes says in his statement -- I ought to show
 24 it to you, just so that you're clear about it. It's
 25 {SEA00014273/51}, at paragraph 108. Do you see that,

26

1 Dr Barker? He says there -- this is three-quarters of
 2 the way through the paragraph, and he refers to an email
 3 which I don't need to show you yet -- it was:
 4 "... prompted by my having pressed for Exova to
 5 attend. My recollection is that Clare was covering for
 6 others and had had to travel some distance and had
 7 little to contribute for much of the meeting. Despite
 8 this I felt it was important Exova were represented
 9 given the importance of fire safety."
 10 Do you agree with what he says there, or with his
 11 recollection?
 12 A. Yes.
 13 Q. Thank you.
 14 Now, given that I think, as you told us, you knew
 15 that Grenfell Tower would be overclad, although not the
 16 details, did you raise the need to carry out a fire
 17 assessment specifically in relation to the proposed
 18 cladding system as the proposal then stood?
 19 A. No.
 20 Q. Is there a reason why you didn't suggest, either at this
 21 meeting or separately to Mr Sounes, that advice on the
 22 specific cladding system should be included in the fire
 23 safety strategy, either the one that you were being
 24 asked to do or the outline proposed for the
 25 refurbishment?

27

1 A. No.
 2 Q. Is there a reason why -- well, let me ask it
 3 differently.
 4 Was the question of the need for cavity barriers
 5 within the cladding that should form part of the
 6 fire strategy discussed at all?
 7 A. Not at that meeting.
 8 Q. Let's then look at the fee proposal, if we can. I'm
 9 just changing to that topic, and to look at it, it's at
 10 {TMO10037721}. This is addressed to Mr Sounes, dated
 11 11 June 2012, and as you have told us, you first saw
 12 this in Mr McCracken's email to you of 24 July 2012.
 13 How familiar were you with this brief and proposal
 14 when you, as we come to, instructed Cate Cooney to carry
 15 out the drafting of the strategy?
 16 A. I was familiar with it. I had read it.
 17 Q. And did you understand what was within the scope?
 18 A. I think I did at the time.
 19 Q. Okay. Let's look at that. It's at page 2 of 10
 20 {TMO10037721/2} under "Proposed Scope of Work", and if
 21 you just look at that, it says that:
 22 "The aim of the work would be the production of
 23 a retrospective fire safety strategy report for the
 24 existing building."
 25 Then it goes on to say:

28

1 "This report will serve to inform the fire safety
2 risk assessment and fire risk management plan for the
3 building. The design of the building will be assessed
4 against relevant design codes relating to the statutory
5 requirements on the design of the building under the
6 Regulatory Reform (Fire Safety) Order 2005, and also
7 under Section 20 of the London Building Acts (Amendment)
8 Act 1939 if the building falls within the size criteria
9 specified by that legislation."

10 Do you see that?

11 A. Mm-hm.

12 Q. Just focusing on those words at the moment, first of
13 all, how was the report or the strategy that was to be
14 produced to inform the fire safety risk assessment?

15 A. So the fire strategy sets down how the building design
16 meets the functional requirements of the
17 Building Regulations. So, for example, it will say that
18 a certain standard of door is required to the stair, or
19 a certain fire resistance is required, or that certain
20 means of warning are required. So when those items are
21 in the strategy, when a fire risk assessment is carried
22 out once the building is occupied, then the risk
23 assessor can go round and check that those items are
24 there. The risk assessor will check that escape routes
25 are kept clear, and will also check that the warning

29

1 systems, et cetera, are there that have been specified
2 in the strategy.

3 Q. I see.

4 How was the report that you were to draft, or that
5 Ms Cooney was instructed by you to draft, to inform the
6 fire risk management plan for the building, as you can
7 see there?

8 A. So that would be with regard to the stay-put policy for
9 the flats. However, the other parts of the building,
10 the boxing club and the nursery, were essentially
11 separate entities with a different evacuation procedure,
12 whereas theirs would be a simultaneous evacuation
13 procedure.

14 Q. You say "theirs", what do you mean by "theirs"?

15 A. The boxing club --

16 Q. Oh, I see.

17 A. -- would operate on a simultaneous evacuation, and the
18 nursery --

19 Q. I see.

20 A. -- would operate on a different evacuation procedure.

21 Q. What about the other parts of the building, namely the
22 residential parts, what evacuation procedure would they
23 have?

24 A. They would have a stay-put policy.

25 Q. Do you call a stay-put policy an evacuation procedure?

30

1 A. Or remain in place -- yes, yes, it is, yeah.

2 Q. You say it is; is that the common parlance and
3 understanding --

4 A. Yes.

5 Q. -- at the time?

6 A. It is, yes.

7 Q. I see.

8 How did you envisage that the existing fire safety
9 strategy that was to be produced would assist the TMO in
10 discharging their duties under the Regulatory Reform
11 (Fire Safety) Order?

12 A. Again, they would know what systems there were in the
13 building that would need to be checked and maintained.

14 Q. Was it part of putting this report together that you
15 would talk to the TMO to find out what they knew about
16 those parts or systems in the building that needed to be
17 checked and maintained?

18 A. Probably at some point, yes.

19 Q. At some point in what process?

20 A. Probably -- well, the draft report was produced with
21 a number of caveats in it and things that needed to be
22 clarified. So at some point after that, it would --

23 Q. Very well. We will come back to revisit that question
24 in due course.

25 We don't see any reference here to the health and

31

1 safety legislation. Was the report to inform compliance
2 with that?

3 A. No.

4 Q. No, okay.

5 The scope of the work, if you continue down, says,
6 in the next paragraph:

7 "The scope of work for the project would therefore
8 include

9 •" a site visit (expected to take no longer than
10 half a day) to survey the building's architecture and
11 fire safety systems;

12 •" the compilation of the fire safety strategy
13 report."

14 Do you see that?

15 A. Yes.

16 Q. What was the purpose of the proposed site visit?

17 A. I assume that the person that went to site would look at
18 the detection systems that were present, to look at any
19 ventilation system that was present within the lobbies
20 to the flats on the residential levels, to look at if
21 there was any ventilation at the head of the stair, and
22 a general walk-round of the building to look at where
23 the escape routes were, from the residential and from
24 the other parts of the building, the non-residential
25 parts of the building.

32

1 Q. How important to carrying out the proposed scope of work
 2 was the proposed site visit?
 3 A. I would have said it was fairly important.
 4 Q. You say "fairly"; can you help elaborate?
 5 A. Yes, it would have certainly informed the fire safety
 6 strategy report by knowing what was there on site.
 7 Q. Yes.
 8 Did you expect a record of the site visit to be
 9 kept?
 10 A. I did think that one would have been made by the person
 11 who did the site visit.
 12 Q. Right. Again, Dr Barker, we will come back to the site
 13 visit question a little bit later.
 14 Just continuing down through this scope, if we can,
 15 it says in the fourth paragraph down:
 16 "This scope of works ..."
 17 If you just follow that with me:
 18 "This scope of works is based on the assumption that
 19 a detailed appraisal is not required of the structural
 20 fire protection to the loadbearing elements of structure
 21 or of the fire compartmentation within the building.
 22 However, if it should transpire during the site survey
 23 that such an appraisal is necessary, then the scope of
 24 works can be extended to cover this, subject to
 25 a separate fee agreement."

33

1 On what basis was the assumption made, to the best
 2 of your recollection, that an appraisal of the
 3 structural fire protection of the compartmentation was
 4 not necessary?
 5 A. I'm not sure, to be honest.
 6 Q. Is that something that you queried with either Mr Sounes
 7 or the person who put this proposal together, James Lee?
 8 A. I would say it was assumed that, because the building
 9 was a concrete building, it possessed the necessary fire
 10 resistance, as well as because at the time that it was
 11 constructed it was required to be a building with
 12 two-hour fire resistance to the structural elements. As
 13 it says underneath about carrying out a site survey to
 14 do that appraisal, that wouldn't be something that we
 15 could do.
 16 Q. Right.
 17 Did you know that James Lee, who is the author of
 18 this proposal, had undertaken a site visit on
 19 29 May 2012?
 20 A. I know that now; I didn't know that when I went to the
 21 meeting.
 22 Q. The meeting on 26 July?
 23 A. (Witness nods).
 24 Q. I see.
 25 Would it follow that you didn't know at that time

34

1 that he had taken photographs of the tower?
 2 A. No, I didn't know at that time.
 3 Q. Now, you said a minute ago you know that now; when did
 4 you learn that Mr Lee had made a site visit on
 5 29 May 2012?
 6 A. It was after I had been to the meeting, when the job
 7 folder for the project was copied to the Manchester
 8 server, because it was originally on the London server.
 9 Q. The job folder for the project?
 10 A. Yes, each project has an electronic job folder --
 11 Q. Right.
 12 A. -- on the server.
 13 Q. Can I just explore that a little.
 14 When was the job folder copied to the Manchester
 15 server first, do you remember?
 16 A. I think -- it was after I had been to the meeting, so it
 17 was some time after the week -- the week after, during
 18 the next week, that would be the week commencing the
 19 30th, I think.
 20 Q. Yes. What was in the job folder, do you remember?
 21 A. The job folder has the fee proposals in it, and that was
 22 where the photographs were --
 23 Q. I see.
 24 A. -- that were taken.
 25 Q. Was there anything else in the job folder at that time?

35

1 A. I don't remember there being anything else in there.
 2 Q. Would you have expected there to be anything else in the
 3 job folder?
 4 A. Not in terms of a report or anything. I had thought
 5 that there might have been drawings, if drawings had
 6 been sent over in order to do the fee proposals for the
 7 refurbishment, because there were the two fee proposals.
 8 I thought there might have been a bit more of a summary
 9 of James's findings from his site visit, but I don't
 10 remember seeing anything.
 11 Q. Do you remember thinking that you should follow up and
 12 find out whether there was a summary in existence of
 13 James Lee's visit?
 14 A. No, because if he had have done one, he would have put
 15 it in the job folder.
 16 Q. I see. So can we just get this right: you looked at the
 17 job folder, you saw that James Lee had not put in it
 18 a report of his site visit, so did you assume that
 19 therefore he had not done one?
 20 A. Yes.
 21 Q. I see.
 22 Would it be unusual for James Lee or a senior fire
 23 consultant in his position to have made a site visit and
 24 not made a report?
 25 A. It would depend on the job, and I wasn't that familiar

36

1 with projects that James had worked on during his time
 2 at Exova, with him being from a different office. But
 3 I did assume -- or I would have thought that there would
 4 have been a bit more by way of some summary of findings
 5 of his site visit.
 6 Q. Do you remember when James Lee -- sorry, let me try this
 7 differently.
 8 It's right, isn't it, I think, that James Lee left
 9 Exova in July 2012?
 10 A. He did. He left the Friday before I went to the
 11 meeting.
 12 Q. So the 20th?
 13 A. Yes.
 14 Q. That's the date he puts in his statement.
 15 A. Yes.
 16 Q. So does that tell us that you first became involved in
 17 Grenfell Tower on 24 July, four days after he had left?
 18 A. Yes.
 19 Q. Did you have any opportunity to speak to James Lee,
 20 whether about his May site visit or anything else about
 21 Grenfell Tower?
 22 A. No, I didn't.
 23 Q. Right. So can we take it from that that he never told
 24 you about whether it was safe to assume that the
 25 appraisal of the structural fire protection to the

37

1 load-bearing elements of the structure or fire
 2 compartmentation wasn't required?
 3 A. No, he never did.
 4 Q. So can we also take it that you didn't have
 5 a conversation with him at all about what he found on
 6 his site visit?
 7 A. No, I didn't.
 8 Q. Do you know whether anybody else in Exova had
 9 a conversation with James Lee about his site visit in
 10 May to Grenfell Tower?
 11 A. I don't know whether anybody did.
 12 Q. Right.
 13 Now, halfway down the page it says, still under
 14 "Proposed Scope of Work":
 15 "In developing the report, we would use our expert
 16 knowledge of fire safety design codes."
 17 Do you see that?
 18 A. Yes.
 19 Q. Which codes were those, do you think?
 20 A. Approved Document B.
 21 Q. That's Approved Document B.
 22 Is that or was that your own personal assumption of
 23 what James Lee was proposing in this fee proposal, or
 24 was that something that you got from something else
 25 within the fee proposal?

38

1 (Pause)
 2 A. I don't know, really. I think ... given that it was
 3 an existing building, it was more straightforward to use
 4 Approved Document B as the benchmark and measure it
 5 against that.
 6 Q. I see.
 7 When you instructed -- let's just leap forward
 8 a little bit in time -- Cate Cooney to proceed to draft
 9 the existing fire safety strategy, did you have
 10 a conversation with her about using Approved Document B
 11 as the fire safety design code, so to speak, as opposed
 12 to any other code?
 13 A. Yes.
 14 Q. You did?
 15 A. Yes.
 16 Q. Okay.
 17 Can we then move on to your team and your role.
 18 It was envisaged in the fee proposal that the
 19 fire safety team would be based in the London office.
 20 A. (Witness nods).
 21 Q. If you want, you can see that on the same page we're
 22 still on under "Fire Engineering Team". Do you see
 23 that?
 24 A. Yes.
 25 Q. Now, Ms Cooney told the Inquiry, back in March, that

39

1 normally this project would have been run out of the
 2 London office.
 3 A. That's correct, yes.
 4 Q. Right. That was my first question.
 5 My next question is: what changed which meant that
 6 the Warrington team from the Warrington office was to
 7 carry it out?
 8 A. Well, James left, and Terry was absent at the time.
 9 I also think due to workload at the time.
 10 David Harries, who was -- he didn't run the London
 11 office but he was in charge, I think he was the
 12 director, he also wasn't based all the time down in
 13 London, so he didn't have a lot of capacity to take on
 14 the work, and the other members of the team in London
 15 didn't have the capacity to do it. So due to Bruce
 16 pressing for somebody to attend, we were asked in
 17 Warrington to help out.
 18 Q. I see.
 19 Now, as we know from this document, James Lee was
 20 the consultant who would lead the project, wasn't he?
 21 A. Yes.
 22 Q. He says in his witness statement {EX000001740/4} -- and
 23 we can look at it if you like, but I will quote from it
 24 verbatim -- he says:
 25 "This would mean acting as a project manager and

40

1 handling the day to day contact with the client in
 2 relation to that workstream.”
 3 First of all, is what I have just read out to you
 4 from his statement correct in your understanding of what
 5 that role involved?
 6 A. Yes, yes.
 7 Q. When he left the project, who was assigned, do you
 8 remember, to take his place, to lead it?
 9 A. When I went to the meeting, it was -- I understood that
 10 Terry would be taking over the project for the
 11 refurbishment, because we had been informed -- and
 12 I relayed this to the design team -- that Terry would be
 13 back on 6 August. So he was going to be doing that role
 14 for the refurbishment.
 15 Q. Yes.
 16 A. But as the requirement for the existing building
 17 fire strategy seemed to be more pressing as well, we
 18 decided that the existing building fire strategy would
 19 be carried out from the Warrington office.
 20 Q. Yes, and my question: who was assigned to take
 21 James Lee's place, to lead the project for the existing
 22 fire safety strategy that was the subject of this fee
 23 proposal?
 24 A. I suppose initially it was me, but then I handed that
 25 job to Cate to do.

41

1 Q. Well, Cate wasn't leading the project; she was, as she
 2 has told us --
 3 A. Well, it would be me, then.
 4 Q. -- doing her work under your supervision.
 5 A. It would be me, then.
 6 Q. You say, "It would be me"; was there actually any
 7 appointment or assignment of the lead role for the
 8 existing fire safety strategy?
 9 A. Not formally, no.
 10 Q. Right. So at what point did you understand that you had
 11 taken James Lee's place as the leader of the project?
 12 A. I suppose at the meeting.
 13 Q. You say you suppose at the meeting; did you know that at
 14 the meeting or is that something you're pulling together
 15 now?
 16 A. Yes, I knew at the meeting.
 17 Q. All right.
 18 Would that mean, and did you understand it to mean
 19 at the time, that you, as project manager from the
 20 meeting, 26 July, would be managing the project until it
 21 was completed?
 22 A. No. It was my understanding that I would be managing
 23 that project until Terry came back, and as soon as Terry
 24 came back, it was always my intention to hand that
 25 project back to Terry, so that it could be run from the

42

1 London office.
 2 Q. I follow.
 3 So just summarising, if I can -- I hope
 4 accurately -- where that takes us: you had taken over,
 5 based on what you saw from the fee proposal, and were
 6 going to lead the project temporarily until Terry Ashton
 7 took it over; have I got that right?
 8 A. Yes.
 9 Q. I follow.
 10 Do you know why James Lee was not replaced on this
 11 project -- and when I say "this project", I mean the
 12 project for the existing fire safety strategy -- with
 13 a London-based lead when he left?
 14 A. Well, I think the intention would have been for Terry to
 15 take over immediately, but Terry was absent due to
 16 illness, and I think that the other members of the team
 17 in the London office didn't have sufficient capacity --
 18 Q. I see.
 19 A. -- to take on the project.
 20 Q. Right. Again, if this is unfair as a summary, please
 21 say, but you were basically the Warrington stopgap
 22 leader?
 23 A. Yes, that's fair to say.
 24 Q. Can I then turn to a slightly different topic, which is
 25 the information gathered to prepare the report for the

43

1 existing fire safety strategy.
 2 What steps did you take, do you remember, to ensure
 3 that sufficient information regarding the existing
 4 building was obtained by Exova in order to produce
 5 a comprehensive existing building fire safety strategy?
 6 A. We obtained the drawings for the building, the existing
 7 building, they were the original drawings for the
 8 building, and we also had the current fire risk
 9 assessment for the building. Then I believe that Cate
 10 contacted Bruce on a couple of occasions to obtain
 11 information regarding the ventilation of the common
 12 lobbies.
 13 Q. You mention the FRA.
 14 A. Yes.
 15 Q. We will look at that in due course.
 16 Was that in the job folder you referred to, or did
 17 you get that separately?
 18 A. I can't remember.
 19 Q. Okay.
 20 A. Can't remember.
 21 Q. If you had got it separately -- and I know this is
 22 something you may not remember either -- where would you
 23 think you would have got it from?
 24 A. Either the client or the architects may have had it and
 25 emailed it to us.

44

1 Q. Right. You say the client; that was who?
 2 A. KCTMO.
 3 Q. Did you have any contact or connection with KCTMO, other
 4 than perhaps the meeting on 26 July, in relation to
 5 carrying out your work?
 6 A. No, I didn't. No.
 7 Q. During the meeting that we have just been discussing,
 8 you I think requested a copy of the specification for
 9 the smoke extract system for Grenfell Tower.
 10 A. Yes.
 11 Q. Did you request any further information about the
 12 existing building?
 13 A. Just the drawings.
 14 Q. Why didn't you ask for any further information?
 15 A. I can't remember.
 16 Q. Okay.
 17 Did you have a discussion with Ms Cooney when you
 18 instructed her that she would need to obtain further
 19 information about the existing building in order to
 20 carry out her work?
 21 A. I believe I did, yes.
 22 Q. What information or documents did you discuss with her
 23 that she would have to get?
 24 A. The drawings and the fire risk assessment.
 25 Q. Right.

45

1 We will come and see the instructions in a moment,
 2 but were there further drawings that neither of you had
 3 at that time which you felt she needed?
 4 A. For the existing building?
 5 Q. Yes.
 6 A. I'm not aware that we needed any other drawings.
 7 MR MILLETT: Right.
 8 Mr Chairman, I'm going to turn to a different topic,
 9 which won't produce an obvious break in the next
 10 five minutes. It may be convenient to the witness and
 11 to you to take one now. I'm in your hands.
 12 SIR MARTIN MOORE-BICK: The next topic will take more than
 13 five minutes?
 14 MR MILLETT: Yes, it will.
 15 SIR MARTIN MOORE-BICK: 10, 15?
 16 MR MILLETT: Yes, probably more than that, actually. Maybe
 17 15 minutes.
 18 SIR MARTIN MOORE-BICK: I think we will keep going, please.
 19 Is that all right by you, Dr Barker?
 20 THE WITNESS: Yes.
 21 MR MILLETT: Thank you, Dr Barker.
 22 I would like to examine with you, then, the next
 23 topic, which is allocation of resources and internal
 24 processes as at the summer of 2012.
 25 Can we first look, please, at {EX000000668}.

46

1 Now, this is an email chain which actually finishes
 2 on 8 August 2012, as you can see at the top. Can we
 3 look down, please, at an email earlier in the chain at
 4 page 3 {EX000000668/3}. This is an email from you to
 5 Bruce Soules on 30 July 2012. Do you see that?
 6 A. Yes.
 7 Q. You say:
 8 "Good afternoon Bruce
 9 "Thank you for sending me the information regarding
 10 the smoke exhaust/ventilation."
 11 Do you see that?
 12 A. Yes.
 13 Q. Then you tell him in the first main paragraph that you
 14 had not received the acceptance from Appleyards of the
 15 fee proposal for the existing building, only for the
 16 upgrade; do you see that?
 17 A. Yes.
 18 Q. We know that you received that acceptance the next
 19 day -- you don't need to see it, just for our purposes
 20 and the transcript, it's {EX000000122} -- but you go on
 21 to say in this email, in the third paragraph:
 22 "In terms of allocating resources to this project
 23 I am happy to work on the fire strategy for the existing
 24 Grenfell Tower from the Warrington office and will aim
 25 to get the report to you before the deadline of the

47

1 16th August."
 2 Do you see that?
 3 A. Yes.
 4 Q. Then you go on to say:
 5 "July and August are generally fairly quiet months
 6 for the fire engineering division as it is holiday time
 7 for a lot of people, however this year it seems to have
 8 gone a bit mad and we have had a number of large
 9 projects come in at once. As I mentioned at the meeting
 10 my colleague Terry Ashton will be back at work on the
 11 6th August so it may be better if he continued with the
 12 project during the RIBA C-E stages as I am on annual
 13 leave for the last two weeks in August."
 14 "I hope this is acceptable ..."
 15 Now, first of all, where do you think you got the
 16 deadline of 16 August from?
 17 A. That was my last day at work, so that's where I got the
 18 deadline from.
 19 Q. Right, okay, so this wasn't a deadline imposed by him or
 20 extraneous circumstances; it was essentially personal?
 21 A. I think so now. I do remember writing it down at the
 22 time. However, I haven't got those notes anymore. But,
 23 yes, that was my last day in work before annual leave,
 24 so I just connected the two, and it was the
 25 understanding that the strategy needed to be done for

48

1 then, or the first draft of the existing strategy needed
2 to be done for then, because otherwise we would be into
3 September.

4 Q. Right.

5 Now, you say, and we've just seen it, in the fifth
6 main paragraph, just in the penultimate line, it may be
7 better if Terry Ashton continued with the project during
8 the RIBA C to E stages, and that's because you're on
9 annual leave for the last two weeks in August.

10 Did you know what relevant qualifications or
11 experience Mr Ashton possessed that would make it
12 appropriate for him to continue with the project?

13 A. Yes, yes, he's a very experienced engineer who has spent
14 a lot of time working in local authority
15 building control.

16 Q. What about qualifications?

17 A. In terms of a fire engineering qualification?

18 Q. Yes.

19 A. He didn't have one.

20 Q. Right.

21 Do you know whether Mr Ashton had undertaken formal
22 education or training relating to fire engineering?

23 A. I don't know specifically, no.

24 Q. Why did you consider that Mr Ashton was the most
25 appropriate person within Exova to deal with this

49

1 project?

2 A. Because he was the senior member in the London team, and
3 because he had had over 30 years of experience working
4 in building control, where he had had experience with
5 fire strategies and he knew the codes and the
6 Building Regulations.

7 Q. Right.

8 Do you know what experience he had specifically in
9 advising on fire safety strategies for overcladding
10 high-rise residential buildings?

11 A. I don't know what experience he had specifically.

12 Q. You refer to his experience as 30 years of experience
13 working in building control, where he had had experience
14 with fire strategies and knew the codes and
15 Building Regulations.

16 Why was that relevant to the production of
17 an existing fire safety strategy specifically?

18 A. Because I suppose he spent a number of years on the
19 other side of the table, in effect.

20 Q. Right.

21 A. So you produce a fire safety strategy normally for
22 a building -- well, generally you produce a fire safety
23 strategy for a building that hasn't been built yet and
24 you are presenting that design to the regulatory
25 authorities for their approval. So Approved Document B

50

1 is one of the most -- or compliance with Approved
2 Document B is one of the most common methods of doing
3 that. So Terry has been on the other side, he has been
4 on the regulatory side. So he knew how to apply the
5 code to the designs.

6 Q. Yes, I see.

7 I don't want to put words in your mouth; would it
8 follow that he also knew what building control would
9 accept?

10 A. Yes, I suppose he would have a good idea of what
11 building control would accept.

12 Q. Yes, I see, okay.

13 Now, was there anybody else in the office, given
14 that you, Ms Cooney and -- take it from me --
15 Andrew McCracken were all due to go on holiday from
16 17 August, and things had gone a bit mad, who could have
17 done the job other than Mr Ashton?

18 A. In the London office or the Warrington office?

19 Q. Well, in either, actually.

20 A. In the London office, as I say, there was David Harries,
21 who was on leave when I went to that meeting;
22 Tony Pearson was in the London office; and I think there
23 was a graduate. So I wouldn't have allocated the task
24 necessarily to a graduate.

25 Q. No.

51

1 A. And from memory, Tony didn't have the capacity to do it.
2 Q. Right.

3 A. Within the Warrington office, the other member of staff,
4 Andrew Martyn, he didn't have the capacity either.

5 Q. What about Mr Harries in the London office?

6 A. I don't think -- I can't remember, to be honest, but he
7 was on leave, which is why I went to that meeting. He
8 could still have been on leave after that. I don't know
9 whether he had just gone on leave. I don't know.

10 Q. Right.

11 What qualifications and experience did Mr Harries
12 have to take over or do the existing fire safety
13 strategy for Grenfell?

14 A. He hasn't got a fire engineering qualification. He does
15 have an engineering degree and he'd been working for
16 Warringtonfire since 2001, so he he'd had ten years'
17 experience of producing fire strategies.

18 Q. Did he have any experience of residential high-rise
19 blocks?

20 A. I don't know.

21 Q. Now, Mr Sounes replies to your email that we see here on
22 7 August, and that is at {EX000000668/2}. He says --
23 this is to you, copied to Mr Ashton:

24 "Apologies for not responding sooner. I have been
25 distracted but I couldn't understand where you got the

52

1 16 August deadline. This is the Planning deadline. Any
 2 impact the fire strategy has on the overall scheme needs
 3 to be understood sooner than this. Ideal we should be
 4 submitting a Stage C type document to the client for the
 5 end of this week, or next week. It would be enough to
 6 know that you have reviewed the scheme and have no
 7 significant comments/reservations to make, and the
 8 strategy for fire safety is achievable and any
 9 implications on the layout and external works is
 10 understood by the rest of the design team.

11 "This might sound unreasonable but the project has
 12 been live for some time - notwithstanding the delay on
 13 formal appointments. See attached markup provided by
 14 James Lee, dated 30 May. I discussed it once with him
 15 over the phone but I'm not convinced I've interpreted it
 16 correctly."

17 Now, I have read that all to you because it's
 18 importance you see it all.

19 Is it right that you, and indeed Ms Cooney, were
 20 suddenly under a huge pressure of time from Mr Sounes?

21 A. Yes, in some ways, because that email was implying that
 22 he wanted the stage C report, which was for the
 23 refurbishment, and it was my understanding from the
 24 meeting that we'd had that Terry would be doing that,
 25 when he came back from his absence, and that the

53

1 existing fire strategy was something that we were
 2 carrying out. So then I think that was where the
 3 confusion lay. But, yes, it did put a bit of pressure
 4 on.

5 Q. In fact, the deadline was even sooner than what you
 6 thought was the deadline, namely 16 August.

7 A. Yes.

8 Q. I think we see this in a document, but you found that
 9 a bit irritating.

10 A. I think, yes, because I didn't know where the confusion
 11 had come from. Possibly it was me introducing my own
 12 deadline that had confused him. However, I thought
 13 I had made it clear that the Warrington office would not
 14 be doing the refurbishment work.

15 Q. Did you think it was realistic to expect you and
 16 Ms Cooney to produce the existing fire safety strategy
 17 and, indeed, the outline fire safety strategy for the
 18 refurbishment within the timeframe which Mr Sounes was
 19 demanding?

20 A. Yes, it was unrealistic to expect two strategies in that
 21 timeframe.

22 Q. Did you protest to him?

23 A. I don't recall having a conversation with him.

24 Q. Is there a reason why you didn't have a conversation
 25 with him, given that what he was asking you to do was

54

1 unrealistic?

2 A. I can't remember.

3 Q. Now, you forwarded this chain to Terry Ashton on
 4 8 August, as we can see from the next document,
 5 {EX000000668/1}. Just scroll up. The same document,
 6 top email:

7 "Hi Terry

8 "I hope you are well and recovered from your
 9 illness."

10 This is you to and Mr Ashton, copied to Ms Cooney.
 11 You say there:

12 "I went to this meeting in your absence as I was
 13 asked to work from the London office that day. The
 14 email below from Bruce has irritated me a little, to say
 15 the least. I have asked Cate to do the fire strategy
 16 for the existing tower building, and so far this is the
 17 only part of the project that we have had the fees
 18 accepted on. If Bruce wants us to do the next stage
 19 then we need to have the fees accepted - this has not
 20 happened yet."

21 Do you see that?

22 A. Yes.

23 Q. Then you say:

24 "The only thing that concerns me about the fire
 25 strategy for the upgrade is that both myself, Cate and

55

1 Andrew McCracken are all on annual leave from next
 2 Friday (17th August) for two weeks."

3 Then it goes on about dates.

4 In fact, I think it's right that you had actually
 5 sent Ms Cooney an email on 7 August, the day before,
 6 which suggests that you had by then asked her to
 7 undertake the compilation of the existing fire safety
 8 strategy.

9 A. Yes.

10 Q. Again, the reference to that -- and we'll come back to
 11 it in a moment -- is {EX000001613}, just for our
 12 transcript.

13 Just looking at this email we are on,
 14 {EX000000668/1}, you mention that you're concerned about
 15 people being away, as I've read to you. That was
 16 a concern.

17 Did you have sufficient resources to submit
 18 a stage C type document in the timescale stipulated by
 19 Mr Sounes?

20 A. In the Warrington office, no.

21 Q. What about the London office?

22 A. Well, I understood that Terry would be undertaking the
 23 stage C report, and I was confident that Terry could
 24 produce a first draft of a stage C report within the
 25 timeframe that Bruce required.

56

1 Q. Did you understand what information would need to be
2 included in a stage C report?
3 A. Yes.
4 Q. What was that?
5 A. A stage C report is quite a ... quite a high level, and
6 it can be quite a brief document where you state the
7 requirements of B1 to B5. For example, you would say in
8 the common lobbies ADB requires that the travel
9 distances are 7.5 metres in a single direction, whereas
10 when you get further through the RIBA stages you would
11 state that and then you would also state what the travel
12 distances are and, if they didn't comply, what
13 mitigating measures you would put in place. So there
14 would be -- it would be quite a brief document.
15 Q. Can I ask you to go back to Mr Sounes' email of 7 August
16 at {EXO00000668/2} in this email chain, where he says,
17 "Apologies for not responding sooner", and he refers to
18 the stage C type document. Do you see that?
19 A. Mm-hm.
20 Q. Can I just look at the last sentence of that paragraph.
21 We looked at it before, but he refers there to:
22 "... the strategy for fire safety is achievable and
23 any implications on the layout and external works is
24 understood by the rest of the design team."
25 In his reference to "external works", what did you

57

1 understand him to mean there?
2 A. I take external works to mean the landscaping at ground
3 level that's outside the building within the site.
4 Q. What about the overcladding which had been discussed, to
5 your knowledge, as you told us earlier, at the 26 July
6 project meeting that you attended when you came down to
7 London?
8 A. I don't think he means that.
9 Q. Why is that?
10 A. Because I think he would have said cladding if he meant
11 cladding, not external works.
12 Q. I see.
13 Now, in that same email, he refers, as we've seen,
14 to an attached mark-up provided by James Lee of 30 May.
15 Do you remember whether you asked Mr Sounes if he
16 needed assistance in interpreting that document?
17 A. No, I didn't ask him.
18 Q. Do you know whether he was ever provided with assistance
19 in interpreting it?
20 A. I don't know for sure; however, I think that Cate looked
21 at that drawing mark-up.
22 Q. Right.
23 A. Because I think that is the fourth floor alterations
24 that were proposed.
25 Q. Now, is it right, looking forward, that all Exova

58

1 produced in the timescale stipulated by Mr Sounes for
2 the upgrade works, as he calls it, was the initial
3 design note of 12 September 2012 produced by Mr Ashton?
4 A. I think so, but I'm not sure.
5 Q. Right. Did you ever look at that initial design note
6 yourself?
7 A. No, I didn't.
8 Q. You didn't. So if I were to ask you questions about it,
9 do I take it you wouldn't be able to answer?
10 A. No.
11 MR MILLETT: Right.
12 I'm now going to turn to a subtopic, which is the
13 handover to Ms Cooney. That may be an appropriate
14 moment, Mr Chairman.
15 SIR MARTIN MOORE-BICK: Yes, it could be a good point,
16 could it?
17 MR MILLETT: Yes.
18 SIR MARTIN MOORE-BICK: I will give you a little bit of
19 help, Mr Millett. How long do you think we should take?
20 I know we have made it clear to everyone that we are
21 going to take long enough breaks to enable you to
22 consider any material coming in from lawyers who are not
23 present in the room. You probably don't know at the
24 moment.
25 MR MILLETT: I think if we take 15 minutes. I don't know at

59

1 the moment. If we take 15 minutes, that ought to be
2 enough. I wouldn't want to take more than 15 minutes.
3 We are making reasonable progress, I should say.
4 SIR MARTIN MOORE-BICK: Good, thank you. Well, that's very
5 helpful.
6 What I'm going to say is that we will have a break
7 now, Dr Barker, give you a chance to stretch your legs.
8 We will come back at 11.45.
9 MR MILLETT: Very good, Mr Chairman, thank you.
10 SIR MARTIN MOORE-BICK: So if you would like to go with the
11 usher now, she will take you back to the witness room
12 and we'll resume at 11.45, please.
13 Before you go, please don't talk to anyone else
14 about your evidence while you're out of the room.
15 Thank you very much.
16 It will only be quarter of an hour in the event.
17 MR MILLETT: That's right.
18 SIR MARTIN MOORE-BICK: 11.45, please. Thank you.
19 (11.28 am)
20 (A short break)
21 (11.45 am)
22 SIR MARTIN MOORE-BICK: Ready to carry on, Dr Barker?
23 THE WITNESS: Yes.
24 SIR MARTIN MOORE-BICK: Yes, Mr Millett.
25 MR MILLETT: Dr Barker, I would now like to examine with you

60

1 the handover to Cate Cooney.
 2 Now, in your statement at paragraph 3.10 -- we
 3 perhaps ought to look at it, it's {EX000001603/3},
 4 please -- you say there that you asked Cate Cooney to
 5 produce the fire safety strategy for the existing
 6 building, and in the last sentence you say:
 7 "I cannot remember exactly why I asked Ms Cooney to
 8 take over this task but I expect it was due to my having
 9 limited capacity over the summer period."
 10 Does that mean that ordinarily you would have
 11 produced the first draft of the fire safety strategy
 12 yourself?
 13 A. Yes.
 14 Q. Now, if we can go, please, to an email we saw before,
 15 which was {EX000000668/3}, this is the email we looked
 16 at before together, Dr Barker, of 30 July 2012, where
 17 you say:
 18 "Good afternoon Bruce
 19 "Thank you for sending me the information ..."
 20 Do you see that?
 21 A. Yes.
 22 Q. In the second paragraph -- we looked at this briefly --
 23 about the fee proposal, you say in the last sentence
 24 there:
 25 "I telephoned him [that's Mr Hale, David Hale, at

61

1 Appleyards] to tell him that he had accepted the wrong
 2 fee and he is going to email us the right fee acceptance
 3 to us tomorrow ..."
 4 Then you say this:
 5 "... so once that arrives we can get started."
 6 Do you see that?
 7 A. Yes.
 8 Q. Now, the fee proposal was accepted on 31 July 2012, we
 9 referred to this earlier -- and again, for our records,
 10 that's {EX000000122} -- but we don't see that you
 11 instructed Ms Cooney to carry out the drafting until
 12 7 August. Is that right?
 13 A. I think so. Yes.
 14 Q. Do you know why you waited an entire week between
 15 31 July, when you accepted the fee proposal, and
 16 7 August?
 17 A. I think that was because we didn't receive the drawings
 18 until then.
 19 Q. I see.
 20 A. For the existing building. Then when we did receive
 21 them, they were microfiche drawings.
 22 Q. Right.
 23 First of all, where did you get those drawings from,
 24 or from whom did you get them?
 25 A. I can't remember, but I would have assumed -- and I may

62

1 be wrong -- that the architects would have sent them.
 2 Q. Right.
 3 Do you recall at all pressing Mr Sounes to send you
 4 the drawings so that you could get your work started, as
 5 you said you would?
 6 A. I don't recall pressing Bruce, but I believe that Cate
 7 did chase for the drawings.
 8 Q. Right. I'm just wondering why it was that, given you
 9 already had a very tight deadline for the production of
 10 the strategy report, and said you could get started as
 11 soon as the fee acceptance comes, you don't push hard to
 12 get the drawings so that you can do the work. Can you
 13 explain that?
 14 A. No, I can't explain it. It was just until we had the
 15 drawings, we couldn't really start work.
 16 Q. All right.
 17 Now, we have two emails, on 7 and 8 August
 18 respectively, where we can see that you sent Cate Cooney
 19 some information. Can we have those, please. First of
 20 all, it's {EX000001613}, where on 7 August you can see,
 21 top of the page, you send Ms Cooney some documents. Do
 22 you see those? One of them is the specification for the
 23 smoke exhaust and ventilation to the residential lobbies
 24 and other tower documents.
 25 A. (Witness nods).

63

1 Q. Yes?
 2 A. Yes.
 3 Q. The next document is 8 August, next day, {EX000001615},
 4 if we can just have that, please, where we see that you
 5 send her two documents, "Meeting 7 Agenda", and notes
 6 from what you call meeting 6, but which was in fact
 7 meeting 5, of 26 July 2012, which you attended.
 8 A. (Witness nods).
 9 Q. Now, I haven't taken you to the documents for you to
 10 confirm that, but we have confirmed that from looking at
 11 the attachments.
 12 Do you recall that those were what you sent her on
 13 that date, or do you want to look at the documents?
 14 A. I don't remember sending her them, but I did.
 15 Q. Yes, and take it from me that meeting 6 hadn't happened
 16 and it was meeting 5.
 17 Do you remember whether you gave any other
 18 information to Cate Cooney in order to enable her to
 19 draft the existing fire safety strategy?
 20 A. No, I didn't give her any more information.
 21 Q. Did you provide Ms Cooney with the fee proposal and
 22 scope of works document of 11 June that Mr Lee had
 23 proposed or drafted?
 24 A. I don't think I physically provided her with the
 25 documents, but she was aware that they were in the job

64

1 folder .
 2 Q. She was aware that they were in the job folder . Did you
 3 tell her that they were in the job folder?
 4 A. I can't remember.
 5 Q. Was the job folder accessible to her in the ordinary
 6 way?
 7 A. It was at that point, yes.
 8 Q. I see.
 9 Did you give her any specific instructions as to the
 10 scope of the works?
 11 A. I instructed her to produce a fire strategy, looking at
 12 the existing building, to Approved Document B, to assess
 13 it in line with Approved Document B.
 14 Q. Did you do that in writing or orally?
 15 A. Orally .
 16 Q. When did you do that orally?
 17 A. I can't remember exactly, but it would have been that
 18 week, because we used to sit next to each other in the
 19 same office .
 20 Q. Right.
 21 Was there anything in the fee proposal, which had
 22 been signed by Mr Lee, 11 June, and accepted, that led
 23 you to think that Approved Document B would be the basis
 24 of the assessment?
 25 A. No.

65

1 Q. So why did you instruct Ms Cooney to use Approved
 2 Document B as the basis of the assessment, do you think?
 3 A. Because I thought that was the most appropriate guidance
 4 document to use for this building.
 5 Q. And why is that?
 6 A. Because the fire safety engineering guidance didn't seem
 7 to be appropriate. Approved Document B covers a number
 8 of different types of purpose groups, one of which is
 9 residential flats , so it seemed appropriate to use that
 10 document.
 11 Q. Did you discuss the appropriateness of using Approved
 12 Document B with anybody else, or did you just --
 13 A. No, I didn't.
 14 Q. I see.
 15 Just go back a stage, a moment. You said a moment
 16 ago that ordinarily you would have carried out the
 17 existing fire safety strategy review and done the
 18 report. If you had done it, who would have reviewed it?
 19 Who would have peer reviewed it?
 20 A. Andrew McCracken.
 21 Q. I see.
 22 Do you remember whether you had any other
 23 discussions with Ms Cooney in advance of her going ahead
 24 and drafting the existing fire safety strategy?
 25 A. I don't remember any specific discussions. However,

66

1 because we worked in the same office and sat next to
 2 each other, you do discuss things on an ad hoc basis
 3 throughout the day. So it's likely that discussions
 4 would have occurred; I just can't remember them.
 5 Q. Did you give her a deadline to which to work in order to
 6 produce a first draft?
 7 A. We were working to the deadline of 16 August.
 8 Q. Was that --
 9 A. No, sorry, that was the date for sending the first draft
 10 out. She would need to produce that a day or two
 11 before, so that I could review it .
 12 Q. And that 16 August deadline, you told us earlier , was
 13 the date on which, I think, you were going on holiday?
 14 A. That was my last day in work, yes.
 15 Q. What about Ms Cooney?
 16 A. I believe -- because at the time I wasn't in the office
 17 on Friday, so my last day would have been a Thursday.
 18 Cate's would have been the Friday.
 19 Q. Yes, I see. So you were both working to a 16 August
 20 deadline --
 21 A. Yes.
 22 Q. -- because of your impending holiday arrangements?
 23 A. Yes.
 24 Q. Right.
 25 I just want to ask you a few questions about the

67

1 peer review process and your role .
 2 Can I ask you, please, to look at your witness
 3 statement, {EX000001603/3}. Let's look together, if we
 4 can, please, at the bottom of that page, paragraph 3.13:
 5 "On 15 August 2012, Ms Cooney asked me to review the
 6 draft of the Existing FSR which she had prepared ...
 7 This was the peer review of the Existing FSR. A peer
 8 review involves reviewing the draft report alongside:
 9 (i) the drawings considered in order to produce that
 10 report; and (ii) the relevant guidance referred to in
 11 the report, in this case Approved Document B, in order
 12 to ensure that the report was correct."
 13 Do you see that?
 14 A. Yes.
 15 Q. Now, at her witness statement, can I just ask you to see
 16 this, she at paragraph 3.8 -- and this is
 17 {EX000001590/3}, I just want to show you this -- she
 18 says:
 19 "On 15 August 2012, I asked Ms Barker to review my
 20 draft of the Existing FSR and sent her the drawings
 21 I had used in preparing that draft ... The peer review
 22 process at Exova is part of the document quality
 23 control, and typically involves someone of equal or
 24 greater seniority to the drafter reviewing the report to
 25 ensure that there are no clear errors and that it is

68

1 sound in its basis."

2 Do you see that?

3 A. Yes.

4 Q. I should ask you first : do you agree with her? Do you

5 agree with what she says there?

6 A. Yes.

7 Q. Can I next ask you to look at Dr Pearson's witness

8 statement. This is {EX000001753/3}. Let's go together

9 and look at paragraph 3.9. He says:

10 "The process of peer reviewing a report involves

11 comparing what is written in the report with any floor

12 plans provided and ensuring (i) that the report is

13 factually correct; (ii) that it correlates with the

14 plans; (iii) that the approach taken is appropriate,

15 eg that the design is based on the appropriate design

16 code(s), or any fire engineering analyses are based on

17 sound principles; (iv) that it is correct where the

18 report says that there is compliance with the cited

19 design code(s); and (v) that the facts, logic and

20 mathematics of any fire engineering analyses are

21 correct."

22 Do you agree with that description of what the

23 peer review process within Exova involved?

24 A. Yes.

25 Q. Can I then next show you a document from Cate Cooney,

69

1 {EX000000175}. This is an email from Ms Cooney, it's

2 the second one down on the page, to you, Dr Barker, on

3 15 August timed at 15.37. Do you see that?

4 A. Yes.

5 Q. It says:

6 "Clare,

7 "Please can you review the existing FSS for the

8 above. I have printed out drawings if these help (they

9 probably will !)."

10 Do you see that?

11 A. Yes.

12 Q. You respond the next day, 16 August, at 15.22, saying

13 you had reviewed it and it was fine. You say:

14 "Have reviewed it and it is fine."

15 Do you see that?

16 A. Yes.

17 Q. I want to ask you some questions now about your review.

18 First of all, Ms Cooney says in her email, as you

19 have just seen, that she has printed out drawings to

20 assist you. Do you remember what those drawings were?

21 A. It would have been the floor plan layouts for each

22 levels -- for each of the levels of the residential

23 building, and probably a section, although I can't

24 remember. But it will have been the general layouts.

25 Q. Did you look at those drawings at all --

70

1 A. Yes.

2 Q. -- when you conducted your review? In how much detail

3 do you think you looked at those?

4 A. I can't remember.

5 Q. We have counted nine sets of drawings that she had --

6 A. Right.

7 Q. -- going back to 1971, when the building was designed.

8 Did you review all of those, do you think?

9 A. I can't remember.

10 Q. Do you remember whether you reviewed the draft that she

11 had produced, the draft fire safety strategy, alongside

12 the drawings?

13 A. Yes, I did.

14 Q. Did you check the measurements?

15 A. I can't remember.

16 Q. What other documents did you have to hand when

17 conducting your review of the draft that Ms Cooney had

18 sent you?

19 A. Approved Document B.

20 Q. Did you have the current fire risk assessment for

21 Grenfell Tower to hand?

22 A. I think I did, but I can't remember.

23 Q. Let's see if I can put the document in front of you and

24 see if it triggers a recollection.

25 Could you please be shown {CST00000090}. This is

71

1 Carl Stokes' fire risk assessment dated 29 December 2010

2 for Grenfell Tower. Do you see that?

3 A. Yes.

4 Q. Is that a familiar document to you, Dr Barker, do you

5 think?

6 A. I have read it, yes.

7 Q. Yes, but does it trigger you having had a recollection

8 of seeing it at the time that you conducted your review

9 of Ms Cooney's draft report?

10 A. Yes, I think I did see it when I reviewed the report.

11 Q. You said you had Approved Document B to hand. Do you

12 remember which parts of Approved Document B you looked

13 at when reviewing Ms Cooney's draft?

14 A. I would have looked at B1 to B5.

15 Q. B1 to B5, right.

16 Can I ask you to go back to your statement, please,

17 in {EX000001603/4}. Let's look at paragraph 3.14

18 together. You say:

19 "Ordinarily, if I had any comments on the draft

20 report, I would provide my comments by way of a

21 manuscript mark-up and would discuss any queries with

22 the author. However, I note from my email of 16 August

23 2012 [that's the one we've just been looking at] that

24 I replied to Ms Cooney to say that I had reviewed the

25 draft and it was fine. I am not surprised that I had no

72

1 comments on the Existing FSR given Ms Cooney's
 2 capabilities and her background in Building Control,
 3 which would have meant that she was very experienced in
 4 working with fire safety strategies."

5 Now, we can see from the two emails, 15 August and
 6 16 August, that just under 24 hours elapsed between her
 7 sending her draft report to you and you reporting back
 8 to her that it was, as you call it, fine.

9 A. Mm-hm.

10 Q. How long did you actually spend reviewing her draft
 11 existing fire safety strategy report, do you think?

12 A. I can't remember. I would have said a couple of hours.
 13 But I don't remember.

14 Q. Do you remember when that couple of hours was? Was it
 15 on the 15th, immediately on receiving it, or the morning
 16 of the 16th?

17 A. I would have thought that it would have been on the
 18 16th.

19 Q. Right.

20 Given that that was your last day in the office, did
 21 you have other things on your plate?

22 A. Yes.

23 Q. How did you review the report? Did you have a hard copy
 24 or did you review it on a screen?

25 A. I honestly can't remember. I usually did a hard copy,

73

1 but I just can't remember.

2 Q. Did you make any notes at all while you reviewed the
 3 report?

4 A. Again, I can't remember.

5 Q. Ms Cooney told us when she gave evidence to the Inquiry
 6 that you were quite fastidious about notebooks. That's
 7 what she said. For those who are interested in seeing
 8 the transcript, it's {Day14/88:8-9}. I don't need to
 9 show you that.

10 Did you make a note of your review in your notebook?

11 A. I may well have done, but I don't know. I would have to
 12 look in the notebook, but I don't have access to them.

13 Q. Do you remember whether you made a note of your review
 14 on any hard paper document of any kind?

15 A. I don't remember, because I don't remember whether
 16 I reviewed that as a hard copy or an electronic copy.
 17 I can't remember. But I possibly would have noted it
 18 down in my notebook what I had done, as I tended to do
 19 that out of habit so I knew what I had done over the
 20 week.

21 Q. Just looking a little bit more closely, if you would,
 22 with me at your statement at paragraph 3.14 that we have
 23 there on the screen, the reason you give for not being
 24 surprised that you had no comments on her draft is that
 25 she had capabilities and background in building control,

74

1 which would have meant that she was very experienced in
 2 working with fire safety strategies. Now, you don't say
 3 there that the reason you had no comments was because
 4 you were satisfied with the contents of the report
 5 itself.

6 My question is: do we take it from what you do say
 7 and what you don't say there that you signed it off as
 8 fine purely because it had been authored by Ms Cooney,
 9 as opposed to having conducted a critical review of its
 10 contents?

11 A. No, I had reviewed its contents, and on the basis that
 12 I appreciate that there were gaps in the document where
 13 further information was required, and I understood that
 14 that would be fed back from the client or the design
 15 team once the draft had been submitted and they had had
 16 a chance to read it and absorb it.

17 Q. When you say, "I am not surprised that I had no
 18 comments", is that that you were not surprised when you
 19 came to write your witness statement in September 2018
 20 that you had no comments, or that you were not surprised
 21 at the time?

22 A. I would say I wasn't surprised at the time.

23 Q. Is that lack of surprise at the time because, as you say
 24 in your statement, of her experience in dealing with
 25 building control and working with --

75

1 A. Yes, and her experience of writing fire strategies.

2 Q. When you did your review, as you said you did, how much
 3 reliance did you place on Ms Cooney's capabilities and
 4 her background and experience, as opposed to a cold-eyed
 5 review of the report itself?

6 A. I don't know, really. I would have said it was a review
 7 of what was written.

8 Q. Did you go through her draft with a critical eye to
 9 check each line?

10 A. Yes, I read each line.

11 Q. Yes. Did you go through it with a critical eye?

12 A. Erm --

13 Q. Or did you rely to some extent, greater or lesser, on
 14 the fact that she was experienced and capable?

15 A. I would say both, really. I went through it with
 16 a critical eye, and also appreciated that Cate was
 17 competent.

18 Q. Looking back on it now, and in the light of Dr Lane's
 19 criticisms of the report, do you still think that it's
 20 fine?

21 A. There are areas that it could have been improved on, and
 22 that would never have been sent out as a formal issue of
 23 a report.

24 Q. Well, we will come to look at it in due course.
 25 Just as a general question, can you explain why you

76

1 signed it off as fine, given that there are areas that
 2 could have been improved on?
 3 A. They were areas that we needed more information on.
 4 Q. I see.
 5 Can we look at the Exova spreadsheet for fees,
 6 please, that is at {EXO00001353}. Now, I would like to
 7 show the native version of that, if I can, Mr Operator,
 8 so can we look at that at {EXO00001353} native.
 9 (Pause)
 10 Right. Now, if you can go to "Timesheets", or be
 11 shown "Timesheets", and then have the space bar on the
 12 bottom right of the document moved to the left so we can
 13 see the left-hand side, we can see together that we've
 14 got a job phase with dates or numbers, I should say,
 15 down the left-hand side, all for Grenfell Tower.
 16 If you go to line 49, we can see that, between
 17 lines 49 and 54, or perhaps more pertinently 49 and 52,
 18 we can see where Cate Cooney has marked hours, and we
 19 can see that she has put in hours on the 9th, the 10th,
 20 the 13th and the 15th, and six hours on the 15th for
 21 her. Do you see that?
 22 A. Mm-hm.
 23 Q. Then there are two more times for the fire strategy for
 24 existing condition in September, 7th and 11th. We don't
 25 see any entry for you or your work there in those

77

1 timesheets. Is that correct?
 2 A. Yes, I believe so.
 3 Q. So on the documents, is it right that no hours were
 4 assigned to you in the billing system for your review of
 5 Ms Cooney's draft?
 6 A. Yes.
 7 Q. Why is that?
 8 A. I probably put the time down for that day on the
 9 timesheet to a different job or to some other ...
 10 something else.
 11 Q. If you had done a thorough review of, if you remember
 12 now, two hours, is there any reason you wouldn't have
 13 billed it to this file?
 14 A. I probably didn't want to exceed the fee, because my
 15 time would have gone over the fee.
 16 Q. Does that tell us -- and tell me if this is wrong --
 17 that the time you spent on reviewing it was limited by
 18 the amount of available fee left in the quote, as
 19 opposed to what a proper review, in compliance with
 20 peer review procedures at Exova, demanded?
 21 A. No. No.
 22 Q. So given that what was billed on this for the fee as at
 23 that point, which was still under the total fee
 24 proposal -- I'm afraid it's disappeared from the screen
 25 temporarily, I wouldn't mind having it back, please.

78

1 Let's proceed without the document if we can, and if
 2 you need to look at it again, we can.
 3 Given that what was billed on this for the fee at
 4 the time, which was still under the total fee, why
 5 didn't you bill the hours that you spent reviewing this
 6 report to the fee?
 7 A. I don't know.
 8 Q. Why didn't you go back to Bruce Sounes or the TMO and
 9 say you needed more by way of a fee in order to do
 10 a proper job?
 11 A. I don't think that I didn't do a proper job, just
 12 because I didn't put time down to it. I could put time
 13 down to a different project.
 14 Q. Is the reality that you didn't post any times at all for
 15 this review because your review was so brief that
 16 honesty forbade it?
 17 A. No. No.
 18 Q. We know that you were busy. You and she were both going
 19 on holiday as of the evening of 16 August, and you
 20 weren't in the office on the 16th. Being quite blunt
 21 about it, Dr Barker, are you quite sure that you didn't
 22 just sign off this report without reading it properly?
 23 A. Yes, I'm quite sure.
 24 Q. Is the reason why you didn't bill any time to a review
 25 of Ms Cooney's draft because you hadn't really spent any

79

1 honestly billable time doing so?
 2 A. No, I disagree with that.
 3 Q. Okay.
 4 Your comment in your email, "Have reviewed it and it
 5 is fine", was it usual, in your experience at that time,
 6 to give so little feedback after a peer review of such
 7 a report?
 8 A. No, I usually gave more feedback than that. However,
 9 I can't remember whether I worked on a hard copy of the
 10 document or an electronic copy.
 11 Q. You would normally give more feedback than that is what
 12 you said. Can you explain why this feedback deviated
 13 from the norm?
 14 A. No. I can't remember.
 15 Q. Can I just go back with you, please, to Dr Pearson's
 16 witness statement, {EXO00001753/3}. We have read this
 17 before, this is paragraph --
 18 SIR MARTIN MOORE-BICK: We haven't got it yet, Mr Millett.
 19 A. It's not here.
 20 (Pause)
 21 Oh, there we are.
 22 MR MILLETT: Paragraph 3.9.
 23 Mr Chairman, I think we now have that.
 24 We looked at that before, Dr Barker.
 25 Did you run through each of the checks that

80

1 Dr Pearson says Exova normally does when peer reviewing
 2 a report when you reviewed Ms Cooney's draft?
 3 A. I believe I did.
 4 Q. Did you have any discussion or communication of any kind
 5 with Cate Cooney in the 24 hours between receiving her
 6 draft report and your telling her the next day that it
 7 was fine?
 8 A. I don't remember.
 9 Q. If you don't remember that, and you don't, I think, have
 10 a document to show that you went through each of the
 11 checks Dr Pearson describes in his statement there, what
 12 is the basis of your belief that you did go through
 13 Ms Cooney's draft making sure that it complied with each
 14 of the five elements of a proper peer review process?
 15 A. Because I did, I did read it, I went through it.
 16 Q. Yes.
 17 A. But it wouldn't necessarily have complied because it was
 18 an existing building. It hadn't been designed to
 19 Approved Document B. We were using Document B as
 20 a benchmark and showing what was provided in the
 21 building.
 22 Q. But the fact that it was a fire safety strategy report
 23 for an existing building wouldn't, would it, mean that
 24 the system of peer review of that report described by
 25 Dr Pearson there would be different, or wouldn't apply?

81

1 A. It would be slightly different, in that there weren't
 2 any, from memory, fire engineering analyses in terms of
 3 calculations in there, in Cate's report.
 4 Q. All right. But making allowances for the fact that this
 5 is an existing building, are you agreeing with what I'm
 6 suggesting to you, which is that, making allowances for
 7 that difference, nonetheless a process of peer reviewing
 8 this report would have to comply with these elements?
 9 A. Yes.
 10 Q. I'm going to ask you just one or two questions about
 11 version control.
 12 At the time, so August 2016, was Exova certified
 13 under ISO 9001?
 14 A. I don't believe they were. They were working towards
 15 it.
 16 Q. I see.
 17 Did Exova have a document procedure which was in
 18 line or working towards ISO 9001?
 19 A. In what way? I don't understand.
 20 Q. Well, did Exova have a document procedure, a document
 21 control procedure, as at the summer of 2012?
 22 A. Yes, I believe they did, yes.
 23 Q. Can we look at {EX000001224}, please. This is the
 24 project completion procedure internal to Exova, issued
 25 on 1 April 2010 and reviewed on 1 April 2012. Do you

82

1 see that?
 2 A. Yes.
 3 Q. Governing standards: ISO 9001:2008.
 4 Are you familiar with this document?
 5 A. No.
 6 Q. You're not familiar with it?
 7 A. No.
 8 Q. Is now the first time you have ever seen it?
 9 A. I may have seen it, but I don't remember it.
 10 Q. Right.
 11 Can you explain how it would be that a senior fire
 12 engineer such as yourself within Exova, responsible for
 13 producing reports or peer reviewing reports of those
 14 done under your instruction, would not be familiar with
 15 a project completion procedure?
 16 A. No. But like I say, I may have seen the document, but
 17 I can't remember. And the project wasn't complete.
 18 Q. We'll come to that. I'm just asking you to see if you
 19 can explain your lack of familiarity with this document.
 20 Leaving aside the document, were you aware in
 21 general terms of the fact that there was a document out
 22 there in Exova which had something to do with project
 23 completion?
 24 A. Yes, I think I was aware.
 25 Q. Let's see if you were aware of the principles.

83

1 Can we go to page 1 and look at section 4, "Closure
 2 of the project":
 3 "For many projects the exact point at which the
 4 consultancy work has been completed is not always
 5 immediately evident. The project manager should make
 6 careful note of the scope of services provided in the
 7 contract documentation. This would initially be the fee
 8 proposal which was provided and the details confirmed on
 9 the fee acceptance form."
 10 Do you see that?
 11 A. Yes.
 12 Q. Then it says:
 13 "Appendix A shows the flow chart.
 14 "To ensure that a high standard is maintained, the
 15 project manager is required to ..."
 16 Then there is a list of bullet points, the first of
 17 which is this, Dr Barker:
 18 "Check that all elements of the project to have been
 19 completed satisfactorily. This will entail a review of
 20 the scope of services set out in the fee proposal and a
 21 specific review of the documents stored on the
 22 electronic filing system to determine that the scope of
 23 services have been completed."
 24 Do you see that?
 25 A. Yes.

84

1 Q. Then it goes on to say, "Or", so this is an alternative :
 2 "Contact the client or client's representative to
 3 ensure that they are satisfied that the scope of
 4 services matched with their expectations. Any comments
 5 from the client should be stored on the electronic
 6 filing system in the correspondence folder."

7 Now, when you conducted your review of Ms Cooney's
 8 draft report, did you have this internal guidance in
 9 your mind?

10 A. No.

11 Q. Can you explain why that is?

12 A. Because the report that was sent out was a draft, and it
 13 was understood that elements needed to be discussed and
 14 clarified with the design team, so that then a formal
 15 version of the final report could be issued.

16 Q. I see.

17 A. So at that point the project wasn't complete.

18 Q. When you peer reviewed -- I see, okay.

19 What was the point of peer reviewing a draft that
 20 was incomplete, then?

21 A. Because the report outlined the basic principles of B1
 22 to B5. However, there were a number of clarifications
 23 and recommendations that Cate made that needed to be
 24 checked. So it was understood that that would happen at
 25 a later date, given that fairly regular design team

85

1 meetings were being held for the project, for the
 2 refurbishment as well.

3 Q. When you did your peer review, even though you say it
 4 was only a draft at that stage, did you undertake
 5 a review of the scope of services set out in the fee
 6 proposal?

7 A. Yes. Yes, I looked at the scope.

8 Q. At any point during your involvement in this -- I call
 9 it "project", but the production of the existing fire
 10 safety strategy, did you ever check that all the
 11 elements of the project had been completed
 12 satisfactorily?

13 A. Yes, I checked, but I knew that they hadn't all been
 14 completed satisfactorily.

15 Q. I see.

16 Did there ever come a point in your involvement
 17 where you were satisfied that they had been completed?

18 A. No.

19 Q. I see.

20 The version of the existing fire safety strategy
 21 that you reviewed was marked as a draft, wasn't it?

22 A. Yes.

23 Q. We don't need to look at it. If you want to, we can,
 24 and we will certainly be looking at it.

25 Did you ask or had you asked Ms Cooney specifically

86

1 to produce a draft?

2 A. Yes, that was quite common practice for projects. We
 3 would produce a draft, issue it, and then any comments
 4 that came back from the design team we would incorporate
 5 and update to an issue.

6 Q. If you look, please, at {EXO00000577}, this is an email
 7 from -- the second one down -- Cate Cooney to Jean Watt,
 8 copied to you, Dr Barker. It follows on from a string
 9 below it. So just after you had gone back to her and
 10 told her it was fine, she then sends it to Jean Watt for
 11 formatting and there is a bit of discussion about that.
 12 Then in the second email down on that page, page 1,
 13 Cate Cooney says to Ms Watt:

14 "Jean,

15 "It is a draft at this stage anyway, but yes
 16 tomorrow morning is fine."

17 Can you explain what stage in the process Ms Cooney
 18 is referring to when she says "It is a draft at this
 19 stage"?

20 A. I think she's meaning more that at this point in time
 21 it's a draft.

22 Q. So not a formal stage in the production process?

23 A. No, no.

24 Q. I see.

25 Do you remember whether this document was intended

87

1 to be sent to Studio E as a draft for its review?

2 A. Yes, it was meant to be sent to the design team.

3 I believe it was sent to Bruce at Studio E.

4 Q. I see.

5 When did you think it would cease to be a draft and
 6 become the final document?

7 A. I don't know. I assumed after seeing an email that --
 8 or an email exchange between Terry and Bruce that it
 9 would be discussed at the next design team meeting.

10 Q. Who would decide that it was a final report?

11 A. From my point of view, because when Terry came back we
 12 had a discussion and the project essentially was handed
 13 back to London, it would be Terry.

14 Q. I see. Would there be a peer review done at that stage?

15 A. Yes.

16 Q. So there would be a final -- is this right? --
 17 peer review?

18 A. Yes.

19 Q. Who was going to conduct that final peer review, do you
 20 remember?

21 A. I don't know.

22 Q. Were you involved in the discussion as to what would
 23 happen to this draft --

24 A. No.

25 Q. -- at that stage?

88

1 Now, Cate Cooney told us that to prepare this kind
 2 of strategy to completion, it would take a number
 3 of weeks, she said solidly for a good number of weeks,
 4 if it was to meet all the requirements. Do you agree
 5 with that?
 6 A. Yes.
 7 Q. She also said that this draft was the start of the
 8 process. Do you agree with that?
 9 A. Yes.
 10 Q. Given that this was only a first draft at the start of
 11 a much lengthier process -- or certainly lengthier, if
 12 not much lengthier -- can you explain why £2,111-odd out
 13 of the £2,865 lump sum fixed fee for this was invoiced
 14 for this draft, some 73% of the fee?
 15 A. No, I can't explain.
 16 Q. Would that be unusual?
 17 A. No. It was quite usual to invoice on a project for the
 18 time that you had spent on it.
 19 Q. I understand that it might be usual to invoice for the
 20 time you had spent. Would it be unusual to have eaten
 21 up so much of the fixed fee, 73%, in producing what was
 22 only a first draft?
 23 A. No, it was usual, that did happen.
 24 Q. So would it be fair to say that the norm is that some
 25 three-quarters of the fee would be used in producing the

89

1 first draft and its peer review?
 2 A. It's difficult to say, because it's -- it can vary so
 3 much from project to project.
 4 Q. I see.
 5 For this particular draft existing fire safety
 6 strategy, what work would be needed -- we touched on
 7 this before a little bit -- what exactly would be needed
 8 by way of further work on Exova's part to be carried out
 9 to make it a final report to go to the client for its
 10 file?
 11 A. I think the recommendations that Cate had listed needed
 12 to be looked at. Those were the main ... the main
 13 points.
 14 Q. Right.
 15 As part of your client care process, would you have
 16 followed up with the client to ensure that a final
 17 version was sent to the client?
 18 A. I probably wouldn't have done, once the project had been
 19 handed back to London.
 20 Q. I see.
 21 Okay, well, let's move on, then, in time.
 22 Well, perhaps I should ask you this question, before
 23 we do: did you ever yourself consider checking that
 24 a final version was sent to the client?
 25 A. No, I didn't.

90

1 Q. Was it unusual for a draft never to be finalised?
 2 A. I would say fairly unusual. However, projects do vary
 3 in length, and quite often there can be a pause in
 4 between certain stages of the project.
 5 Q. Let's look at {SEA00000068}, please. This is an email
 6 sent by Bruce Sounes to Terry Ashton on 30 August 2012,
 7 copied to you and indeed Paul Dunkerton at the TMO. Do
 8 you see that?
 9 A. Yes.
 10 Q. He says:
 11 "Terry,
 12 "We have a meeting planned for the afternoon of the
 13 6th, which is the date Cate returned (bounce back
 14 below)."
 15 Then in the second paragraph he says:
 16 "We need to go through the fire strategy (existing -
 17 Draft) received 16/08 which has numerous
 18 recommendations, some of which may be unrealistic for an
 19 interim strategy. It is probably also a good time to
 20 make contact with the local fire officer to discuss the
 21 project."
 22 Now, you received this document by way of copy. Do
 23 you know if Mr Ashton or you or indeed anybody else at
 24 Exova went through the draft existing fire safety
 25 strategy at that point, as Mr Sounes said needed to be

91

1 done?
 2 A. I don't know whether they did or whether that email from
 3 Bruce, his intention is to go through it at the meeting.
 4 Q. Did you react to this email in any way by going back to
 5 Mr Sounes and asking him what needed to be done or gone
 6 through or offering a meeting?
 7 A. I didn't speak to Bruce. I do remember having
 8 a telephone conversation with Terry to tell him what we
 9 had done on the project, and then I forwarded him the
 10 existing fire strategy draft.
 11 Q. Yes, let's look at that document, {EX000001607}, please.
 12 You can see the second email down on that first page of
 13 that string there, the email we've looked at just
 14 a minute ago, and then above it we see the email from
 15 Terry Ashton to you on Monday, 3 September:
 16 "Clare
 17 "Can you please ring me regarding this."
 18 Just first of all, I think we discussed earlier
 19 Mr Ashton coming back from illness.
 20 A. Yes.
 21 Q. When did he first start becoming involved in the
 22 existing fire safety strategy, do you remember?
 23 A. I don't remember.
 24 Q. Was he well involved by this point, late August/early
 25 September 2012?

92

1 A. I think so. He had returned to work on 6 August, so
 2 that's just under a month of being back, where I think
 3 he had been working on the refurbishment side.
 4 Q. Just scrolling back in time, then, a little bit, given
 5 that he had come back to work from illness on 6 August,
 6 did you have any discussions or contact with him between
 7 his coming back to work on that date and the production
 8 of the draft existing fire safety strategy on 16 August?
 9 A. I don't think I did.
 10 Q. Right.
 11 Do you remember any discussions with him between
 12 16 August and 3 September on that subject, bearing in
 13 mind, of course, that you had gone on holiday on
 14 17 August?
 15 A. No, I didn't communicate with him then.
 16 Q. All right. Let's look at this email, then.
 17 He says, "please ring me regarding this". Did you?
 18 Did you call him, having received that email?
 19 A. Yes, I telephoned Terry.
 20 Q. What was discussed, do you remember?
 21 A. Well, as I've just said, I told him about the project,
 22 told him about the existing fire strategy draft that had
 23 been produced and sent to the design team, and then
 24 I forwarded him on the strategy. I can't remember what
 25 else was discussed.

93

1 Q. Can we look, please, at {EXO00000413}. This is an email
 2 later the same day, 3 September, from you to
 3 Terry Ashton, and there is an attachment, "Draft 01 -
 4 Grenfell Tower Existing FSS using existing
 5 drawings.doc", and you say, "Here it is, cheers, Clare."
 6 Did he ask you to send that document to him?
 7 A. Yes.
 8 Q. Do you know or do you remember why he wanted to see it?
 9 A. Well, I'm assuming that he wanted to read it and digest
 10 it before he went to the meeting.
 11 Q. Was Mr Ashton at this point, to your understanding,
 12 taking responsibility for this part of the project?
 13 A. I believe he was, because he asked me in an email if
 14 I was the project manager on it, and I told him: no, it
 15 was now going to be a London project.
 16 Q. You told him it was now going to be a London project.
 17 What else did you tell him about who was going to take
 18 responsibility for the draft existing fire safety
 19 strategy from that point onwards?
 20 A. I don't remember discussing that specifically with him.
 21 Q. Was there any discussion to the effect that it was he
 22 who was going henceforth to take forward to completion
 23 the existing fire safety strategy?
 24 A. There may have been during our telephone conversation,
 25 but I can't remember.

94

1 Q. Do you know who was responsible from that date for
 2 ensuring that the existing fire safety strategy was
 3 completed and not simply left as a draft?
 4 A. No, I don't know.
 5 Q. Can we go, please, to your witness statement,
 6 {EXO00001603/4}, and look at paragraph 3.16. You say
 7 there:
 8 "I had no more involvement with the Existing FSR or
 9 with the Grenfell Tower refurbishment except for an
 10 email received on 3 September 2012 ... from
 11 Mr Ashton ..."
 12 Which we will come to look at in a minute.
 13 Did you ever enquire with him or with anybody else
 14 as to whether the draft from Ms Cooney that you had
 15 signed off as fine on 16 August had been finalised?
 16 A. No, I didn't.
 17 Q. If we look, while we're on the same page in your
 18 statement, at paragraph 3.17, you say in the last
 19 sentence:
 20 "... I am not aware of any changes being made to the
 21 Existing FSR following that conversation, or any further
 22 versions being requested."
 23 I think that conversation is the one that you
 24 referred to in the previous paragraph.
 25 A. Yes.

95

1 Q. 3 September.
 2 Now, we know that Mr Ashton produced his initial
 3 design note on 12 September 2012 using the draft
 4 existing fire safety strategy.
 5 To your understanding and recollection, Dr Barker,
 6 does that tell us that Mr Ashton produced that document
 7 simply using the draft as it stood?
 8 A. I don't know.
 9 Q. Can I ask you to look, please, at {ART00000404}. This
 10 is a project meeting held on Thursday, 6 September 2012
 11 at 2 o'clock in the afternoon at Appleyards. Now,
 12 you're not present there. Mr Ashton from Exova is,
 13 along with Mr Soules and others from Studio E, and
 14 others from the TMO. Do you see that?
 15 A. Yes.
 16 Q. If you go, please, to page 2 {ART00000404/2} under
 17 "Fire", it says this:
 18 "Exova need to understand the existing situation and
 19 whether LFB do test the Exova system twice a year, and
 20 what was behind the proposed upgrade works to the smoke
 21 exhaust/fire. The statutory position on the design
 22 needs to be established as it is not possible for
 23 Building Control to insist on enhancements.
 24 "Draft fire strategy needs detail interrogation and
 25 a meeting was arranged with SE [Studio E] early

96

1 next week to review."
 2 Did Mr Ashton discuss with you the need for detailed
 3 interrogation of the draft?
 4 A. No.
 5 Q. Did Mr Ashton come back to you after this meeting, do
 6 you remember, in order to take forward the process of
 7 a detailed interrogation?
 8 A. No.
 9 Q. Was there, in your mind, a moment when you were clear
 10 that your involvement in the production of the existing
 11 fire safety strategy had stopped?
 12 A. Yes, I would consider it to be when I had the telephone
 13 conversation with Terry, and I believe there is an email
 14 where he had asked if we were running the project, and
 15 I did state that: no, the project needed to continue
 16 from the London office.
 17 Q. So in your mind -- okay.
 18 Do you remember ever having any kind of handover
 19 from yourself to Mr Ashton about the existing fire
 20 safety strategy?
 21 A. Other than the telephone conversation between myself and
 22 Terry, no.
 23 Q. No, and that conversation was the one we had discussed
 24 earlier, 3 September?
 25 A. Yes, and then I had sent him the existing fire strategy

97

1 draft report.
 2 Q. After that conversation?
 3 A. Yes.
 4 Q. So are we to take it from that that you never handed
 5 over the report to him, took him through it, showed him
 6 where the gaps were and what further information was
 7 needed and then said to Terry Ashton, "Over to you"?
 8 A. No.
 9 Q. Right. I would like now to -- sorry, before I do that,
 10 one or two more questions.
 11 Who was responsible for invoicing the first draft?
 12 Because we know an invoice went for the first draft. Do
 13 you know why that was?
 14 A. It was usually the admin team that set up the invoicing
 15 for the month, so based on what's on the timesheets,
 16 would be invoiced. It wasn't done by each individual
 17 fire engineer.
 18 Q. I see.
 19 Did you have any direct contact with the billing
 20 department to tell them to send out an invoice when the
 21 first draft was completed?
 22 A. No.
 23 Q. Do you know why Exova invoiced for it when, according to
 24 Cate Cooney, so much more was left to do?
 25 A. No, I don't know why.

98

1 Q. Right.
 2 I would now like to turn to a different topic, which
 3 is to look at the existing fire safety strategy itself.
 4 As a reminder to you, Dr Barker, you said you had
 5 reviewed it and you had said no more about it other than
 6 that it was fine.
 7 It's at {CST00003114}, if we can just look at that.
 8 There it is, watermarked "Draft", so it's quite clear
 9 that it's a draft, and it was a report to Kensington and
 10 Chelsea TMO, although it was, I think, sent to Studio E.
 11 In your mind, were you clear that both you and
 12 Ms Cooney knew that your client was the TMO?
 13 A. I don't remember.
 14 Q. Okay.
 15 I'm going to dot around, I'm afraid, between this
 16 document and the fee proposal.
 17 If we look back at the fee proposal, {TMO10037721}.
 18 We looked at this earlier on, I just want to remind you
 19 of what it says. On page 2 {TMO10037721/2}, if we can
 20 go there, please, under "Proposed Scope of Work" -- we
 21 looked at this before -- it says that the design of the
 22 building will be assessed against the relevant design
 23 codes, and then they're referred to. Do you see that?
 24 My question is: when you look at the existing fire
 25 safety strategy, the draft, we don't find any assessment

99

1 of or in fact any mention of the requirements of the
 2 Regulatory Reform (Fire Safety) Order 2005 or section 20
 3 of the London Building Acts (Amendment) Act 1939. Do
 4 you know why that is?
 5 A. Because the building was being assessed under the
 6 relevant design code, so it was being assessed to the
 7 guidance in Approved Document B.
 8 Q. Yes, the proposed scope of work, though, actually says
 9 the relevant design codes relating to the statutory
 10 requirements on the design of the building under the
 11 Regulatory Reform (Fire Safety) Order 2005 and the
 12 London Building Acts.
 13 Correct me if I'm wrong, Dr Barker, but Approved
 14 Document B is not a document which is produced or
 15 generated under the authority of the Regulatory Reform
 16 (Fire Safety) Order 2005, is it?
 17 A. No.
 18 Q. So given that the relevant design codes relate to the
 19 statutory requirements on the design of the building
 20 under those two statutes, the RRO and the London
 21 Building Acts as amended, why were those not referred to
 22 in the draft as opposed to ADB?
 23 A. The RRO -- the requirements for the RRO is that the
 24 responsible person should carry out a suitable and
 25 sufficient risk assessment, and then the section 20

100

1 requirements apply, and there are requirements to do
 2 with firefighting access that apply.
 3 However, the design of the building was assessed
 4 under the relevant design code. So you assess
 5 a building under -- using a design code, and then once
 6 the building is assessed, that then informs the person
 7 carrying out the risk assessment so that they can fulfil
 8 their requirements under the RRO, and the risk
 9 assessment in the residential buildings covers the
 10 common areas, it doesn't cover the flats themselves.
 11 Q. I can understand, Dr Barker, that Approved Document B
 12 would be relevant. What I'm trying to get to the bottom
 13 of is why there is no assessment of or even any mention
 14 of the requirements of the RRO or the London Building
 15 Acts in the report.
 16 (Pause)
 17 A. I don't know.
 18 SIR MARTIN MOORE-BICK: Can you help me with this,
 19 Dr Barker: what are the relevant design codes under the
 20 RRO?
 21 A. Well, a relevant design code will be a piece of guidance
 22 that you use to show that your building meets the
 23 functional requirements for the building design. So the
 24 codes will be the design codes, for example, Approved
 25 Document B, or if you were designing a hospital, HTM,

101

1 the health technical memorandum.
 2 SIR MARTIN MOORE-BICK: You have just told Mr Millett --
 3 sorry to interrupt you -- that they're not issued under
 4 the RRO.
 5 A. No. The ... there's two sides to it, really. You have
 6 got -- the design of the building has to meet the
 7 functional requirements of the Building Regulations, and
 8 you can use Approved Document B to assess that as one of
 9 your design codes. Then under the RRO, that is putting
 10 in place measures to ensure that what fire safety
 11 measures you have got in your building are maintained.
 12 So you need the fire strategy first, so that you know
 13 what those measures are, and then the person who is
 14 carrying out the risk assessment can assess the building
 15 and see that those measures are in place.
 16 SIR MARTIN MOORE-BICK: All right, thank you.
 17 I'm sorry to interrupt you, Mr Millett.
 18 MR MILLETT: Mr Chairman, that's helpful.
 19 So coming back to my question for the last time on
 20 this, although the proposed scope of work specifically
 21 identified that the design of the building would be
 22 assessed against the relevant design codes relating to
 23 the statutory requirements on the design of the building
 24 under the RRO and the LBA, my question is: why was there
 25 no assessment or even a mention of those requirements in

102

1 the report?
 2 A. I don't know.
 3 Q. Okay.
 4 What work would you have expected to be carried out
 5 to assess the design of the building against the
 6 relevant design codes relating to the statutory
 7 requirements on design of the building under the RRO?
 8 A. It would have been an assessment of the existing
 9 building layouts.
 10 Q. With a view to advising on or ensuring that those
 11 building layouts complied with the RRO? I made that as
 12 a statement; that's a question.
 13 A. It was a way of looking at the building to see: do the
 14 travel distances meet with the current requirements and
 15 other safety provisions, because the building was going
 16 to be refurbished. So I think it was a benchmark to
 17 see: where is the building now in terms of compliance,
 18 because then following the building work, it was
 19 important to ensure that if the building didn't comply,
 20 it was made no worse following the building work.
 21 Q. Now, can I take you to a part of the report, the
 22 existing fire safety strategy, partly by way of
 23 correction of a question but partly to take the point
 24 forward a little bit. If you look, please, at
 25 {TMO10001925/8}, we do in fact see a reference to the

103

1 RRO in there.
 2 If we go to page 8, paragraph 3.2.5, under "Common
 3 Areas", do you see at the bottom? I think I may have
 4 put to you that there is no reference at all to the RRO.
 5 In fact there is, there is one, and it's under "Common
 6 Areas". You see there that you're talking about
 7 an audible fire alarm not required to common areas of
 8 residential buildings, et cetera. Then you can see
 9 what's said there. Then:
 10 "Control of this [which is corridors and stairways]
 11 is a duty of the management under the Regulatory Reform
 12 (Fire Safety) Order 2005."
 13 So it looks from that that Ms Cooney had in mind the
 14 need to examine or report on the duty of management
 15 under the Regulatory Reform Order so far as common areas
 16 are concerned, but the RRO isn't mentioned anywhere else
 17 in the report.
 18 My question is: did you, when you did your review,
 19 note that, but for that one reference, the RRO had not
 20 been referred to anywhere, notwithstanding the reference
 21 in the scope of services in the fee proposal?
 22 A. No.
 23 Q. Did it concern you at the time that there was no
 24 mention, apart from in that one instance, of the RRO?
 25 A. No, because the report was more concerned with the

104

1 building design and compliance with the functional
2 requirements of the Building Regulations.
3 Q. Yes, and you know, because it said it in the fee
4 proposal, that part of it was in order to inform the
5 management plan?
6 A. Yes.
7 Q. Were you at the time aware of the duties imposed on the
8 responsible person by the RRO?
9 A. Yes.
10 Q. Did you think at the time that it would be important for
11 your client, the TMO, to understand fully whether the
12 building allowed it to comply with the requirements on
13 it as the responsible person under the RRO?
14 A. I'm sorry, can you rephrase the question, please?
15 Q. Yes. Let me try it a different way.
16 Did you think it was important for your client, the
17 TMO, to understand whether it was compliant or not
18 compliant with its obligations under the RRO at the
19 time?
20 (Pause)
21 A. I don't know.
22 Q. You don't know?
23 A. Mm-hm.
24 Q. You say you don't know or --
25 A. I can't remember.

105

1 Q. You can't remember.
2 Were you familiar at the time with Article 13 of the
3 RRO, which relates to the obligation on the responsible
4 person to ensure that the premises are equipped with
5 appropriate firefighting equipment, fire detectors and
6 alarms?
7 A. Yes.
8 Q. Did you notice, when you did your review of Ms Cooney's
9 work, that there was no analysis of the extent to which
10 the existing building complied with that article?
11 A. I do think that the strategy does refer to means of
12 warning within the building.
13 Q. Did you have it in your mind that that was something
14 that you should be looking out for?
15 A. Yes.
16 MR MILLETT: Mr Chairman, I'm afraid I'm in the middle of
17 this and I note the time, but it's probably a convenient
18 moment.
19 SIR MARTIN MOORE-BICK: Yes, because if you continue it will
20 take you, what, 10 or 15 minutes?
21 MR MILLETT: We are on a series of things.
22 I should just tell you, Dr Barker, so you know where
23 we are, and also the panel, that we are now going to
24 examine a number of aspects of this report which will
25 take up the bulk of the rest of your examination, and

106

1 there is no easy way of calling a halt to that. But
2 we're going to turn to a different part of the same
3 document, so it would be convenient.
4 SIR MARTIN MOORE-BICK: We'll stop there.
5 Again, help us if you can, Mr Millett. We can
6 afford to take an hour for lunch, can we?
7 MR MILLETT: We can, yes.
8 SIR MARTIN MOORE-BICK: Dr Barker, we're going to break now
9 so we can all get some lunch. We will come back at
10 2 o'clock, please. Please don't talk to anyone about
11 your evidence while you're out of the room, all right?
12 Thank you very much. Go with the usher.
13 (Pause)
14 On course to finish today?
15 MR MILLETT: Yes.
16 SIR MARTIN MOORE-BICK: Very good. Thank you very much.
17 2 o'clock, please. Thank you.
18 (1.00 pm)
19 (A short break)
20 (2.00 pm)
21 SIR MARTIN MOORE-BICK: All right, ready to carry on?
22 THE WITNESS: Yes.
23 SIR MARTIN MOORE-BICK: Thank you very much.
24 Yes, Mr Millett.
25 MR MILLETT: Dr Barker, thank you for coming back to us.

107

1 I just want to ask a follow-up question, if I can.
2 You said this morning, in the course of examination,
3 that when you signed off Ms Cooney's report as fine,
4 there were areas you needed more information on.
5 If there were areas on which more information was
6 needed, why didn't you raise those areas with Ms Cooney
7 as part of your review?
8 A. There wasn't time, really, until the report was due to
9 be sent out. So I considered -- well, I don't actually
10 remember whether I did raise anything with Cate.
11 I can't remember. However, we thought it was better to
12 send the report out and then the design team had
13 an understanding of the things that needed to be
14 clarified, and then they could be discussed at a later
15 date.
16 Q. Had you had more time, would you have raised those areas
17 with Ms Cooney as part of your review and got to the
18 bottom of them before the report was sent out?
19 A. Yes, I think we would have tried to obtain more
20 information and get to the bottom of it, yes.
21 Q. So was this something of a missed opportunity, do you
22 think?
23 A. With hindsight, yes.
24 Q. Thank you.
25 Can we go back to where we were, then, when we broke

108

1 at the lunch break, which was looking at the draft
 2 report itself .
 3 Can I ask you to look at it . It's at
 4 {TMO10001925/15}. I would like you to look with me,
 5 please, at paragraph 7.1, and this is under the heading
 6 "Requirement B5 - Access and Facilities for the
 7 Fire Service". Do you see that?
 8 A. Yes.
 9 Q. Under 7.1, "Provision of Fire Mains", it says that:
 10 "The height of the building means that a fire
 11 fighting shafts(sic) is required for the residential
 12 floors and one is provided (as stated in the current
 13 fire risk assessment). There should be a dry rising
 14 main within the fire fighting shaft and the outlets from
 15 fire mains should be sited within the fire fighting
 16 stair . The main is located in the lobby approach. This
 17 is an existing condition."
 18 Now, she says there "as stated in the current fire
 19 risk assessment".
 20 When you did your review, did you notice the
 21 reference in here to the current fire risk assessment?
 22 A. Yes.
 23 Q. You did? Did you read it? Did you read the current
 24 fire risk assessment?
 25 A. I did read the fire risk assessment, yes.

109

1 Q. It's quite a long document, but you got that into your
 2 two hours, did you?
 3 A. Yes, I did read it .
 4 Q. Right.
 5 Now, we don't need to look at it necessarily, but
 6 we've looked at the fire risk assessment and we can't
 7 see anywhere where it mentions that Grenfell Tower was
 8 provided with a firefighting shaft .
 9 Now, I don't know whether that's something you have
 10 had a chance to consider yourself, but on the footing
 11 that I'm right about that, can you explain why Ms Cooney
 12 thought, under your review, that the current fire risk
 13 assessment did say that a firefighting shaft was
 14 provided for the residential floors in this building?
 15 A. I think it's probably a reference to the two-hour fire
 16 resistance around the stair, and the ventilation
 17 provided at --
 18 Q. Right.
 19 A. -- the head of the stair .
 20 Q. Well, let me ask you in a different way: did you
 21 yourself verify whether or not the fire risk assessment
 22 did say that there was a firefighting shaft?
 23 A. I don't remember.
 24 Q. Right.
 25 Did you verify any of the assumptions or statements

110

1 made by Mr Stokes in his fire risk assessment?
 2 I haven't shown it to you, because I'm assuming you're
 3 familiar with it, but if you're not I can show it to
 4 you. But as a general --
 5 A. I don't remember.
 6 Q. Right. You don't remember. Well, let me ask it this
 7 way: if you hadn't verified the assumptions in his fire
 8 risk assessment, how would you satisfy yourself that
 9 Ms Cooney's draft report was accurate?
 10 (Pause)
 11 A. I don't know.
 12 Q. Let me be slightly clearer in my question.
 13 How would you satisfy yourself that Ms Cooney's
 14 report about the assumptions and statements made by him
 15 was accurate?
 16 A. I would have gone to the fire risk assessment to look at
 17 it .
 18 Q. Do you know or remember whether James Lee attempted to
 19 identify a firefighting shaft on his site visit?
 20 A. I'm not aware that he did, I'm only aware that he took
 21 some photographs.
 22 Q. Do you recall thinking that the TMO should be advised
 23 that they should confirm whether there was or wasn't
 24 a firefighting shaft for the residential floors?
 25 A. No.

111

1 Q. Why not?
 2 (Pause)
 3 A. Because when the building was designed, it wouldn't
 4 necessarily have had to have a firefighting shaft. That
 5 was my understanding. It had to have two hours' fire
 6 resistance and it needed the rising main.
 7 Q. Ms Cooney says at 7.1 that the height of the building
 8 means -- she says it -- that a firefighting shaft is
 9 required for the residential floors .
 10 A. It did --
 11 Q. Was she right about that or was she wrong about that?
 12 A. Yes, under the current guidance.
 13 Q. Yes, and given that that is correct, why didn't you
 14 verify, whether by looking at the FRA or Mr Lee's work,
 15 whether one was provided?
 16 A. I did look at the fire risk assessment and I thought it
 17 stated that there was a firefighting shaft in there.
 18 Q. How long did you spend actually looking at the fire risk
 19 assessment, Dr Barker?
 20 A. I don't remember. I don't remember.
 21 Q. We're going to come back to it in due course this
 22 afternoon. Let me just move on.
 23 Could you back, please, to page 5 {TMO10001925/5} of
 24 the same document. We looked at this earlier under
 25 section 1, "Introduction", and in the fourth paragraph

112

1 it says:
 2 "It is expected and therefore assumed that the
 3 existing building has been built to the prevailing
 4 standards of the day, thought originally to be the
 5 Building Regulations 1965, which did little more than
 6 require the structure of the building to have fire
 7 resistance (the design of the building predates the
 8 guidance of the 1971 Code of Practice CP3). The London
 9 Building Acts Amendments Act 1939 however required
 10 features to be included in the building which are very
 11 comparable with today's standards in terms of fire
 12 fighter access. The date of later developments is
 13 unknown."
 14 Now, we looked earlier at the London Building Acts
 15 amendments being relevant. This is a specific reference
 16 to them here.
 17 Were you familiar with section 20 of the London
 18 Building Acts (Amendment) Act 1939 at the time?
 19 A. Yes, I had seen the Act.
 20 Q. You had --
 21 A. Yes.
 22 Q. -- seen the Act. Were you familiar with section 20?
 23 A. Yes.
 24 Q. So you were familiar with the fact that it required
 25 buildings of more than 100 feet -- that's 30 metres --

113

1 or buildings over 80 feet if the area of the building
 2 exceeds 10,000 square feet, 25 metres high if that area
 3 exceeds 930 square metres; you were familiar with that,
 4 were you?
 5 A. Yes.
 6 Q. Did you know at the time how tall Grenfell Tower was?
 7 A. No, but I could have made an assumption from -- based on
 8 the number of storeys or looked on the sections to see
 9 how high it was.
 10 Q. Did you make an assumption?
 11 A. I can't remember.
 12 Q. Right.
 13 Did you know at the time that Grenfell Tower was
 14 67.3 metres tall? That's 220 feet and 10 inches.
 15 A. Okay.
 16 Q. Did you know that?
 17 A. Yes, I think I would have known that.
 18 Q. So would you have known, therefore, that section 20 of
 19 the London Building Acts (Amendment) Act 1939 applied to
 20 this building?
 21 A. Yes.
 22 Q. Did you know what the relevant design codes were
 23 relating to the statutory requirements under section 20?
 24 A. It was provisions for the fire service, access to the
 25 building.

114

1 Q. Right, and where were those contained? What code had
 2 those in them?
 3 A. That's in B5 of Approved Document B.
 4 Q. Right.
 5 Given that, according to the scope of work we looked
 6 at earlier -- and we can look at it again if you like --
 7 the design of the building was to be assessed against
 8 the relevant design codes relating to the statutory
 9 requirements on design of the building under section 20
 10 of the LBA 1939, my question is: did you think at the
 11 time that it was sufficient for Ms Cooney to assume and
 12 expect, as she says here in this fourth paragraph under
 13 the introduction, that the building was built to the
 14 prevailing standards of the day?
 15 A. Yes.
 16 Q. Why was it sufficient for her to assume and expect that?
 17 A. Well, I wouldn't have thought it would have been allowed
 18 to be built if it didn't meet those standards of the
 19 day.
 20 Q. Did it occur to you to question that assumption and
 21 expectation?
 22 A. Not at the time, no.
 23 Q. Well, why is that?
 24 A. Well, as I said, I wouldn't have thought that the
 25 building would have been built had it not had the

115

1 relevant approvals under the guidance at the time.
 2 Q. What about later developments? Was it sufficient for
 3 Ms Cooney to assume and expect that the building was
 4 developed later in accordance with prevailing standards
 5 of those later days?
 6 A. Yes, I would have assumed that it had been done, if any
 7 further developments had taken place.
 8 Q. Was it not part of Exova's job in providing a complete
 9 existing fire safety strategy to examine the correctness
 10 or otherwise of these assumptions and expectations?
 11 A. Not necessarily, because we were just looking at the
 12 design of the building and comparing it to what the
 13 current standards would be, initially.
 14 Q. If you were preparing an existing fire safety strategy
 15 for an existing building, in circumstances where one had
 16 never been done before in the full just under 40 years
 17 of its existence, would you not think to check the
 18 building to make sure that, as a starting point, the
 19 building was compliant with relevant building standards
 20 so far as they related to fire safety?
 21 A. Yes.
 22 Q. So why didn't you?
 23 A. I don't know.
 24 Q. Can we then turn back to the scope of work on page 2
 25 {TMO10037721/2}. Thank you very much.

116

1 Now, on page 2 here, under "Proposed Scope of Work"
 2 it says:
 3 "The scope of work for the project would therefore
 4 include
 5 •" a site visit ..."
 6 Do you see that?
 7 A. Mm-hm.
 8 Q. "... (expected to take no longer than half a day) to
 9 survey the building's architecture and fire safety
 10 systems."
 11 Do you see that?
 12 A. Yes.
 13 Q. Before James Lee left Exova, did you have a conversation
 14 with him in which you asked him for his notes on the
 15 site survey, or did this all happen after he left?
 16 A. No, I didn't have a conversation with James, because my
 17 involvement with Grenfell only began after he had left.
 18 Q. So at the point you took over responsibility, which was
 19 after he left, as I think we established this morning,
 20 did you know -- well, let me ask you: did you think that
 21 a site survey would be required?
 22 A. Yes.
 23 Q. When would that be carried out?
 24 A. I don't know, because I think after that I then found
 25 out that he had been to site.

117

1 Are you meaning somebody from the Warrington office
 2 to do a site survey?
 3 Q. Let's look at it this way: you get the proposed scope of
 4 work within the fee proposal around about 24 July, and
 5 then you go to a meeting on 26 July, and you can see
 6 from the document that part of the scope of the work
 7 would include a site visit.
 8 Did it occur to you at the time that a site visit
 9 was going to be needed in order for the report to be
 10 produced?
 11 A. Yes.
 12 Q. Right, and when was that site visit to take place?
 13 A. No, I don't mean that I was going to do a site visit.
 14 I mean that I saw a copy of the fee proposal --
 15 Q. Yes.
 16 A. -- and saw that a site visit was required, and I think
 17 I found out that one had already taken place.
 18 Q. Are you referring to the site visit that James Lee did
 19 at the end of May?
 20 A. Yes.
 21 Q. Did you know that he had done it at the end of May?
 22 A. I didn't know the precise date of it, I just knew that
 23 he had carried out a site visit before he left.
 24 Q. I see. Did you know that he had done it prior to the
 25 fee proposal even being drafted by him?

118

1 A. No, I didn't know that.
 2 Q. Did you ask yourself why, if he had already done a site
 3 visit, he would be providing for a site visit to be
 4 conducted?
 5 A. No, I didn't ask myself that.
 6 Q. Did you make any investigations at all when you took
 7 this project over on 24 July to find out whether the
 8 site visit referred to in the fee proposal had already
 9 been done or whether it remained outstanding?
 10 A. No, I didn't take any steps to find that out, I just
 11 assumed that the site visit that he had carried out was
 12 in relation to the existing building fire strategy.
 13 Q. Did you ask yourself why the site visit that he had
 14 carried out was the one referred to in the fee proposal,
 15 given that the fee proposal postdated it by some weeks?
 16 A. No, I didn't.
 17 Q. Given that you didn't have, as you have told us earlier,
 18 a note of his site visit or a report or any conversation
 19 with him before he left about a site visit, can you
 20 explain why you didn't commission or perform yourself
 21 another site visit in order to be able to produce at
 22 least a draft existing fire safety strategy?
 23 A. We looked at the photographs that he had taken, but to
 24 be honest, I didn't have the time to do a site visit.
 25 Q. Did you and Ms Cooney discuss together whether the draft

119

1 that she had produced would be improved by a site visit?
 2 A. No.
 3 Q. Did you at any stage tell Mr Sounes or the TMO that in
 4 order to finish this document off and produce a final
 5 version, a site visit was going to be needed?
 6 A. No.
 7 Q. Why is that?
 8 A. I don't know.
 9 Q. The scope of work also says, halfway down page 2 -- and
 10 it is just about halfway down page 2 -- it says:
 11 "In developing the report, we would use our expert
 12 knowledge of fire safety design codes. The report for
 13 the building will consider the following items ..."
 14 Then it says means of escape and fire safety
 15 systems.
 16 Just focusing on fire safety systems, Dr Barker, do
 17 you know or did you ask what investigations Mr Lee had
 18 carried out in order to assess the fire safety systems?
 19 A. No. But I couldn't, because he had left.
 20 Q. Correct. So does that tell us that an investigation
 21 into the assessment of the fire safety systems in the
 22 building was yet to be done?
 23 A. There were fire safety systems mentioned in the fire
 24 risk assessment.
 25 Q. So this was a paper exercise based on Carl Stokes' 2010

120

1 report?

2 A. Yes, in some respects, yes.

3 Q. I see. So how would you know whether the fire safety

4 systems were the same or in the same condition in

5 August 2012 as they had been reviewed by Mr Stokes in

6 December 2010?

7 A. I wouldn't know. I would just take the information from

8 the fire risk assessment.

9 Q. That's 18 months during which things about fire safety

10 systems in the building could have changed, at least in

11 terms of their maintenance, which was unchecked. Is

12 that satisfactory?

13 A. Usually the fire risk assessment is updated

14 periodically, or it's updated if there are significant

15 changes within the building, so we assumed that the

16 current fire risk assessment stood.

17 Q. Was that a safe assumption to make, given that it was

18 not, by August 2012, a particularly recent document?

19 (Pause)

20 A. I don't know. Possibly.

21 Q. Do you know or did you ask what investigations Ms Cooney

22 had carried out into the existing fire safety systems at

23 Grenfell Tower?

24 A. I think I discussed it with her. However, she had used

25 the fire risk assessment.

121

1 Q. Did you see anything in the report by way of an analysis

2 of the fire safety systems?

3 A. Not really an analysis. The report states what is there

4 in the common areas, and makes an assumption on what's

5 provided in the flats themselves.

6 Q. Indeed.

7 Let's look, if we can, together at Carl Stokes' fire

8 risk assessment of 29 December 2010, please. It's at

9 {TMO10037743}. If we can just look at the very first

10 page of that document together, you can see "Area(s) not

11 covered"; do you see that --

12 A. Yes.

13 Q. -- at the bottom of the page?

14 Dr Barker, are you all right to continue?

15 A. Yes, sorry, I'm just blowing my nose.

16 Q. "Area(s) not covered", and it says:

17 "All the private residential apartments, the ground

18 floor electrical substation, Dale Youth Boxing club,

19 Grenfell nursery, the access to the upper ground floor

20 level and the upper ground floor level offices

21 complete."

22 When you reviewed Ms Cooney's draft, did you notice

23 or did you know that these areas had not been covered by

24 the FRA?

25 A. Yes.

122

1 Q. Does that tell us that, so far as Ms Cooney's work is

2 concerned, she hadn't reviewed those areas either?

3 A. She did look at them in terms of the means of escape --

4 Q. Right.

5 A. -- I believe, yes.

6 Q. Okay, we will come to the means of escape later.

7 Did you discuss with Ms Cooney whether there was any

8 further fire risk assessment for the areas not covered

9 by Mr Stokes' review?

10 A. No, I didn't.

11 Q. Why is that?

12 A. I think because we were primarily concerned with the

13 risk assessment for the residential parts, and because

14 of the fire resistance provided between the residential

15 parts and these areas, we considered them almost to be

16 separate entities.

17 Q. So maybe I misunderstood that answer you have just given

18 us, but are you saying that because you were primarily

19 concerned with the risk assessment for the residential

20 parts, there wasn't actually, therefore, a fire risk

21 assessment which Mr Stokes had done which was relevant,

22 because private residential apartments had been

23 excluded?

24 A. Yes, private residential apartments wouldn't normally

25 form part of a residential building risk assessment.

123

1 The risk assessment stops at the flat entrance door.

2 Q. How would you be able to assess and analyse the existing

3 fire safety measures by way of checking Ms Cooney's work

4 given what's not covered expressly by Mr Stokes in this

5 fire risk assessment?

6 A. In what way? Do you mean the private apartments or the

7 common or communal areas?

8 Q. Let me ask it a slightly different way.

9 Did you approach Ms Cooney's draft on the basis that

10 it was limited to the same parts of the building that

11 Mr Stokes' FRA was limited to?

12 A. Yes.

13 Q. Yes.

14 A. I suppose, yes, I did.

15 Q. That would mean, wouldn't it, that those areas not

16 covered by Mr Stokes' analysis would also not be the

17 subject of your existing fire safety strategy at all?

18 A. No, they were covered in the strategy.

19 Q. They were covered in the strategy but without reference

20 to the FRA; is that right?

21 A. Yes.

22 Q. So what information did you have for those other parts

23 of the building not covered by the FRA --

24 A. The floor plans.

25 Q. -- if you hadn't done a site visit?

124

1 A. It's the floor plans.
 2 Q. Right, thank you.
 3 Can we now turn, please, to a document:
 4 {TMO10037740}. This is an email from Paul Dunkerton to
 5 Ms Cooney of 13 August 2012 attaching Mr Stokes' FRA,
 6 which she had asked for. Do you see that?
 7 A. Yes.
 8 Q. Now, it didn't include what Mr Stokes called the
 9 significant findings and action plan that he had also
 10 prepared on 29 December.
 11 Now, you were not copied in on this, but do you have
 12 a recollection of such a document existing?
 13 A. No.
 14 Q. Well, let me just go back, then, if I can, just to jog
 15 your memory. If we can look back at the fire risk
 16 assessment, {TMO10037743} again. At the foot of that
 17 page you can see, just underneath the "Area(s) not
 18 covered", there is a rubric:
 19 "The significant findings and action plan of this
 20 Fire Risk Assessment are inserted next with this
 21 document continuing on page 2."
 22 So when you did see this report, as part of your
 23 review of Ms Cooney's work, did you notice that you
 24 didn't have the significant findings and action plan of
 25 the FRA?

125

1 A. No, I didn't.
 2 Q. You didn't?
 3 A. No.
 4 Q. Can you explain why you didn't?
 5 A. No.
 6 Q. It's a slightly negative question to ask. Let me try it
 7 a different way.
 8 Would significant findings and an action plan of
 9 a fire risk assessment, highlighted like this in bold on
 10 the first page, not be an important extra document or
 11 rider document for you to examine so that you could
 12 understand the full advice being given by Mr Stokes as
 13 part of his fire risk assessment?
 14 A. Yes. However, I would also have thought that there
 15 would have been mention of the findings actually within
 16 the risk assessment itself before they were summarised
 17 in a separate document with an action plan.
 18 Q. At any rate, you told us you didn't notice that you
 19 hadn't got it; can we take it that there was therefore
 20 no discussion between you and Ms Cooney about whether
 21 you should have it and why you didn't have it?
 22 A. Yes, there was no discussion.
 23 Q. Right.
 24 Can I then go back to the scope of the works in the
 25 fee proposal, {TMO10037721/2}. This is about the fourth

126

1 time, I am afraid, Dr Barker -- and I apologise -- I've
 2 taken you back to this. It's the scope of the works
 3 again. We looked at this this morning. In the first
 4 paragraph there, the second sentence:
 5 "This report will serve to inform the fire safety
 6 risk assessment and fire risk management plan for the
 7 building."
 8 You see reference to the words "fire risk management
 9 plan" there, you see.
 10 How did you expect the report would form a fire risk
 11 management plan for the building if neither you nor
 12 Ms Cooney had undertaken a detailed review and analysis
 13 of the existing fire risk assessment and also the
 14 documents accompanying it, such as the significant
 15 action plan?
 16 A. Again, the report was primarily to look at the design of
 17 the building in relation to compliance with Approved
 18 Document B, so if there were areas of non-compliance or
 19 measures that were in place, that serves to inform the
 20 fire safety risk assessment and the management plan of
 21 the building.
 22 Q. Yes, and how would the report serve to inform the fire
 23 risk assessment and the management plan of the building,
 24 the next one that was to be produced, if you didn't have
 25 the whole of the last one?

127

1 A. Well, I think that's one of the reasons why, when it was
 2 sent out as a draft, there were areas that needed to be
 3 looked at, that needed more information.
 4 Q. Dr Barker, you didn't notice, as you've told us, that
 5 the FRA that Ms Cooney had been sent by the TMO did not
 6 include the significant findings and action plan, so how
 7 could it have been something on the radar to be looked
 8 at next if you hadn't noticed it?
 9 A. I don't know.
 10 Q. Is the reality that you didn't have time to chase up
 11 this extra document and make sure that you fully
 12 understood the full extent of the FRA because you were
 13 going on holiday?
 14 A. I think time was a factor. It wasn't necessarily
 15 because I was going on holiday. There were other
 16 workload factors there.
 17 Q. I understand that. If you had had different workload
 18 factors, lower workload factors and more time, would you
 19 have asked Ms Cooney to get hold of the full significant
 20 action plan, having noticed that it was missing, and
 21 incorporated that into the report, even though a draft,
 22 so that you could make the best shot you could at
 23 informing the fire safety risk assessment and fire risk
 24 management plan as instructed?
 25 A. Yes, I probably would, yes.

128

1 Q. Can I ask you to look back, please, at the draft report.
2 Just in general, and this might speed things up a little
3 bit -- and this is at {TMO10001925} -- do you recall
4 that there are many unknowns and assumptions throughout
5 the draft?

6 A. Yes.

7 Q. I could list them all and I could spend time doing that,
8 but you accept that they're there?

9 A. Yes.

10 Q. Was it usual that an existing fire safety strategy, even
11 in a draft, would have so many assumptions and
12 uncertainties in it?

13 A. Yes.

14 Q. You say "Yes"; what normally would then happen to those
15 assumptions and uncertainties?

16 A. I think if it was a strategy for an existing building
17 that was just done as a piece of work and there was
18 going to be no refurbishment done on the building, it
19 would be a slightly different scenario, because you
20 would want to gain as much information as you can about
21 that building so that you could complete the report.
22 But because the refurbishment was being carried out sort
23 of concurrently, or the design for the refurbishment was
24 happening concurrently with this report for the existing
25 building, it was understood that we'd potentially be

129

1 able to get more information as time went on and Terry
2 attended meetings. That's the way that I understood it.

3 Q. I see.

4 Let's look at just one or two together, if we can,
5 because there are too many to go through each of them
6 this afternoon.

7 Can I ask you, please, to look at the draft report
8 {TMO10001925/8} at 3.2.1. This is under "Means of
9 Warning", "Levels 1 and 2", and she says in the draft:

10 "It is unknown whether the community areas and
11 nursery are covered by an automatic fire detection
12 system (AFD) or a manual system triggered by manual call
13 points."

14 Do you see that?

15 A. Yes.

16 Q. Then she says in the next paragraph under the same
17 numbered paragraph:

18 "There is detection within the ground floor
19 lift lobby. The provision of this detector would only
20 serve to inform the management of the building of a fire
21 and presumably disable the operation of the lifts."

22 Note the word "presumably" there.

23 Did you think to check with Ms Cooney the basis on
24 which she made the assumption that the detection system
25 would disable the operation of the lifts?

130

1 A. That's usual practice for when a detector detects smoke
2 is that the lifts aren't to be used in the event of
3 a fire and they return to ground.

4 Q. So --

5 A. That's general passenger lifts. Firefighters' lifts,
6 where there is one, are different because they tend to
7 have a control mechanism that can be used by the
8 fire service when they arrive.

9 Q. Given that there had been no site visit and no test of
10 the lifts to see whether in fact this detector did
11 actually disable the operation of the lifts, why was
12 that assumption made?

13 A. Because that's common practice in designs, and I think
14 also what she's meaning with that sentence is that when
15 that detector activates, it might not necessarily sound
16 an audible alarm and warn the people in the flats.

17 Q. Did you think that it was safe to approve a draft report
18 that contained an assumption which had not been checked,
19 merely because it was an assumption based on common
20 practice?

21 A. Yes, but this could have been something that could have
22 been discussed later on as well with the design team, as
23 they read and digested the draft report.

24 Q. I see.

25 Are you aware of any way in which this report or any

131

1 later communication flagged up in crystal clear terms,
2 both to Studio E and critically to the client, that all
3 these presumptions had to be double-checked to make sure
4 they were valid?

5 A. No, I'm not aware.

6 Q. Why is that?

7 A. I don't know.

8 Q. She says in the first sentence:

9 "It is unknown whether the community areas and
10 nursery are covered by an [AFD] ... or a manual system
11 triggered by manual call points."

12 Why was it unknown? Why was that not something that
13 had been checked before 15 August?

14 A. I don't know. I'm not sure whether when James went to
15 site, whether he was given access to those areas, and we
16 didn't have the fire risk assessment for those different
17 areas.

18 Q. Let's look at another one, 3.3.6, page 10
19 {TMO10001925/10}, please. Under 3.3.6, in the third
20 line, it says:

21 "The distance to the stairs from the flat entrance
22 doors appears to be more than 7.5m from the flats with
23 entrance doors to the North of the lift shaft, the
24 maximum if which is approximately 8.3m (scaled from
25 microfiche plans, to be checked on site). This

132

1 excessive distance of less than 1m results in an
2 increase in travel of less than 1 second and would be
3 considered to be acceptable under current standards and
4 risk assessment."

5 Now, did you not want to know why Ms Cooney was
6 content to proceed on the basis of appearances and not
7 precise measurements?

8 A. Well, as she says in -- it's been scaled from microfiche
9 plans, so it may well have been less than 8.3.

10 Q. Yes. My question is: why were you happy that she was
11 going to proceed as she has on the basis of appearances,
12 in other words working off plans and scaling up from
13 them, as opposed to on-site precise measurements?

14 A. Again, there wasn't sufficient time to go to site.

15 Q. So, time. Okay.

16 Under section 3.4, same page, "Smoke Ventilation",
17 she says -- and this is at 3.4 on the following page,
18 this is page 11 {TMO10001925/11}, please, the third
19 paragraph down -- she says there in the third line:

20 "It is understood that the fan(s) are
21 positioned ..."

22 Do you see that?

23 A. Yes.

24 Q. "It is understood that the fan(s) are positioned at the
25 base of the shaft. It is unknown how the fresh air

133

1 ventilation shaft operates in a fire condition (the rate
2 of extraction the system currently achieves both
3 naturally and mechanically). It is also not known how
4 the existing system performs as a natural shaft for the
5 purposes of escape prior to fire service intervention."

6 Again, Dr Barker, same question: did you not want to
7 know why Ms Cooney was content to proceed on the basis
8 of what she didn't know?

9 A. Well, she's put in the report that what is provided is
10 unsatisfactory, and she's noted that it's going to be
11 changed, and that was the information that we'd been
12 given, that as part of the refurbishment works the
13 ventilation system would be upgraded.

14 Q. I see, okay. So these were things to be tested rather
15 than unknowns that could be solved by her by way of
16 a site visit; is that right?

17 A. No, they probably or they may have been solved by a site
18 visit.

19 Q. Are you familiar with PAS 911:2007?

20 A. I have seen it, yes.

21 Q. A document which bears the elegant title "Fire
22 strategies - guidance and framework for their
23 formulation". You are.

24 Can we have a look at that, please. It's
25 {BSI00000066}, please, and I would like to turn to

134

1 page 46 within it, which is internal page 46, so page 52
2 of the document on our system {BSI00000066/52}.

3 (Pause)

4 Now, this is paragraph 9.2 I would like to look at
5 with you, please, where it says, "Level of detail". Do
6 you see that?

7 A. Yes.

8 Q. At 9.2 it says:

9 "The strategy is designed ..."

10 I should just put this in wider context so everybody
11 can understand this, "Finalising the fire strategy
12 document", and under 9.2, "Level of detail", it says:

13 "The strategy is designed to be a single overview of
14 all relevant fire precautions specific to the building.

15 It is not meant to specify detailed designs or
16 arrangements but is there to give sufficient guidance
17 for more detailed assessments and designs. In this way,
18 it is likely to continue to be relevant throughout minor
19 changes to the building, its occupants, etc. However,
20 it should also not be so vague as to lead to ambiguous
21 or misleading conclusions."

22 Then if you look at paragraph 7.1.3 on
23 {BSI000000/37}, if you go back a little in the document,
24 there is a photograph of some people having what we used
25 to call a meeting.

135

1 At paragraph 7.1.3(e), it says, under "First
2 review":

3 "Collation and review of information received with
4 relevant stakeholders. Where the information is found
5 insufficient or ambiguous, further investigations may be
6 required. This may include, for instance, the
7 requirement for system health checks. This will involve
8 one or more meetings with stakeholders."

9 Let me ask you this: was PAS 911, which we have just
10 been looking at, a guiding framework for you in your
11 work when you were reviewing Ms Cooney's?

12 A. No.

13 Q. Why is that, can you explain?

14 A. We just didn't use it. It's not mandatory to use it, so
15 we didn't use the PAS 911 framework.

16 Q. Are the principles that I've just shown you on those two
17 pages principles that nonetheless you in your practice
18 when reviewing a draft would adopt?

19 A. Yes, there are some common practices in there that --

20 Q. Right.

21 A. In the way that we did our projects.

22 Q. Why were you content to sign this draft report off as
23 fine when there were so many unknowns and so many
24 matters which had been assumed where the assumptions had
25 not been verified?

136

1 A. Because it was sent out on the basis that it was
 2 a draft, on the understanding that these issues could be
 3 clarified --
 4 Q. Yes, but --
 5 A. -- in the future.
 6 Q. My question is: even though it was sent out as a draft,
 7 why were you happy to sign off on it as a fine draft,
 8 notwithstanding so many unknowns and so many unverified
 9 assumptions?
 10 A. Because I was happy that that was a document that could
 11 be built on at a later stage to provide more
 12 information --
 13 Q. Right.
 14 A. -- and be a complete document.
 15 Q. I see.
 16 Can I just then go back to the draft report at
 17 page 10, that's {TMO10001925/10}, and look at
 18 paragraph 3.4 with you, please, "Smoke Ventilation". We
 19 looked at the start of this paragraph, but then went
 20 over the page. I just want to come back to the
 21 beginning of it.
 22 Halfway down that first paragraph, four lines down,
 23 it says:
 24 "The dimensions of the shafts are unknown ..."
 25 Do you see that?

137

1 A. Yes.
 2 Q. "The dimensions of the shafts are unknown; from the
 3 microfiche archive drawings they appear to be in the
 4 region of 400mm x 600mm each, between their internal
 5 walls. These measurements are not able to be precisely
 6 scaled and should be checked on site. The shafts appear
 7 to continue up to the roof of the plant housing, where
 8 they are terminated. The details of the shaft
 9 termination cowl/protrusions are unknown."
 10 Do you see that?
 11 A. Yes.
 12 Q. Again, did you not want to know why Ms Cooney was
 13 content to proceed on the basis of appearances in
 14 respect of those shafts and not precise measurements?
 15 A. I think in the timescale that we had for the report and
 16 the quality of the drawings shown on the microfiche,
 17 I think it was reasonable of her to say that they were
 18 in the region of those dimensions and they needed to be
 19 checked on site, because she was making the point that
 20 what is provided doesn't comply with the current
 21 guidance.
 22 So, yes, it did need to be checked on site.
 23 Q. And when would that happen, did you think?
 24 A. Possibly at some point after the draft report had been
 25 issued and the design team had seen it and discussed it

138

1 with my colleague, Terry.
 2 Q. Given the numbers of assumptions which had been
 3 unverified and the numbers of occasions when Cate Cooney
 4 had identified things as unknown, can you explain why
 5 you didn't, instead of signing off her report as fine,
 6 amend it to identify -- or suggest that she amends it --
 7 a shopping list of some kind of future investigative
 8 actions to determine or confirm unknown or assumed
 9 facts?
 10 A. I don't know why I didn't, and with hindsight I probably
 11 should.
 12 Q. And the same question: why didn't you make it absolutely
 13 crystal clear to the TMO and Studio E that until and
 14 unless the missing information was obtained and the
 15 assumptions were verified, the draft couldn't be relied
 16 on?
 17 A. Again, I don't know, and with hindsight I probably
 18 should.
 19 Q. Did you consider how, unless those matters were verified
 20 and the unknowns were made known, the TMO as the
 21 responsible person under the Regulatory Reform Order
 22 could discharge their obligations under it?
 23 A. No, because I assumed that some discussion would be held
 24 regarding the draft report to try and rectify or clarify
 25 some of the assumptions that were made in the report.

139

1 Q. I see.
 2 Can I ask you to go back in the report to page 7
 3 {TMO10001925/7}. I want you to look with me, please, at
 4 section 2, "Purpose groups".
 5 Now, there are three of them, per the guidance in
 6 Approved Document B: residential, assembly and offices.
 7 Do you see that?
 8 A. Yes.
 9 Q. I just want to look at residential.
 10 Did you consider whether it was important that the
 11 report should reflect or examine the characteristics of
 12 the occupants under each of these purpose groups?
 13 A. No, because the purpose groups in Approved Document B in
 14 a way reflect that in themselves. For example, when
 15 it's residential, the risk is that there is a sleeping
 16 risk. So you have to consider then the means of warning
 17 may be different to what's required, for example, in
 18 an office purpose group, where people are familiar with
 19 the building, it's their place of work, and they're
 20 generally awake.
 21 Q. Yes.
 22 Was any consideration given to how the
 23 characteristics of the occupants as individuals would
 24 need to be addressed by the TMO as the responsible
 25 person when managing fire safety in the building?

140

1 A. No.
 2 Q. I mean, for example, did you give any consideration, or
 3 ask why Ms Cooney had not given any consideration, to,
 4 for example, people who may need assistance in escaping
 5 in the event of a fire because they had mobility
 6 problems?
 7 A. Well, for residential buildings, in Approved Document B
 8 there is no requirement to consider occupants that have
 9 mobility impairments. For residential buildings, it is
 10 not a requirement to have disabled refuges because of
 11 the remain-in-place evacuation policy. So you rely on
 12 self-evacuation. So the occupant of a fire affected
 13 flat, they're the only ones that receive a warning that
 14 there's a fire in their flat, so they can evacuate. The
 15 person who lives next door doesn't receive a warning
 16 that something is going wrong in the flat next door, and
 17 the provisions are in place so that there is
 18 a sufficient level of fire resistance around each
 19 apartment that other people should not need to evacuate.
 20 And with a residential building, there is not always
 21 a management presence on site. So with the disabled
 22 refuge, an EVC, a voice communication system, is
 23 required, and it is a safe area for somebody with
 24 a disability to remain until they are rescued. But if
 25 there is no management presence there to consider that,

141

1 then it will fall down -- that plan will fall down.
 2 So in the other parts, the offices and assembly, if
 3 there are any stairs to negotiate in those areas, there
 4 would generally be a requirement for a disabled refuge.
 5 Q. Did you have any thoughts at the time about how the TMO
 6 would comply with its obligations under the RRO in
 7 relation to its fire safety management plan without
 8 having some kind of guidance or strategy for assisting
 9 people who need assistance from evacuating the building,
 10 whether from their own flats which are on fire or
 11 whether by way of a wider, more generalised evacuation?
 12 A. Possibly, but when you're considering the guidance in
 13 the ADB, it is assumed that people can self-evacuate
 14 from their flat.
 15 Q. Yes. As an experienced fire engineer, was it your
 16 experience and understanding that that assumption was
 17 also made in the obligations under the RRO?
 18 A. I think under the RRO they would need to consider their
 19 residents and consider if some of them did have mobility
 20 impairments, to house them in a high-rise residential
 21 building might not be an appropriate place to put them.
 22 Q. Let me see if I can put the question a bit less
 23 delicately and a bit more bluntly: did it occur to you
 24 when you saw Ms Cooney's report to think to yourself:
 25 given that we're dealing with residents in a high-rise

142

1 block, and we've got to advise the TMO on the
 2 fire safety management plan for the occupants, we should
 3 look at how we're going to get people with mobility
 4 issues out?
 5 A. No, I didn't consider that.
 6 Q. Can you help us understand why that is?
 7 A. Because, again, if they did have mobility issues, then
 8 maybe Grenfell Tower wasn't the best place for them to
 9 live. To reiterate, Approved Document B does not make
 10 any provisions in residential buildings for people with
 11 mobility impairments.
 12 Q. I see.
 13 A. That's not to say that they can't be put in, but ADB
 14 does not make provision for them.
 15 Q. Now, can I then move on to another area of this
 16 report --
 17 SIR MARTIN MOORE-BICK: Mr Millett, I have one eye on the
 18 clock.
 19 MR MILLETT: Yes.
 20 SIR MARTIN MOORE-BICK: At some point, I imagine we're going
 21 to need to take another break, aren't we?
 22 MR MILLETT: Yes.
 23 SIR MARTIN MOORE-BICK: I'm quite happy to leave it in your
 24 hands, but it doesn't want to be too much later.
 25 MR MILLETT: No, that's right. Let me just do one more

143

1 topic, if that's all right.
 2 SIR MARTIN MOORE-BICK: Yes.
 3 MR MILLETT: Dr Barker, is that all right with you? Are you
 4 feeling all right to go on for ten minutes or so?
 5 THE WITNESS: Yes, okay, ten minutes, yes.
 6 SIR MARTIN MOORE-BICK: Well, don't be pushed into it by
 7 Mr Millett. Do you feel you need a break now?
 8 THE WITNESS: Yes, I would like one.
 9 MR MILLETT: Yes, I think that is sensible.
 10 SIR MARTIN MOORE-BICK: Is this another case for quarter of
 11 an hour?
 12 MR MILLETT: I would rather ten minutes, if possible. The
 13 last time we took quarter of an hour, nothing very much
 14 happened, apart from me having -- no, if we say
 15 ten minutes, I think --
 16 SIR MARTIN MOORE-BICK: We'll say ten minutes. If you need
 17 longer, you had better let me know.
 18 MR MILLETT: Very good.
 19 Is ten minutes all right for you, Dr Barker?
 20 SIR MARTIN MOORE-BICK: Dr Barker, we will have a ten-minute
 21 break now, please. Go with the usher. Please don't
 22 talk to anyone about your evidence.
 23 THE WITNESS: Okay.
 24 SIR MARTIN MOORE-BICK: Thank you.
 25 3.10, please.

144

1 (3.00 pm)
 2 (A short break)
 3 (3.10 pm)
 4 SIR MARTIN MOORE-BICK: All right, Dr Barker?
 5 THE WITNESS: Yes.
 6 SIR MARTIN MOORE-BICK: If at any stage you feel you'd like
 7 a bit of respite, just indicate, will you?
 8 THE WITNESS: Yes, thanks.
 9 SIR MARTIN MOORE-BICK: Yes, Mr Millett.
 10 MR MILLETT: Mr Chairman, thank you.
 11 Dr Barker, can I just examine ADB with you, just in
 12 light of the answers you were giving us earlier on in
 13 answer to my questions about mobility difficulties.
 14 Can I ask you, please, to be shown {CLG00000173/14}.
 15 If you look at the rubric "Inclusive design" under
 16 paragraph 0.19 -- do you see that? -- there is reference
 17 here to the health and safety of all persons, including
 18 people with disabilities. Do you see that?
 19 A. Yes.
 20 Q. It goes on:
 21 "Part M of the Regulations [that's the
 22 Building Regulations], Access to and use of buildings,
 23 requires reasonable provision for access by people to
 24 buildings. Regardless of compliance with Building
 25 Regulations, there will also be obligations under the

145

1 Disability Discrimination Act 1995 for service providers
 2 and employers to consider barriers created by physical
 3 features in buildings.
 4 "People, regardless of disability, age or gender,
 5 should be able to gain access to buildings and use their
 6 facilities, both as visitors and as people who live or
 7 work in them.
 8 "As such the fire safety measures incorporated into
 9 a building will need to take account of the needs of all
 10 those persons who may have access to the building. It
 11 is not appropriate, except in exceptional circumstances,
 12 to presume that certain groups of people will be
 13 excluded from a building because of its use."
 14 Then over the top of the next column:
 15 "The provisions set out in this Approved Document
 16 are considered to be a reasonable standard for most
 17 buildings. However, there may be some people whose
 18 specific needs are not addressed. In some situations
 19 additional measures may be needed to accommodate these
 20 needs. This should be done on a case by case basis."
 21 Can I also then show you page 18 {CLG00000173/18}
 22 under paragraph B1.v, "Criteria for means of escape",
 23 and if you look at the note under that, it says:
 24 "Some people, for example those who use wheelchairs,
 25 may not be able to use stairways without assistance."

146

1 For them evacuation involving the use of refuges on
 2 escape routes and either assistance down (or up)
 3 stairways or the use of suitable lifts will be
 4 necessary."
 5 Now, I've shown you that again to refresh your
 6 memory.
 7 Looking at that again, it's not right to say, is it,
 8 that ADB was completely devoid of any guidance in
 9 respect of people with mobility issues?
 10 A. No, I didn't say that it was completely devoid. In the
 11 guidance with respect to flats, the provision of
 12 disabled refuges is not mentioned in that section, and
 13 disabled refuges aren't generally provided in flats
 14 because the emergency voice communication system that
 15 would go with it would need to communicate with
 16 somebody, albeit a management presence. In many
 17 high-rise residential buildings that are built, there
 18 can be no management presence. So if there was a person
 19 within the refuge, there wouldn't be anybody there to
 20 rescue them.
 21 Similarly, evacuation lifts could be provided, but
 22 they aren't -- they're not mentioned in the section of
 23 guidance on means of escape from flats.
 24 Q. I note those answers, and that's very helpful, in a more
 25 general sense. Coming back to your specific role in

147

1 signing off as fine Ms Cooney's draft, and given that
 2 your understanding was that she was working from
 3 Approved Document B as the design code, can you explain
 4 why, even though she had identified the residents as
 5 a purpose group, there is nothing in the report about
 6 the suitability of the building in respect of
 7 fire safety for those with mobility issues?
 8 A. Yes, that's right, there is no provision in there.
 9 Q. Yes, and why is that something you didn't pick up when
 10 reviewing her draft?
 11 A. I did -- it's not that I didn't pick up on it, it's that
 12 within residential buildings we wouldn't normally
 13 require there to be provisions in place for mobility
 14 impaired persons.
 15 Q. Coming back to the question I asked just before the
 16 break, given that in ADB there is at the very least
 17 a consciousness that fire safety systems should take
 18 account of people with mobility issues, can you explain
 19 why the draft that Ms Cooney produced and you signed off
 20 on did not advise the TMO that, when formulating their
 21 fire safety management plan, consideration should be
 22 given to a strategy which incorporated or included
 23 keeping disabled people safe?
 24 A. Sorry, could you rephrase the question?
 25 Q. I can rephrase it, yes.

148

1 Can you explain, when you signed off Ms Cooney's
 2 draft, why there was no advice given to the TMO in it
 3 about how their fire safety strategy was going to keep
 4 people with mobility issues safe in the event of
 5 an evacuation?
 6 A. No, I can't explain.
 7 Q. Okay.
 8 Sticking with the subject of evacuation, can I take
 9 you to the existing fire safety strategy please,
 10 {TMO10001925/10}, and I would like to look, please, with
 11 you at paragraph 3.3.4.
 12 3.3.4, "Evacuation principals - residential":
 13 "The recommendations in the current guidance of
 14 Approved Document B support an evacuation strategy which
 15 is based upon the following assumptions ..."
 16 Then you can see the four of them set out. Do you
 17 see that?
 18 A. Yes.
 19 Q. You told us earlier that the evacuation strategy that
 20 you understood was in place at Grenfell was stay put.
 21 A. Yes.
 22 Q. And you refer to that as an evacuation strategy --
 23 A. Yes, an evacuation policy/strategy.
 24 Q. Policy?
 25 A. Yes.

149

1 Q. Does stay put as a strategy rely on a high degree of
 2 compartmentation?
 3 A. Yes.
 4 Q. Look at paragraph 3.3.4 in the third bullet point. It
 5 says:
 6 "Due to an assumed high degree of compartmentation
 7 and therefore a low probability of fire spread beyond
 8 the dwelling of fire origin, simultaneous evacuation of
 9 the building is unlikely to be considered necessary ..."
 10 Do you see that?
 11 A. Yes.
 12 Q. Did you understand the basis on which Ms Cooney had made
 13 that assumption?
 14 A. Yes. That is also an assumption in Approved Document B,
 15 because of the level of fire resistance to the floor --
 16 the floors within the building, and the walls between
 17 adjacent flats, and between the flat and the common
 18 lobby on each level.
 19 Q. Well, you say it's an assumption in Approved Document B;
 20 rather than debating that with you, let me ask you
 21 a question.
 22 Did you ask Ms Cooney what information she had
 23 relied on to assume that within Grenfell Tower there was
 24 a high degree of compartmentation?
 25 A. No, but I took that to mean that the provision of

150

1 concrete floors, a concrete frame, and masonry walls
 2 would provide the compartmentation.
 3 Q. Did you note, when you examined this report as part of
 4 your peer review, that no investigation had been done of
 5 the fabric or the build-up of the compartment walls?
 6 A. No. However, the fire risk assessment does refer to the
 7 walls being masonry and the floors being concrete.
 8 Q. Yes.
 9 A. I do remember reading that in the fire risk assessment.
 10 Q. Did you note that Ms Cooney hadn't recommended that
 11 an investigation into the fabric or the build-up of the
 12 compartment walls should be carried out?
 13 A. No, I didn't note that.
 14 SIR MARTIN MOORE-BICK: Can I ask: did the drawings that you
 15 were provided with tell you what the materials of the
 16 building were?
 17 A. No, the general arrangement layouts don't tell you what
 18 the building fabric is.
 19 MR MILLETT: Given that the stay-put policy or strategy
 20 relied on a high degree of compartmentation, can I ask
 21 you why you didn't suggest to Ms Cooney that she should
 22 include some guidance or some advice that further
 23 inspection of the layout, the materials and the build-up
 24 of the compartment walls was necessary in order to
 25 verify this assumption?

151

1 A. I understood that that could be a matter for discussion,
 2 following the receipt of the draft report by the design
 3 team, and also it would involve going into a resident's
 4 flat, which at the time I understood we didn't have
 5 access to the actual dwellings themselves.
 6 Q. As you say, in fact the dwellings themselves were
 7 outside the scope even of the fire risk assessment done
 8 by Mr Stokes that you were relying on.
 9 A. Yes.
 10 Q. So if Mr Stokes hadn't done an assessment and you hadn't
 11 done an assessment, what was the assumption of the high
 12 degree of compartmentation actually based on?
 13 A. When the building was originally constructed it was
 14 required to be a two-hour concrete frame, so that will
 15 be the basis of the fire resistance of the floors, each
 16 floor will be a two-hour floor.
 17 Q. Right. So this is similar to an answer you gave this
 18 morning: you just presumed compliance at the point of
 19 origin --
 20 A. Yes.
 21 Q. -- without ever checking it.
 22 A. Yes.
 23 Q. Similarly, the statement in the same part of the report,
 24 "simultaneously evacuation of the building is unlikely
 25 to be considered necessary", did you analyse or ask

152

1 Ms Cooney if she had analysed whether the stay-in-place
2 or stay-put evacuation strategy was the most appropriate
3 one for this building?

4 A. No, I didn't specifically discuss it with her. However,
5 it is usual practice for residential flats to operate
6 a remain-in-place policy, and the stairs are sized
7 accordingly, as opposed to a building which has
8 a simultaneous evacuation strategy, where you have to
9 consider all of the people in the building trying to get
10 out at once, and the stairs would have to be the
11 appropriate width.

12 Q. Yes.

13 Can I just ask you to turn on, then, please in this
14 report to page 13 {TMO10001925/13} and look at
15 paragraph 5.1.3, "Fire Stopping Within Concealed
16 Spaces". Do you see that?

17 A. Yes.

18 Q. She quotes from Approved Document B:

19 "The building shall be designed and constructed so
20 that unseen spread of fire and smoke within concealed
21 spaces in its structure and fabric is inhibited."

22 Then she says:

23 "There are limits to the extent to which any
24 cavities can exist, for example between walls and
25 cladding and between ceilings and roofs. Fire stopping

153

1 via appropriate cavity barriers are assumed to be in
2 place. These elements are not usually visible without
3 invasive surveying and it is recommended that these
4 elements are assessed within void flats to a level which
5 would provide confidence in whether or not the provision
6 is satisfactory."

7 Can I take it, Dr Barker, that you understood the
8 difference between a firestop and a cavity barrier?

9 A. Yes, I understand the difference.

10 Q. Do you think that it was clear, or did Ms Cooney mean
11 cavity barriers here where she said firestops?

12 A. I think she means both. There is a diagram in Approved
13 Document B, diagram 33, I think --

14 Q. There is.

15 A. -- which shows where compartment floors meet the
16 external walls, you need a firestop and a cavity
17 barrier, otherwise you need cavity barriers around
18 openings. Whereas firestopping is there to ensure the
19 integrity of fire separating elements at junctions or
20 where there are openings through them.

21 Q. Yes, well, we could spend time debating the definition.

22 My question is: you didn't, I think, suggest that she
23 should amend the existing fire strategy to make it clear
24 that she was referring to cavity barriers?

25 A. No, I didn't.

154

1 Q. Why is that?

2 A. I don't know.

3 Q. Was it because you had too little time, perhaps?

4 A. Possibly, yes.

5 Q. Now, in this section, she says, as I've shown you, there
6 are limits to the extent to which any cavities can
7 exist, for example between walls and cladding and
8 between ceilings and roofs. Did you understand what she
9 meant there?

10 A. Yes, again, referring to the diagram that's in Approved
11 Document B, you have cavity barriers around openings,
12 such as windows, and then you also have a cavity barrier
13 between a wall and a cladding, so that you -- usually at
14 every floor level, to prevent there from being -- it
15 allows there to be a cavity but it prevents the cavity
16 from being too big so that fire can spread unseen within
17 that void.

18 Q. Again, why didn't you suggest Ms Cooney amend the draft
19 to make that clear?

20 A. I don't know.

21 Q. Okay.

22 Now, the paragraph, as we've seen, continues. She
23 says:

24 "These elements are not usually visible without
25 invasive surveying ..."

155

1 You've seen that, I've shown it to you.

2 Did you find out from Cate Cooney, or anybody,
3 whether there had been any attempt to investigate or
4 inspect the compartmentation of the building physically?

5 A. No.

6 Q. No?

7 A. I don't know.

8 Q. Was it not vital in order to understand the efficacy of
9 the compartmentation in this building to consider the
10 firestopping of services or the existence of adequate
11 cavity barriers?

12 A. Yes. I assumed, though, that the cavity barriers would
13 be looked at while the window replacement work was
14 undertaken, as that would be an area where you've got
15 openings where cavity barriers would be required.

16 Q. That's looking forward; we're looking at the existing
17 fire strategy report that you were approving.

18 Was it not vital in order even to produce a sound
19 existing fire safety strategy that you should understand
20 the efficacy of the compartmentation in the building?

21 A. Yes.

22 Q. You took no steps other than to look at the drawings in
23 order to do that?

24 A. Yes.

25 Q. I think, as we discussed earlier -- let me ask it

156

1 again -- it's right, isn't it, that a stay-put
 2 evacuation policy relied on a high degree of
 3 compartmentation and a low probability of fire spread
 4 beyond the flat of origin?
 5 A. Yes.
 6 Q. Did you think that it was necessary to make clear that
 7 any defects in compartmentation would impact on, would
 8 affect, the stay-put strategy or affect its efficacy?
 9 A. Not at the time. With hindsight, yes, it should have
 10 done.
 11 Q. Right.
 12 Again, can you explain why you didn't make that
 13 clear or ask Ms Cooney to make that clear when you did
 14 your review?
 15 A. I don't know.
 16 Q. Again, lack of time, is it, perhaps, workload?
 17 A. Yes, possibly, lack of time.
 18 Q. In your statement -- and there is no need to turn it up,
 19 but it's paragraph 3.13 {EXO00001603/3} -- you say that
 20 you reviewed your report alongside the drawings, and you
 21 told us earlier this morning that you did do that and
 22 you confirmed it.
 23 What assistance did the drawings give you in
 24 reviewing Ms Cooney's work?
 25 A. It gave me the general layouts of the floors, so I could

157

1 see the layout of the apartments, where the stair was
 2 located, the layouts of the lower floors. The sections
 3 would have given me the height of the building.
 4 Q. All right. Okay.
 5 Let's just move on to the question of the height of
 6 the building.
 7 Can we go back to something we looked at this
 8 morning in the report, or perhaps just after lunch, at
 9 page 15 {TMO10001925/15}, paragraph 7.1, under
 10 "Provision of Fire Mains". We looked at that this
 11 morning or earlier, and it says:
 12 "There should be a dry rising main within the fire
 13 fighting shaft and the outlets from fire mains should be
 14 sited within the fire fighting stair."
 15 Do you see that?
 16 A. Yes.
 17 Q. If we look at 7.3, "Fire Fighting Shafts", it says in
 18 the fourth line down, let's look at it together:
 19 "The fire risk assessment describes the provision of
 20 a fire fighting shaft and fire fighting/evacuation lifts
 21 with dry rising main. Current guidance would be for a
 22 wet rising main, as the building is over 50m in height.
 23 The provision of a wet main saves time in fire fighting
 24 operations due to the increased time for a dry main to
 25 be primed by the pumping appliance. The time delay in

158

1 priming the dry riser is not considered to have an
 2 adverse effect on fire fighting operations due to the
 3 high levels of compartmentation and fire resistance of
 4 the building elements of structure."
 5 As you say, it says, "Current guidance would be for
 6 a wet rising main, as the building is over 50 metres in
 7 height".
 8 A. Yes.
 9 Q. Can you explain why she says that there should be a wet
 10 rising main in paragraph 7.3 but there should be
 11 a dry rising main in paragraph 7.1?
 12 A. No, I can't explain it.
 13 Q. Did you notice --
 14 SIR MARTIN MOORE-BICK: Mr Millett, is that right? She says
 15 in 7.1 there should be a dry rising main, second line.
 16 A. Yes.
 17 SIR MARTIN MOORE-BICK: Then the wet rising main is --
 18 MR MILLETT: 7.3.
 19 SIR MARTIN MOORE-BICK: -- referred to in 7.3.
 20 MR MILLETT: Yes.
 21 SIR MARTIN MOORE-BICK: I think you had it the other way
 22 round.
 23 MR MILLETT: You understand the point I and the Chairman,
 24 I think, are putting to you.
 25 A. Yes.

159

1 Q. In 7.1 you refer to a dry rising main, in 7.3 to a wet
 2 rising main, or she does. My question is: did you
 3 notice that contradiction when you reviewed the existing
 4 fire safety strategy?
 5 A. I didn't, and I should have picked up on that, because
 6 a wet rising main would be required as the building is
 7 over 50 metres.
 8 Q. So you accept that that's something you should have
 9 picked up in your review?
 10 A. Yes. However, the fire risk assessment states that it
 11 is a dry rising main provided.
 12 Q. Cate Cooney describes the purpose of the existing fire
 13 safety strategy as to provide a baseline for the
 14 proposed refurbishment works. Did you understand that
 15 that was its purpose?
 16 A. Yes.
 17 Q. What did you understand by "baseline" in that context?
 18 A. We were looking at what Approved Document B would
 19 require now, and outlining what was provided within the
 20 building, with the view that in the future, when the
 21 refurbishment works took place, any building work
 22 resulted in it being no worse than it was before.
 23 Q. Yes. Okay, I'll come back to that in a moment, then.
 24 Can I then just go back to something we were
 25 discussing a moment ago, and that's the relationship

160

1 between stay put and compartmentation.
 2 Can I ask you to look, please, first of all, at the
 3 report at paragraph 3.3.4 on page 10 {TMO10001925/10},
 4 we looked at this a minute ago, where she says in the
 5 second bullet point:
 6 "There is no reliance on rescue for evacuation,
 7 other than via the main core."
 8 Do you see that?
 9 A. Mm-hm.
 10 Q. Can you now also be shown paragraph 3.2.5 at page 8
 11 {TMO10001925/8}, which says in the last line there:
 12 "Evacuation of flats beyond the dwelling of fire
 13 origin would be carried out under the control of the
 14 attending fire service if necessary."
 15 When you reviewed this report, did you see that
 16 there might be a possible contradiction or conflict
 17 between those two statements?
 18 A. No. I don't believe there is a conflict.
 19 Q. Well, in one it says that evacuation beyond the dwelling
 20 of fire origin would be carried out under the control of
 21 the attending fire service, and in the other it says
 22 that no reliance would be placed on rescue.
 23 Did you try to reconcile those two statements to
 24 make them fit together? It's a factual question: did
 25 you do that?

161

1 A. No.
 2 Q. Do you accept, sitting here now, that those two
 3 statements do require to be reconciled?
 4 A. No, because I -- I take that to mean that there is
 5 an alarm in each flat, and the alarm in the fire
 6 affected flat will warn the people of that flat, they
 7 will evacuate on their own, and it is accepted that in
 8 the process of them escaping, some smoke may enter the
 9 common lobby, and that's why there is a ventilation
 10 system in the common lobby.
 11 Now, if somebody else on that floor came out of
 12 their flat, they may feel the need to evacuate. They
 13 won't have been warned, but the ventilation of the
 14 common lobby is supposed to maintain tenable conditions
 15 for them to escape.
 16 If then the Fire Brigade arrive on scene and find
 17 that conditions within that lobby are not tenable, they
 18 may then start to evacuate the remaining flats on that
 19 floor. That's what it means.
 20 Q. I see.
 21 So going back, then, to paragraph 3.3.4, which we
 22 looked at a moment ago, if we can, on page 10
 23 {TMO10001925/10}, "There is no reliance on rescue for
 24 evacuation, other than via the main core", what does
 25 that mean?

162

1 A. It means generally that occupants will self-evacuate.
 2 If the fire service deem it necessary to evacuate the
 3 other flats on a level where there is a fire in a flat,
 4 I take that to mean that they will knock on their doors
 5 and ask them or tell them that they would be -- it would
 6 be a good idea to leave.
 7 Q. Is that what you mean by rescue?
 8 A. Yes.
 9 Q. Or is that what you understand by the word she used?
 10 A. Yes.
 11 Q. I see, right.
 12 A minute ago you referred to the smoke ventilation
 13 system. Can we just look at that briefly.
 14 You, I think, attended the project meeting, as you
 15 told us before, on 26 July. We looked at the minutes of
 16 that. We can go to it again, but I can take this more
 17 quickly. I think at that meeting you requested a copy
 18 of the specification of the smoke extraction system for
 19 Grenfell Tower.
 20 A. Yes.
 21 Q. That was sent to you on 31 July 2012, and you referred
 22 to that in your witness statement, paragraph 3.9
 23 {EXO00001603/3}, and you say it was needed in order to
 24 prepare the existing fire safety strategy.
 25 I have summarised quite a lot there, but do you

163

1 accept that?
 2 A. Yes.
 3 Q. Thank you.
 4 You say in your statement that the reason is that in
 5 residential buildings there are requirements in relation
 6 to travel distances in the common corridor from
 7 an individual flat to the stair and for the corridor to
 8 be ventilated.
 9 A. Yes.
 10 Q. Did you know what the travel distances were at
 11 Grenfell Tower?
 12 A. When I received the ventilation document, no.
 13 Q. So --
 14 A. I would have got the travel distances from the drawings
 15 when we were sent the drawings.
 16 Q. Right. Was that an important aspect of the report that
 17 you were reviewing?
 18 A. Yes, and Cate alludes to that in the report, about the
 19 7.5-metre single erection limit that's recommended in
 20 Approved Document B for a single stair.
 21 Q. Yes. If you go to page 10 {TMO10001925/10}, which
 22 I think we're on still, of this document, 3.4, under
 23 "Smoke Ventilation", she refers to assumptions made from
 24 information available. You see that?
 25 A. Yes.

164

1 Q. Assume that the common area to each residential floor is
 2 ventilated, et cetera. She says in the fourth line:
 3 "The dimensions of the shaft are unknown ..."
 4 And we looked at that, and the measurements should
 5 be checked on site.
 6 In the fifth paragraph of this section, which
 7 I think you need to go over the page for
 8 {TMO10001925/11}, she says:
 9 "The existing system is unsatisfactory ..."
 10 You see that?
 11 A. Yes.
 12 Q. Then she goes on to say, and it's covered by the word
 13 "Draft", but it's just about halfway down that
 14 paragraph, within the big A in "Draft":
 15 "This also casts into doubt the justification on
 16 grounds of escape time, the excessive travel distance as
 17 outlined in 3.3.6 above. As the ventilation provision
 18 is critical to the stay in place evacuation principle,
 19 it is strongly recommended that the performance of the
 20 automatic system of mechanical ventilation as existing
 21 and as proposed is assessed in order to ensure that a
 22 satisfactory level of safety is provided to the
 23 residents throughout the tower."
 24 Do you see that?
 25 A. Yes.

165

1 Q. Finally, I should just show you 3.3.6 on page 10
 2 {TMO10001925/10}, she says under "Common Areas" in the
 3 third line:
 4 "The distance to the stairs from the flat entrance
 5 doors appears to be more than 7.5m from the flats with
 6 entrance doors to the North of the lift shaft, the
 7 maximum if which is approximately 8.3m (scaled from
 8 microfiche plans, to be checked on site)."
 9 We looked at this before.
 10 "This excessive distance of less than 1m results in
 11 an increase in travel of less than 1 second and would be
 12 considered to be acceptable under current standards and
 13 risk assessment."
 14 We looked at this before.
 15 My question is this: did you notice that Ms Cooney
 16 had not actually stated the basis of her assumptions
 17 here?
 18 A. In what way?
 19 Q. Well, she --
 20 A. She had not stated the basis of her assumption?
 21 Q. No.
 22 A. Do you mean as relating to the requirements of Approved
 23 Document B?
 24 Q. No, in relation to the measurements.
 25 A. Sorry, could you rephrase the question, please?

166

1 Q. Well, she says in that paragraph, at 3.3.6, that the
 2 distance from the flat entrance doors appears to be more
 3 than 7.5 metres from the flats, with entrance doors to
 4 the north of the lift shaft, and she then goes on to say
 5 that it should be checked on site.
 6 Did you, when you did your review, notice that
 7 Ms Cooney hadn't stated the basis of that assumption?
 8 A. No.
 9 Q. Did you notice during your review that the whole fire
 10 safety strategy --
 11 SIR MARTIN MOORE-BICK: I'm sorry, Mr Millett, it may be my
 12 fault, but I thought she was telling us here that it's
 13 more than 7.5 because it appears to be 8.3 scaled from
 14 the plans.
 15 MR MILLETT: Yes.
 16 SIR MARTIN MOORE-BICK: Well, that's the basis of her --
 17 what assumption are you putting to the witness?
 18 MR MILLETT: I'm putting the assumption -- that it remained
 19 an assumption based on the plans and hadn't been checked
 20 by reference to physical measurements.
 21 A. No, it hadn't been checked on site at that point, no.
 22 Q. No, no, and that leads on to a series of questions.
 23 Did you notice during your review that the whole of
 24 the fire safety strategy was reliant on a smoke
 25 ventilation system working properly in order to maintain

167

1 tenable conditions for means of escape purposes?
 2 A. Yes.
 3 Q. Did that to you mean that the lobby smoke control system
 4 had to be in full working order because, if it wasn't,
 5 then the travel distance would not be acceptable?
 6 A. I think what Cate was seeking to do in the strategy is
 7 to say that it would be acceptable to have a natural
 8 ventilation strategy if the shaft was big enough, but in
 9 section 3.4 she goes on to state that, from the
 10 drawings, the shaft is not big enough for a natural
 11 ventilation strategy, so the only way that it would be
 12 acceptable would then be to provide a mechanical system.
 13 If, say, the shaft had been big enough for a natural
 14 ventilation, then it may have been acceptable for the
 15 travel distance to be 80 centimetres greater than the
 16 recommended distance. However, because the shaft isn't
 17 big enough, Cate is trying to convey that that
 18 ventilation system may not work satisfactorily;
 19 therefore, a mechanical one should be provided.
 20 Q. Yes. I mean, cutting to the chase on this particular
 21 point, Dr Barker, did it not concern you at the time
 22 that here was a building which had excessive travel
 23 distances mitigated only by a smoke extract system which
 24 worked, and if it didn't work, there would be a problem?
 25 A. Yes.

168

1 Q. Is that not something that -- let me try it slightly
2 more neutrally.

3 Did you think at the time to amend the report so
4 that that problem was made crystal clear to the TMO as
5 the recipient of this draft?

6 A. No, I didn't.

7 Q. Again, why is that?

8 A. Again, with hindsight, I should have done.

9 Q. Right.

10 Now, you have explained what the baseline purpose of
11 this document was. Can I perhaps see if you can agree
12 with what Mr Veitch says. Can I take you back to his
13 statement that we looked at right at the start of your
14 evidence this morning. It's {MET00065130}. He produced
15 this statement for the police in August 2017. Page 2
16 {MET00065130/2}, please, and I'm looking at the third
17 paragraph on that page, and he says there in the fourth
18 line:

19 "We completed a fire strategy for the existing
20 building, prior to the regeneration works, as there was
21 no fire strategy in place. This was required as a base
22 from which to work from for the purpose of completing a
23 fire strategy for the building during the works."

24 Then he says also on page 3 {MET00065130/3} in the
25 second paragraph, if you see that, he says:

169

1 "Our strategy for the existing building therefore
2 then became the baseline from which the refurbishment
3 would be done. And that's also important as during
4 construction they need to understand what the fire
5 strategy is for the building during the refurbishment
6 and as it is being constructed."

7 First of all, do you agree with Mr Veitch's
8 description of the purpose of the existing fire safety
9 strategy for Grenfell Tower that I've just read out to
10 you from his statement?

11 A. Yes.

12 Q. What role did Mr Veitch play, do you remember, in the
13 production of the existing fire safety strategy, or
14 indeed the outline fire safety strategy?

15 A. He didn't provide any role.

16 Q. Right.

17 A. No.

18 Q. When you read Ms Cooney's draft existing fire safety
19 strategy, did you spot the fact that she didn't anywhere
20 in the report link the draft existing building fire
21 safety strategy report that she had done to the
22 fire safety needs of the primary refurbishment works?

23 A. No, I didn't.

24 Q. Did it occur to you to suggest that she should amend the
25 report to make that link, so that whoever picked up the

170

1 existing fire safety strategy, even if in draft, would
2 understand what it was for?

3 A. No, because I understood that, following the discussions
4 with the design team after they had received the draft,
5 once we had a clearer picture of some of the things that
6 needed to be clarified, we could then update the report
7 and make that correlation.

8 Q. Does it come to this: that in order to be effective as
9 a proper and reliable baseline, as Ms Cooney and
10 Mr Veitch and you have described, the existing fire
11 safety strategy needed to be finalised, all the elements
12 of assumption and lack of knowledge or information
13 filled in, completed, so that it was a finalised
14 document?

15 A. Yes.

16 Q. And that as a draft, it could never fulfil that purpose?

17 A. Yes, it needed to be updated.

18 Q. Right.

19 As principal fire engineer reviewing the draft
20 existing building fire safety report, and as senior to
21 Ms Cooney, Dr Barker, given the omissions and the
22 assumptions and the gaps in it, can you explain, sitting
23 here today, why you described the report that she had
24 done without any further elaboration as "fine"?

25 A. No, I can't. I can offer a possible explanation, which

171

1 was I sent the email back to say it's fine, it's
2 possible that had I printed out the report and marked up
3 things on the drawing -- sorry, on the report, that
4 there were things to put in it, I do not remember.
5 However, I considered that it was acceptable to be sent
6 out as a draft, on the understanding that there were
7 a number of issues that needed to be discussed and
8 clarified before the proper issue of the report could be
9 done.

10 Q. In your supervisory role as peer reviewer, senior to
11 Ms Cooney, do you accept that it was your responsibility
12 to point all those matters out to the reader of this
13 draft and ensure that they were addressed by the next
14 person picking it up?

15 A. Not necessarily in that draft. I think it was important
16 for me to communicate with Terry, who was going to be
17 taking over the project, the items that needed
18 clarification.

19 MR MILLETT: Thank you very much, Dr Barker.

20 Now, Mr Chairman, I have come to the end of the
21 questions thus far this afternoon. It's customary to
22 take a short break in order to make sure, with my team,
23 that I have covered everything.

24 SIR MARTIN MOORE-BICK: Yes. Have you any idea how long you
25 might need for that purpose?

172

1 MR MILLETT: If we say ten minutes or so for the moment. If
 2 we need a little bit longer because there are questions
 3 coming from outside this building, then we will let you
 4 know. As you know, Mr Chairman, it's important that
 5 those watching this remotely have an adequate
 6 opportunity to --
 7 SIR MARTIN MOORE-BICK: Of course, they must. If I say 4.05
 8 in the first instance, would that be all right?
 9 MR MILLETT: In the first instance, that would be very good,
 10 Mr Chairman, thank you.
 11 SIR MARTIN MOORE-BICK: Well, Dr Barker, those are the
 12 questions that Mr Millett wanted to ask you, but he
 13 needs time to check that there aren't other matters that
 14 need to be put to you. So, as you have heard, we're
 15 going to have a short break until probably 4.05, it
 16 could be a bit longer, we will see how we go.
 17 THE WITNESS: Okay.
 18 SIR MARTIN MOORE-BICK: So would you please go with the
 19 usher now, and don't talk to anyone about your evidence.
 20 THE WITNESS: Okay.
 21 SIR MARTIN MOORE-BICK: Thank you very much.
 22 Right, 4.05 then. Good, thank you.
 23 (3.53 pm)
 24 (A short break)
 25 (4.05 pm)

173

1 SIR MARTIN MOORE-BICK: Thank you, Dr Barker.
 2 Well, it may be that Mr Millett has some more
 3 questions. I haven't actually asked him yet. We will
 4 see.
 5 Yes, Mr Millett.
 6 MR MILLETT: I do have a few questions, Dr Barker. They
 7 shouldn't take too long, Mr Chairman.
 8 First, in your experience, were the agreed fees for
 9 this job, by which I mean the production of the existing
 10 fire safety strategy as per the 11 June fee proposal,
 11 unusually high or unusually low, or usual, considering
 12 the time that would be required to do a proper job?
 13 A. With hindsight, and if the project had been run
 14 completely from London, I still think they were a little
 15 bit on the low side.
 16 Q. Can you give us an idea of how much on the low side, do
 17 you think?
 18 A. I would envisage it being possibly 50% higher.
 19 Q. I see. Do you know, or did you know, why they were set
 20 a little bit on the low side, as you say?
 21 A. No. No, I don't know. It could possibly be due to the
 22 fact that, as James prepared the fee proposal, he was
 23 intending to carry out the work himself, so he allowed
 24 for the amount of time that he would spend on it, based
 25 on his charge rate.

174

1 Q. I see. Do you know why he left?
 2 A. I don't.
 3 Q. Have you previously worked on an existing fire safety
 4 strategy for a private or luxury project?
 5 A. Er ...
 6 Q. They're not necessarily the same thing, but ...
 7 A. Off the top of my head, I can't remember if I have
 8 worked for a private or luxury project, but I have done
 9 existing building fire strategies.
 10 Q. Let me ask it differently: would Exova's proposed
 11 fees -- so hourly rate, numbers of hours allocated to
 12 the task -- be the same regardless of whether the
 13 project was a luxury development in a high-end part of
 14 town or a simple private development, or social housing?
 15 A. No, I don't think -- I don't think they would -- I don't
 16 think we would charge a premium rate because we were
 17 working on more expensive --
 18 Q. Right.
 19 A. -- apartments.
 20 Q. Are you aware of Cate Cooney's email which described
 21 making a "crap condition worse" --
 22 A. Yes.
 23 Q. -- which we looked at when she gave evidence?
 24 A. Yes.
 25 Q. Given that, did you see this job essentially to be

175

1 a paper exercise whose aim was to pass Building Control
 2 rather than as an actual strategy to ensure that lives
 3 were saved in the building?
 4 A. No, I don't think it was just a paper exercise. I think
 5 Cate's email, rather bluntly, was referring to one
 6 particular aspect of the design which didn't comply with
 7 Approved Document B and needed addressing.
 8 Q. Now, we looked earlier in the afternoon at your evidence
 9 about the compartmentation and the need for
 10 an investigation into the build-up of the compartment
 11 walls.
 12 At the time of this draft, August 2012, were you
 13 aware of compartment fires or fires on the exterior of
 14 buildings in the UK or elsewhere?
 15 A. Yes, there had been the fire at Lakanal House --
 16 Q. Yes.
 17 A. -- a few years before.
 18 Q. In 2009.
 19 A. Yes.
 20 Q. At this stage, of course, you may or may not remember,
 21 the coroner had not yet delivered her report, and
 22 I don't think the inquest hearings had yet happened, but
 23 to what extent was the Lakanal experience in your mind
 24 when reviewing Ms Cooney's draft for this building?
 25 (Pause)

176

| | | | |
|----|---|----|--|
| 1 | A. I don't -- I don't actually think I considered it. | 1 | |
| 2 | Q. So does that tell us that the fact that it was | 2 | INDEX |
| 3 | a high-rise residential building did not raise | 3 | DR CLARE BARKER (affirmed)3 |
| 4 | a particular flag about the risk of fires? | 4 | Questions from COUNSEL TO THE INQUIRY4 |
| 5 | (Pause) | 5 | |
| 6 | A. No. No. | 6 | |
| 7 | Q. What experience did you yourself have of refurbishment | 7 | |
| 8 | like this involving a substantial change to the exterior | 8 | |
| 9 | of a relatively old building? | 9 | |
| 10 | (Pause) | 10 | |
| 11 | A. I can't remember. I don't actually think I had worked | 11 | |
| 12 | on a project that was a refurbishment of that scale | 12 | |
| 13 | before. | 13 | |
| 14 | MR MILLETT: Yes, thank you. | 14 | |
| 15 | Thank you very much, Dr Barker. | 15 | |
| 16 | Mr Chairman, I have no further questions. | 16 | |
| 17 | Ms Panel Member, no further questions. | 17 | |
| 18 | Thank you very much indeed for coming here and | 18 | |
| 19 | assisting us with our investigations. We are extremely | 19 | |
| 20 | grateful to you. Thank you. | 20 | |
| 21 | THE WITNESS: Thank you. | 21 | |
| 22 | SIR MARTIN MOORE-BICK: I echo that, Dr Barker, thank you | 22 | |
| 23 | very much for coming. It's a bit of a journey, and I'm | 23 | |
| 24 | glad we got your evidence finished this afternoon. Back | 24 | |
| 25 | to Warrington this evening? | 25 | |

177

179

| | | |
|----|---|-----|
| 1 | THE WITNESS: Tomorrow. | 179 |
| 2 | SIR MARTIN MOORE-BICK: Tomorrow, good, that's not so | 180 |
| 3 | rushed. | |
| 4 | Anyway, thank you very much for coming, you're free | |
| 5 | to go. | |
| 6 | THE WITNESS: Thank you. | |
| 7 | (The witness withdrew) | |
| 8 | SIR MARTIN MOORE-BICK: Yes, thank you, Mr Millett. Well, | |
| 9 | that's it for the day, then. | |
| 10 | MR MILLETT: It is, Mr Chairman, yes. | |
| 11 | SIR MARTIN MOORE-BICK: Nearly finished in time. | |
| 12 | MR MILLETT: Almost, I'm getting better. | |
| 13 | Ms Grange will be here in my place tomorrow and | |
| 14 | I shall be in hers, and we have the next witness, | |
| 15 | Mr Ashton. | |
| 16 | SIR MARTIN MOORE-BICK: Good. Thank you very much. That | |
| 17 | will be 10 o'clock? | |
| 18 | MR MILLETT: 10 o'clock. Thank you. | |
| 19 | SIR MARTIN MOORE-BICK: Thank you, 10 o'clock tomorrow. | |
| 20 | Thank you. | |
| 21 | (4.15 pm) | |
| 22 | (The hearing adjourned until 10 am on Tuesday, 7 July 2020) | |
| 23 | | |
| 24 | | |
| 25 | | |

178

| A | | | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | adequacy (2) 8:25 | allowances (2) 82:4,6 | 122:1 | 125:17 127:18 128:2 | 110:6,13,21 | 95:15 121:5,18 125:5 |
| | 10:11 | allowed (3) 105:12 | anyway (2) 87:15 178:4 | 130:10 132:9,15,17 | 111:1,8,16 112:16,19 | 132:13 169:15 176:12 |
| | adequate (4) 3:5 12:20 | 115:17 174:23 | anywhere (4) 104:16,20 | 142:3 166:2 | 120:21,24 | augustearly (1) 92:24 |
| able (9) 3:3 26:11 59:9 | 156:10 173:5 | allows (1) 155:15 | 110:7 170:19 | arent (5) 131:2 143:21 | 121:8,13,16,25 122:8 | author (2) 34:17 72:22 |
| 119:21 124:2 130:1 | adjacent (1) 150:17 | alludes (1) 164:18 | apart (2) 104:24 144:14 | 147:13,22 173:13 | 123:8,13,19,21,25 | authored (1) 75:8 |
| 138:5 146:5,25 | adjourned (1) 178:22 | almost (2) 123:15 | apartment (1) 141:19 | around (7) 4:5 99:15 | 124:1,5 125:16,20 | authorities (2) 17:6 |
| above (5) 5:4 22:25 | admin (1) 98:14 | 178:12 | apartments (6) 122:17 | 110:16 118:4 141:18 | 126:9,13,16 | 50:25 |
| 70:8 92:14 165:17 | adopt (1) 136:18 | along (3) 16:9,12 96:13 | 123:22,24 124:6 158:1 | 154:17 155:11 | 127:6,13,20,23 128:23 | authority (2) 49:14 |
| absence (4) 19:13 23:6 | advance (1) 66:23 | alongside (3) 68:8 | 175:19 | arranged (1) 96:25 | 132:16 133:4 151:6,9 | 100:15 |
| 53:25 55:12 | advanced (1) 2:1 | 71:11 157:20 | apologies (2) 52:24 | arrangement (1) 151:17 | 152:7,10,11 158:19 | automatic (2) 130:11 |
| absent (3) 19:22 40:8 | adverse (1) 159:2 | already (4) 63:9 118:17 | 57:17 | arrangements (2) 67:22 | 160:10 166:13 | 165:20 |
| 43:15 | advice (7) 3:8 9:1 10:18 | 119:2,8 | apologise (1) 127:1 | 135:16 | assessments (1) 135:17 | available (5) 5:18 16:5 |
| absolutely (1) 139:12 | 27:21 126:12 149:2 | also (38) 4:18,25 6:2,19 | appear (2) 138:3,6 | arrive (2) 131:8 162:16 | assessor (2) 29:23,24 | 20:6 78:18 164:24 |
| absorb (1) 75:16 | 151:22 | 7:22,25 10:15 18:19 | appearances (3) | arrives (1) 62:5 | assigned (3) 41:7,20 | avoided (1) 1:7 |
| accept (7) 51:9,11 | advise (4) 2:16 3:15 | 29:6,25 38:4 40:9,12 | 133:6,11 138:13 | 78:4 | 78:4 | awake (1) 140:20 |
| 129:8 160:8 162:2 | 143:1 148:20 | 44:8 51:8 57:11 76:16 | appears (4) 132:22 | art00000404 (1) 96:9 | assignment (1) 42:7 | aware (14) 46:6 64:25 |
| 164:1 172:11 | advised (1) 111:22 | 89:7 91:19 106:23 | 166:5 167:2,13 | art000004042 (1) 96:16 | assist (2) 31:9 70:20 | 65:2 83:20,24,25 |
| acceptable (8) 48:14 | advising (2) 50:9 103:10 | 120:9 124:16 125:9 | appendix (1) 84:13 | artelia (1) 21:6 | assistance (7) 58:16,18 | 95:20 105:7 111:20,20 |
| 133:3 166:12 | afd (2) 130:12 132:10 | 126:14 127:13 131:14 | appleyards (4) 21:5 | article (2) 106:2,10 | 141:4 142:9 146:25 | 131:25 132:5 175:20 |
| 168:5,7,12,14 172:5 | affect (2) 157:8,8 | 134:3 135:20 142:17 | 47:14 62:1 96:11 | ashton (28) 9:19 18:17 | 147:2 157:23 | 176:13 |
| acceptance (7) 16:22 | affected (3) 2:22 | 145:25 146:21 150:14 | appliance (1) 158:25 | 43:6 48:10 | assisting (2) 142:8 | away (1) 56:15 |
| 25:2 47:14,18 62:2 | 141:12 162:6 | 152:3 155:12 161:10 | applied (2) 6:18 114:19 | 49:7,11,21,24 51:17 | 177:19 | |
| 63:11 84:9 | affirmed (2) 3:23 179:3 | 165:15 169:24 170:3 | apply (4) 51:4 81:25 | 52:23 55:3,10 59:3 | assume (9) 32:17 36:18 | |
| accepted (7) 55:18,19 | afford (1) 107:6 | alterations (1) 58:23 | 101:1,2 | 91:6,23 92:15,19 | 37:3,24 115:11,16 | |
| 62:1,8,15 65:22 162:7 | afraid (5) 19:2 78:24 | alternative (1) 85:1 | 94:3,11 95:11 | 96:2,6,12 97:2,5,19 | 116:3 150:23 165:1 | b (47) 15:4 16:3,24 |
| access (12) 74:12 101:2 | 99:15 106:16 127:1 | although (5) 11:9 27:15 | 98:7 178:15 | 98:7 178:15 | assumed (14) 34:8 | 17:2,4,9,16 38:20,21 |
| 109:6 113:12 114:24 | after (21) 8:6 21:6 | 70:23 99:10 102:20 | appraisal (5) 33:19,23 | aside (1) 83:20 | 62:25 88:7 113:2 | 39:4,10 50:25 51:2 |
| 122:19 132:15 | 31:22 35:6,16,17,17 | 12:13,14,16,24 42:24 | 34:2,14 37:25 | ask (55) 4:16,17 5:2 | 116:6 119:11 121:15 | 65:12,13,23 66:2,7,12 |
| 145:22,23 146:5,10 | 37:17 52:8 80:6 87:9 | 84:4 141:20 | appreciate (2) 4:14 | 11:3 13:12 14:11 | 136:24 139:8,23 | 68:11 71:19 72:11,12 |
| 152:5 | 88:7 97:5 98:2 | ambiguous (2) 135:20 | 75:12 | 17:25 24:2 28:2 45:14 | 142:13 150:6 154:1 | 81:19,19 100:7,14 |
| accessible (2) 3:10 65:5 | 117:15,17,19,24 | 136:5 | appreciated (1) 76:16 | 57:15 58:17 59:8 | 156:12 | 101:11,25 102:8 115:3 |
| accommodate (1) | 138:24 158:8 171:4 | 136:5 | approach (4) 16:6 69:14 | 67:25 68:2,15 69:4,7 | assuming (2) 94:9 111:2 | 127:18 140:6,13 141:7 |
| 146:19 | afternoon (10) 21:5 | 109:16 124:9 | 101:16 124:9 | 70:17 72:16 82:10 | assumption (24) 33:18 | 143:9 148:3 149:14 |
| accompanying (1) | 47:8 61:18 91:12 | 155:18 169:3 170:24 | 100:16 124:9 | 86:25 90:22 94:6 96:9 | 34:1 38:22 114:7,10 | 150:14,19 153:18 |
| 127:14 | 96:11 112:22 130:6 | amended (1) 100:21 | 109:16 124:9 | 108:1 109:3 110:20 | 115:20 121:17 122:4 | 154:13 155:11 160:18 |
| accordance (1) 116:4 | 172:21 176:8 177:24 | amendment (4) 29:7 | 109:16 124:9 | 111:6 117:20 | 130:24 131:12,18,19 | 164:20 166:23 176:7 |
| according (2) 98:23 | again (32) 2:10 8:24 | 100:3 113:18 114:19 | 109:16 124:9 | 119:2,5,13 120:17 | 142:16 150:13,14,19 | b1 (5) (5) 10:13 57:7 |
| 115:5 | 14:24 19:2 22:15 | amendments (2) | 109:16 124:9 | 153:2,11 154:1 | 151:25 152:11 166:20 | 72:14,15 85:21 |
| accordingly (1) 153:7 | 31:12 33:12 43:20 | 113:9,15 | 109:16 124:9 | 129:1 130:7 136:9 | 167:7,17,18,19 171:12 | blv (1) 146:22 |
| account (2) 146:9 | 56:10 62:9 74:4 79:2 | amends (1) 139:6 | 109:16 124:9 | 140:2 141:3 145:14 | assumptions (16) | b5 (7) 10:13 57:7 |
| 148:18 | 107:5 115:6 125:16 | amount (2) 78:18 | 109:16 124:9 | 150:20,22 151:14,20 | 110:25 111:7,14 | 72:14,15 85:22 109:6 |
| accurate (2) 111:9,15 | 127:3,16 133:14 134:6 | 174:24 | 109:16 124:9 | 152:25 153:13 156:25 | 116:10 129:4,11,15 | 115:3 |
| accurately (2) 4:20 43:4 | 138:12 139:17 143:7 | analyse (2) 124:2 | 109:16 124:9 | 157:13 161:2 163:5 | 136:24 137:9 | back (67) 9:12,18 17:20 |
| achievable (2) 53:8 | 147:5,7 155:10,18 | 152:25 | 109:16 124:9 | 173:12 175:10 | 139:2,15,25 149:15 | 22:2,15 25:11 31:23 |
| 57:22 | 157:1,12,16 163:16 | analysed (1) 153:1 | 109:16 124:9 | asked (22) 9:9 12:25 | 164:23 166:16 171:22 | 33:12 39:25 41:13 |
| achieved (1) 10:25 | 169:7,8 | analyses (3) 69:16,20 | 109:16 124:9 | 13:8 18:22 27:24 | attached (3) 21:23 | 42:23,24,25 48:10 |
| achieves (1) 134:2 | against (8) 9:1 17:17 | 82:2 | 109:16 124:9 | 40:16 55:13,15 56:6 | 53:13 58:14 | 53:25 56:10 57:15 |
| acting (3) 9:25 10:15 | 29:4 39:5 99:22 | analysis (7) 16:16,20 | 109:16 124:9 | 58:15 61:4,7 68:5,19 | attaching (1) 125:5 | 60:8,11 66:15 71:7 |
| 40:25 | 102:22 103:5 115:7 | 106:9 122:1,3 124:16 | 109:16 124:9 | 86:25 94:13 97:14 | attachment (1) 94:3 | 72:16 73:7 75:14 |
| action (9) 23:4 | age (3) 23:12,13 146:4 | 127:12 | 109:16 124:9 | 117:14 125:6 128:19 | attachments (2) 22:4 | 76:18 78:25 79:8 |
| 125:9,19,24 126:8,17 | agenda (1) 64:5 | andrew (9) 9:9 17:24 | 109:16 124:9 | 148:15 174:3 | 64:11 | 80:15 87:4,9 88:11,13 |
| 127:15 128:6,20 | ago (8) 17:24 35:3 | 18:2,13 21:21 51:15 | 109:16 124:9 | asking (4) 10:7 54:25 | attempt (1) 156:3 | 90:19 91:13 92:4,19 |
| actions (1) 139:8 | 66:16 92:14 160:25 | 52:4 56:1 66:20 | 109:16 124:9 | 83:18 92:5 | attempted (1) 111:18 | 93:2,4,5,7 97:5 99:17 |
| activates (1) 131:15 | 161:4 162:22 163:12 | annual (4) 48:12,23 | 109:16 124:9 | aspect (2) 164:16 176:6 | attend (8) 2:23 9:10 | 102:19 107:9,25 |
| active (1) 1:14 | agree (11) 11:21,23 | 49:9 56:1 | 109:16 124:9 | aspects (3) 1:19 12:8 | 18:16,17,20 20:6 27:5 | 108:25 112:21,23 |
| acts (9) 29:7 | 12:12 27:10 69:4,5,22 | another (7) 16:5,15 | 109:16 124:9 | 106:24 | 40:16 | 116:24 125:14,15 |
| 100:3,12,21 101:15 | 89:4,8 169:11 170:7 | 119:21 132:18 | 109:16 124:9 | assembly (2) 140:6 | attended (9) 6:19,20 | 126:24 127:2 129:1 |
| 113:9,14,18 114:19 | agreed (2) 25:5 174:8 | 143:15,21 144:10 | 109:16 124:9 | 142:2 | 20:25 21:14,16 58:6 | 135:23 137:16,20 |
| actual (2) 152:5 176:2 | agreeing (2) 24:23 82:5 | answer (4) 59:9 123:17 | 109:16 124:9 | assess (8) 17:17 65:12 | 64:7 130:2 163:14 | 140:2 147:25 148:15 |
| actually (18) 8:11 42:6 | agreement (1) 33:25 | 145:13 152:17 | 109:16 124:9 | 101:4 102:8,14 103:5 | attending (2) 161:14,21 | 158:7 160:23,24 |
| 46:16 47:1 51:19 56:4 | ahead (1) 66:23 | answers (2) 145:12 | 109:16 124:9 | 120:18 124:2 | attorney (1) 2:3 | 162:21 169:12 172:1 |
| 73:10 100:8 108:9 | aim (3) 28:22 47:24 | 147:24 | 109:16 124:9 | assessed (10) 29:3 | audible (2) 104:7 | 177:24 |
| 112:18 123:20 126:15 | 176:1 | anticipated (1) 19:22 | 109:16 124:9 | 99:22 100:5,6 101:3,6 | 131:16 | background (4) 5:20 |
| 131:11 152:12 166:16 | air (1) 133:25 | anybody (10) 5:12,18 | 109:16 124:9 | 102:22 115:7 154:4 | august (48) 9:14 13:14 | 73:2 74:25 76:4 |
| 174:3 177:1,11 | alarm (4) 104:7 131:16 | 38:8,11 51:13 66:12 | 109:16 124:9 | 165:21 | 41:13 47:2 | bar (1) 77:11 |
| ad (1) 67:2 | 162:5,5 | 91:23 95:13 147:19 | 109:16 124:9 | assesses (1) 10:10 | 48:1,5,11,13,16 49:9 | barker (50) |
| adb (7) 57:8 100:22 | alarms (1) 106:6 | 156:2 | 109:16 124:9 | assessment (65) 27:17 | 51:16 52:22 53:1 54:6 | 3:18,22,23,24 4:10 |
| 142:13 143:13 145:11 | albeit (2) 2:6 147:16 | anymore (1) 48:22 | 109:16 124:9 | 29:2,14,21 44:9 45:24 | 55:4 56:2,5 57:15 | 17:21 27:1 33:12 |
| 147:8 148:16 | allocated (2) 51:23 | anyone (4) 60:13 | 109:16 124:9 | 65:24 66:2 71:20 72:1 | 62:12,16 63:17,20 | 46:19,21 60:7,22,25 |
| add (1) 20:21 | 175:11 | 107:10 144:22 173:19 | 109:16 124:9 | 99:25 100:25 | 64:3 67:7,12,19 | 61:16 68:19 70:2 72:4 |
| additional (1) 146:19 | allocating (1) 47:22 | anything (10) 17:12 | 109:16 124:9 | 101:7,9,13 102:14,25 | 68:5,19 70:3,12 72:22 | 79:21 80:24 84:17 |
| addressed (4) 28:10 | allocation (1) 46:23 | 35:25 36:1,2,4,10 | 109:16 124:9 | 103:8 | 73:5,6 79:19 82:12 | 87:8 96:5 99:4 100:13 |
| 140:24 146:18 172:13 | allow (1) 2:21 | 37:20 65:21 108:10 | 109:16 124:9 | 109:13,19,21,24,25 | 91:6 93:1,5,8,12,14 | 101:11,19 106:22 |
| addressing (1) 176:7 | | | | | | 107:8,25 112:19 |

| | | | | | | |
|---|---|--|---|--|--|--|
| 120:16 122:14 127:1 128:4 134:6 144:3,19,20 145:4,11 154:7 168:21 171:21 172:19 173:11 174:1,6 177:15,22 179:3 barrier (3) 154:8,17 155:12 barriers (10) 28:4 146:2 154:1,11,17,24 155:11 156:11,12,15 base (2) 133:25 169:21 based (15) 14:16 33:18 39:19 40:12 43:5 69:15,16 98:15 114:7 120:25 131:19 149:15 152:12 167:19 174:24 baseline (5) 160:13,17 169:10 170:2 171:9 basic (1) 85:21 basically (2) 15:23 43:21 basis (22) 25:5 34:1 65:23 66:2 67:2 69:1 75:11 81:12 124:9 130:23 133:6,11 134:7 137:1 138:13 146:20 150:12 152:15 166:16,20 167:7,16 bearing (1) 93:12 bears (1) 134:21 became (4) 9:8 21:5 37:16 170:2 become (2) 2:5 88:6 becoming (1) 92:21 before (37) 2:24 4:1 5:12 8:12 21:24 26:12 37:10 47:25 48:23 56:5 57:21 60:13 61:14,16 67:11 80:17,24 90:7,22 94:10 98:9 99:21 108:18 116:16 117:13 118:23 119:19 126:16 132:13 148:15 160:22 163:15 166:9,14 172:8 176:17 177:13 beforehand (1) 16:18 began (1) 117:17 beginning (1) 137:21 begun (1) 1:12 behaviour (3) 6:21 10:14 16:16 behind (1) 96:20 being (29) 2:19,24 15:25 23:22 24:20 26:11 27:23 36:1 37:2 56:15 74:23 79:20 86:1 93:2 95:20,22 100:5,6 113:15 118:25 126:12 129:22 151:7,7 155:14,16 160:22 170:6 174:18 belief (1) 81:12 believe (13) 44:9 45:21 63:6 67:16 78:2 81:3 82:14,22 88:3 94:13 97:13 123:5 161:18 below (4) 9:15 55:14 87:9 91:14 benchmark (3) 39:4 81:20 103:16 benefit (1) 1:16 | best (3) 34:1 128:22 143:8 better (5) 48:11 49:7 108:11 144:17 178:12 between (27) 4:5 8:9 18:13 20:13 62:14 73:6 77:16 81:5 88:8 91:4 93:6,11 97:21 99:15 123:14 126:20 138:4 150:16,17 153:24,25 154:8 155:7,8,13 161:1,17 beyond (4) 150:7 157:4 161:12,19 big (6) 155:16 165:14 168:8,10,13,17 bill (2) 79:5,24 billable (1) 80:1 billed (3) 78:13,22 79:3 billing (2) 78:4 98:19 bit (25) 11:2 20:15 33:13 36:8 37:4 39:8 48:8 51:16 54:3,9 59:18 74:21 87:11 90:7 93:4 103:24 129:3 142:22,23 145:7 173:2,16 174:15,20 177:23 block (1) 143:1 blocks (2) 8:7 52:19 blowing (1) 122:15 blunt (1) 79:20 bluntly (2) 142:23 176:5 bodies (1) 7:2 bold (1) 126:9 both (10) 1:21 55:25 67:19 76:15 79:18 99:11 132:2 134:2 146:6 154:12 bottom (11) 21:8,9 22:25 25:19 68:4 77:12 101:12 104:3 108:18,20 122:13 bounce (1) 91:13 boxing (3) 30:10,15 122:18 break (15) 4:2 46:9 60:6,20 107:8,19 109:1 143:21 144:7,21 145:2 148:16 172:22 173:15,24 breaks (2) 3:5 59:21 brick (1) 25:13 brief (4) 28:13 57:6,14 79:15 briefly (3) 9:5 61:22 163:13 brigade (1) 162:16 british (1) 13:13 broke (1) 108:25 bruce (17) 9:17 19:6 40:15 44:10 47:5,8 55:14,18 56:25 61:18 63:6 79:8 88:3,8 91:6 92:3,7 brunel (1) 5:24 bs (3) 15:1 16:5,7 bsi00000037 (1) 135:23 bsi00000066 (1) 134:25 bsi0000006652 (1) 135:2 bsi00001716 (2) 13:13,17 | bsi0000171644 (1) 14:12 bsi000017167 (1) 13:24 building (215) 8:22 9:22,22 10:11,13 11:17,18,18,19,25 12:2,4,19,21,23,25 13:9 14:15 16:2 17:17 23:3,6,10,14,15,21,23 24:1,10 26:20 28:24 29:3,3,5,7,8,15,17,22 30:6,9,21 31:13,16 32:22,24,25 33:21 34:8,9,11 39:3 41:16,18 44:4,5,6,7,8,9 45:12,19 46:4 47:15 49:15 50:4,6,13,15,22,23 51:8,11 55:16 58:3 61:6 62:20 65:12 66:4 70:23 71:7 73:2 74:25 75:25 81:18,21,23 82:5 96:23 99:22 100:3,5,10,12,19,21 101:3,5,6,14,22,23 102:6,7,11,14,21,23 103:5,7,9,11,13,15,17,18,19,20,14 105:1,2,12 106:10,12 109:10 110:14 112:3,7 113:3,5,6,7,9,10,14,18 114:1,19,20,25 115:7,9,13,25 116:3,12,15,18,19,19 119:12 120:13,22 121:10,15 123:25 124:10,23 127:7,11,17,21,23 129:16,18,21,25 130:20 135:14,19 140:19,25 141:20 142:9,21 145:22,24 146:9,10,13 148:6 150:9,16 151:16,18 152:13,24 153:3,7,9,19 156:4,9,20 158:3,6,22 159:4,6 160:6,20,21 168:22 169:20,23 170:1,5,20 171:20 173:3 175:9 176:1,3,24 177:3,9 buildings (20) 24:5 32:10 50:10 101:9 104:8 113:25 114:1 117:9 141:7,9 143:10 145:22,24 146:3,5,17 147:17 148:12 164:5 176:14 buildup (4) 151:5,11,23 176:10 built (7) 50:23 113:3 115:13,18,25 137:11 147:17 bulk (1) 106:25 bullet (3) 84:16 150:4 161:5 busy (1) 79:18 <div>C</div> c (9) 49:8 53:4,22 56:18,23,24 57:2,5,18 calculate (1) 16:13 | calculations (1) 82:3 call (12) 1:10 2:1 3:22 18:15 30:25 64:6 73:8 86:8 93:18 130:12 132:11 135:25 called (1) 125:8 calling (1) 107:1 calls (1) 59:2 came (9) 23:21 42:23,24 53:25 58:6 75:19 87:4 88:11 162:11 cannot (1) 61:7 cant (40) 8:11 19:17 26:17 44:18,20 45:15 52:6 55:2 62:25 63:14 65:4,17 67:4 70:23 71:4,9,15,22 73:12,25 74:1,4,17 80:9,14 83:17 89:15 93:24 94:25 105:25 106:1 108:11 110:6 114:11 143:13 149:6 159:12 171:25 175:7 177:11 capabilities (3) 73:2 74:25 76:3 capable (3) 1:14 14:5 19,20,14 capacity (8) 20:19,20 40:13,15 43:17 52:1,4 61:9 carbon (1) 6:2 care (1) 90:15 careful (1) 84:6 carl (3) 72:1 120:25 122:7 carried (15) 29:21 41:19 66:16 90:8 103:4 117:23 118:23 119:11,14 120:18 121:22 129:22 151:12 161:13,20 carry (9) 27:16 28:14 40:7 45:20 60:22 62:11 100:24 107:21 174:23 carrying (8) 8:15 10:3 33:1 34:13 45:5 54:2 101:7 102:14 casts (1) 165:15 cate (36) 3:13 9:14,21 10:7 28:14 39:8 41:25 42:1 44:9 55:15,25 58:20 61:1,4 63:6,18 64:18 69:25 76:16 77:18 81:5 85:23 87:7,13 89:1 90:11 91:13 98:24 108:10 139:3 156:2 160:12 164:18 168:6,17 175:20 cates (3) 67:18 82:3 176:5 caveats (1) 31:21 cavities (2) 153:24 155:6 cavity (14) 28:4 154:1,8,11,16,17,24 155:11,12,15,15 156:11,12,15 ce (1) 48:12 cease (1) 88:5 ceilings (2) 153:25 | 155:8 centimetres (1) 168:15 certain (6) 12:8 29:18,19,19 91:4 146:12 certified (1) 82:12 cetera (3) 30:1 104:8 165:2 chain (4) 47:1,3 55:3 57:16 chairman (16) 3:20 4:7 46:8 59:14 60:9 80:23 102:18 106:16 145:10 159:23 172:20 173:4,10 174:7 177:16 178:10 chance (3) 60:7 75:16 110:10 change (1) 177:8 changed (3) 40:5 121:10 134:11 changes (4) 2:14 95:20 121:15 135:19 changing (1) 28:9 characteristics (2) 140:11,23 charge (3) 40:11 174:25 175:16 chart (1) 84:13 chase (5) 22:1,7 63:7 128:10 168:20 check (11) 22:3 29:23,24,25 71:14 76:9 84:18 86:10 116:17 130:23 173:13 checked (15) 31:13,17 85:24 86:13 131:18 132:13,25 138:6,19,22 165:5 166:8 167:5,19,21 checking (4) 8:25 90:23 124:3 152:21 checks (3) 80:25 81:11 136:7 cheers (1) 94:5 chelsea (1) 99:10 circumstances (3) 48:20 116:15 146:11 cited (1) 69:18 clad (1) 25:14 cladding (11) 25:21 26:1,19 27:18,22 28:5 58:10,11 153:25 155:7,13 clare (9) 3:18,22,23 18:2 27:5 70:6 92:16 94:5 179:3 clarification (1) 172:18 clarifications (1) 85:22 clarified (6) 31:22 85:14 108:14 137:3 171:6 172:8 clarify (1) 139:24 clear (19) 1:6,17 26:24 29:25 54:13 59:20 68:25 97:9 99:8,11 132:1 139:13 154:10,23 155:19 157:6,13,13 169:4 clearance (1) 16:14 clearer (2) 111:12 171:5 clg0000017314 (1) 145:14 | clg0000017318 (1) 146:21 client (17) 8:16 41:1 44:24 45:1 53:4 75:14 85:2,5 90:9,15,16,17,24 99:12 105:11,16 132:2 clients (1) 85:2 clock (1) 143:18 closely (2) 3:7 74:21 closure (1) 84:1 club (3) 30:10,15 122:18 code (11) 15:4 39:11,12 51:5 100:6 101:4,5,21 113:8 115:1 148:3 codes (22) 6:15 14:4,21 29:4 38:16,19 50:5,14 69:16,19 99:23 100:9,18 101:19,24,24 102:9,22 103:6 114:22 115:8 120:12 coldeyed (1) 76:4 collate (1) 3:6 collation (1) 136:3 colleague (2) 48:10 139:1 colleagues (1) 8:16 column (1) 146:14 columns (1) 25:14 combination (1) 14:3 come (24) 9:12,18 17:20 28:14 31:23 33:12 46:1 48:9 54:11 56:10 60:8 76:24 83:18 86:16 93:5 95:12 97:5 107:9 112:21 123:6 137:20 160:23 171:8 172:20 comes (1) 63:11 comfortable (1) 3:25 coming (13) 4:13 5:12 59:22 92:19 93:7 102:19 107:25 147:25 148:15 173:3 177:18,23 178:4 commencing (1) 35:18 comment (1) 80:4 comments (9) 72:19,20 73:1 74:24 75:3,18,20 85:4 87:3 commentsreservations (1) 53:7 commission (1) 119:20 common (22) 31:2 44:11 51:2 57:8 87:2 101:10 104:2,5,7,15 122:4 124:7 131:13,19 136:19 150:17 162:9,10,14 164:6 165:1 166:2 commonly (1) 17:4 communal (1) 124:7 communicate (3) 93:15 147:15 172:16 communication (4) 81:4 132:1 141:22 147:14 community (2) 130:10 132:9 comparable (1) 113:11 comparing (2) 69:11 116:12 compartment (6) | 151:5,12,24 154:15 176:10,13 compartmentation (17) 33:21 34:3 38:2 150:2,6,24 151:2,20 152:12 156:4,9,20 157:3,7 159:3 161:1 176:9 competent (1) 76:17 compilation (2) 32:12 56:7 complete (7) 26:12 83:17 85:17 116:8 122:21 129:21 137:14 completed (11) 42:21 84:4,19,23 86:11,14,17 95:3 98:21 169:19 171:13 completely (3) 147:8,10 174:14 completing (1) 169:22 completion (5) 82:24 83:15,23 89:2 94:22 compliance (9) 32:1 51:1 69:18 78:19 103:17 105:1 127:17 145:24 152:18 compliant (3) 105:17,18 116:19 complied (5) 15:13 81:13,17 103:11 106:10 complies (1) 12:18 comply (8) 2:11 57:12 82:8 103:19 105:12 138:20 142:6 176:6 complying (1) 15:15 components (1) 11:19 composites (1) 6:2 comprehensive (1) 44:5 comprise (5) 14:17,25 15:10,14 22:4 concealed (2) 153:15,20 concern (3) 56:16 104:23 168:21 concerned (6) 56:14 104:16,25 123:2,12,19 concerns (1) 55:24 conclusions (1) 135:21 concrete (6) 25:15 34:9 151:1,1,7 152:14 concurrently (2) 129:23,24 condition (5) 77:24 109:17 121:4 134:1 175:21 conditions (5) 2:20 16:21 162:14,17 168:1 conduct (1) 88:19 conducted (5) 71:2 72:8 75:9 85:7 119:4 conducting (1) 71:17 conferences (2) 6:19,21 confidence (1) 154:5 confident (1) 56:23 confirm (4) 5:9 64:10 111:23 139:8 confirmed (3) 64:10 84:8 157:22 conflict (2) 161:16,18 confused (1) 54:12 confusion (2) 54:3,10 connected (1) 48:24 |
|---|---|--|---|--|--|--|

| | | | | | | |
|--------------------------|-------------------------|----------------------------|-------------------------|---------------------------|------------------------|------------------------|
| connection (1) 45:3 | 55:10 56:5 59:13 | cowlsprotrusions (1) 138:9 | delivered (1) 176:21 | 52:1,4 54:10,24 57:12 | 126:20,22 139:23 | 8:8,19 23:22 36:14,19 |
| consciousness (1) 148:17 | 61:1,4,7 62:11 | cp3 (1) 113:8 | demand (1) 78:20 | 58:17 59:7,8 62:17 | 152:1 | 48:25 49:2 51:17 |
| consider (20) 3:6 12:4 | 63:18,21 64:18,21 | cpd (1) 6:10 | demanding (1) 54:19 | 64:20 66:6,13 78:14 | discussions (7) 22:14 | 66:17,18 74:11,18,19 |
| 26:19 49:24 59:22 | 66:1,23 67:15 68:5 | crap (1) 175:21 | department (1) 98:20 | 79:5,8,11,12,14,21,24 | 66:23,25 67:3 93:6,11 | 78:11 83:14 88:14 |
| 90:23 97:12 110:10 | 69:25 70:1,18 71:17 | created (1) 146:2 | depend (2) 13:2 36:25 | 90:25 92:7 93:15 | 171:3 | 90:18 92:1,5,9 98:16 |
| 120:13 139:19 | 72:24 74:5 75:8 77:18 | criteria (4) 16:19,22 | depends (1) 12:15 | 95:16 103:19 108:6 | disposal (1) 2:15 | 116:6,16 118:21,24 |
| 140:10,16 141:8,25 | 81:5 86:25 87:7,13,17 | 29:8 146:22 | described (6) 16:7,8 | 112:13 115:18 116:22 | distance (15) | 119:2,9 120:22 123:21 |
| 142:18,19 143:5 146:2 | 89:1 95:14 98:24 | critical (6) 25:24 75:9 | 81:24 171:10,23 | 117:16 118:22 | 20:4,13,18,21,22 27:6 | 124:25 129:17,18 |
| 153:9 156:9 | 99:12 104:13 108:6,17 | 76:8,11,16 165:18 | 175:20 | 119:1,5,10,16,17,20,24 | 132:21 133:1 165:16 | 146:20 151:4 |
| considerably (1) 23:14 | 110:11 112:7 115:11 | critically (1) 132:2 | describes (4) 16:12 | 123:10 125:8,24 | 166:4,10 167:2 | 152:7,10,11 157:10 |
| consideration (4) | 116:3 119:25 121:21 | criticisms (1) 76:19 | 81:11 158:19 160:12 | 126:1,2,4,18,21 | 168:5,15,16 | 169:8 170:3,21 171:24 |
| 140:22 141:2,3 148:21 | 123:7 125:5 126:20 | crystal (3) 132:1 139:13 | description (4) 11:22 | 127:24 128:4,10 | distances (7) 57:9,12 | 172:9 175:8 |
| considered (13) 2:9 | 127:12 128:5,19 | 169:4 | 14:18 69:22 170:8 | 132:16 134:8 | 103:14 164:6,10,14 | dont (114) 1:12 5:16 |
| 26:11 68:9 108:9 | 130:23 133:5 134:7 | cst00000090 (1) 71:25 | design (70) 10:11 12:17 | 136:14,15 139:5,10,12 | 168:23 | 12:24 17:12 19:5 |
| 123:15 133:3 146:16 | 138:12 139:3 141:3 | cst00003114 (1) 99:7 | 14:16 16:2 22:14,18 | 143:5 147:10 148:9,11 | distracted (1) 52:25 | 20:14,18 23:8 |
| 150:9 152:25 159:1 | 148:19 150:12,22 | current (18) 13:14 44:8 | 29:3,4,5,15 38:16 | 151:13,21 152:4 153:4 | division (1) 48:6 | 24:12,16,20 26:5,5,7 |
| 166:12 172:5 177:1 | 151:10,21 153:1 | 71:20 103:14 | 39:11 41:12 50:24 | 154:22,25 155:18 | document (126) 9:13 | 27:3 31:25 36:1,9 |
| considering (2) 142:12 | 154:10 155:18 156:2 | 109:12 160:12,23 | 53:10 57:24 59:3,5 | 157:12 160:5 168:24 | 11:3 12:10 13:13,18 | 38:11 39:2 47:19 |
| 174:11 | 157:13 160:12 166:15 | 110:12 112:12 116:13 | 69:15,15,19 75:14 | 169:6 170:15,19,23 | 14:12 15:4 | 49:23 50:11 51:7 |
| constructed (7) | 167:7 171:9,21 172:11 | 121:16 133:3 138:20 | 85:14,25 87:4 88:2,9 | 176:6 | 16:3,7,10,12,15,24 | 52:6,8,9,20 54:23 |
| 23:18,22 24:11 34:11 | cooneys (26) 72:9,13 | 149:13 158:21 159:5 | 93:23 96:3,21 | difference (3) 82:7 | 17:2,4,5,7,9,16 21:20 | 58:8,20 59:23,25 |
| 152:13 153:19 170:6 | 73:1 76:3 78:5 79:25 | 166:12 | 99:21,22 | 154:8,9 | 22:24 38:20,21 | 60:13 62:10 63:6,11 |
| construction (2) 23:16 | 81:2,13 85:7 106:8 | currently (1) 134:2 | 100:6,9,10,18,19 | different (28) 4:17 | 39:4,10 40:19 50:25 | 64:14,24 66:25 73:13 |
| 170:4 | 108:3 111:9,13 122:22 | customary (1) 172:21 | 101:3,4,5,19,21,23,24 | 6:17,20 7:20,21 8:3 | 51:2 53:4 54:8 55:4,5 | 74:8,11,12,15,15 |
| consultancy (1) 84:4 | 123:1 124:3,9 125:23 | cutting (1) 168:20 | 102:6,9,21,22,23 | 16:1 30:11,20 37:2 | 56:18 57:6,14,18 | 75:2,7 76:6 77:24 |
| consultant (2) 36:23 | 136:11 142:24 148:1 | | 103:5,6,7 105:1 | 43:24 46:8 66:8 78:9 | 58:16 64:3,22 | 79:7,11 81:8,9,9 |
| 40:20 | 149:1 157:24 170:18 | | 108:12 113:7 114:22 | 79:13 81:25 82:1 99:2 | 65:12,13,23 | 82:14,19 83:9 86:23 |
| consultants (1) 3:14 | 175:20 176:24 | | 115:7,8,9 116:12 | 105:15 107:2 110:20 | 66:2,4,7,10,12 | 88:7,21 92:2,23 93:9 |
| contact (6) 41:1 45:3 | coordination (2) 25:21 | | 120:12 127:16 129:23 | 124:8 126:7 128:17 | 68:11,22 69:25 | 94:20 95:4 96:8 98:25 |
| 85:2 91:20 93:6 98:19 | 26:1 | dai (2) 18:19 19:3 | 131:22 138:25 145:15 | 129:19 131:6 132:16 | 71:19,23 72:4,11,12 | 99:13,25 101:17 103:2 |
| contacted (1) 44:10 | copied (8) 9:19 35:7,14 | dale (1) 122:18 | 148:3 152:2 171:4 | 140:17 | 74:14 75:12 77:12 | 105:21,22,24 107:10 |
| contain (1) 10:17 | 52:23 55:10 87:8 91:7 | date (13) 18:5 23:15 | 176:6 | differently (3) 28:3 37:7 | 79:1 80:10 | 108:9 110:5,9,23 |
| contained (3) 25:6 | 125:11 | 37:14 64:13 67:9,13 | designed (7) 2:12 71:7 | 175:10 | 81:10,19,19 | 111:5,6,11 112:20,20 |
| 115:1 131:18 | copy (10) 45:8 73:23,25 | 85:25 91:13 93:7 95:1 | 81:18 112:3 135:9,13 | difficult (1) 90:2 | 82:17,20,20 | 116:23 117:24 118:13 |
| content (4) 133:6 134:7 | 74:16,16 80:9,10 | 108:15 113:12 118:22 | 153:19 | difficulties (1) 145:13 | 83:4,16,19,20,21 | 120:8 121:20 128:9 |
| 136:22 138:13 | 91:22 118:14 163:17 | dated (4) 5:2 28:10 | designing (1) 101:25 | difficulty (1) 4:15 | 87:25 88:6 91:22 | 132:7,14 139:10,17 |
| contents (4) 5:9 | core (5) 1:23 2:22 3:2 | 53:14 72:1 | designs (4) 51:5 131:13 | digest (1) 94:9 | 92:11 94:6 96:6 99:16 | 144:6,21 151:17 |
| 75:4,10,11 | 161:7 162:24 | dates (2) 56:3 77:14 | 135:15,17 | digested (1) 131:23 | 100:7,14,14 101:11,25 | 155:2,20 156:7 157:15 |
| context (3) 9:7 135:10 | coronavirus (1) 1:8 | david (5) 18:4,18 40:10 | desk (1) 5:1 | dimensions (4) 137:24 | 102:8 107:3 110:1 | 161:18 173:19 174:21 |
| 160:17 | coroner (1) 176:21 | 51:20 61:25 | despite (1) 27:7 | 138:2,18 165:3 | 112:24 115:3 118:6 | 175:2,15,15,15 |
| continue (8) 3:7 32:5 | correct (13) 6:1 7:14 | day (23) 32:10 41:1,1 | detail (5) 9:19 71:2 | direct (1) 98:19 | 120:4 121:18 122:10 | 176:4,22 177:1,1,11 |
| 49:12 97:15 106:19 | 9:11 40:3 41:4 68:12 | 47:19 48:17,23 55:13 | 96:24 135:5,12 | direction (1) 57:9 | 125:3,12,21 | door (4) 29:18 124:1 |
| 122:14 135:18 138:7 | 69:13,17,21 78:1 | 56:5 64:3 | detailed (6) 33:19 | directly (2) 1:16 2:22 | 126:10,11,17 127:18 | 141:15,16 |
| continued (3) 1:23 | 100:13 112:13 120:20 | 67:3,10,14,17 70:12 | 135:15,17 | director (1) 40:12 | 128:11 134:21 | doors (7) 132:22,23 |
| 48:11 49:7 | correction (1) 103:23 | 73:20 78:8 81:6 94:2 | details (3) 27:16 84:8 | disabilities (1) 145:18 | 135:2,12,23 137:10,14 | 163:4 166:5,6 167:2,3 |
| continues (1) 155:22 | correctly (1) 53:16 | 113:4 115:14,19 117:8 | 138:8 | disability (3) 141:24 | 140:6,13 141:7 143:9 | dot (1) 99:15 |
| continuing (2) 33:14 | correctness (1) 116:9 | 178:9 | detection (4) 32:18 | 146:1,4 | 146:15 148:3 149:14 | double (1) 22:3 |
| 125:21 | correlates (1) 69:13 | day148889 (1) 74:8 | 130:11,18,24 | disable (3) 130:21,25 | 150:14,19 153:18 | doublechecked (1) |
| contract (1) 84:7 | correlation (1) 171:7 | days (4) 6:16 21:24 | 131:10,15 | 131:11 | 154:13 155:11 160:18 | 132:3 |
| contractor (1) 26:10 | correspondence (1) | 37:17 116:5 | detector (4) 130:19 | disabled (6) 141:10,21 | 164:12,20,22 166:23 | doubt (1) 165:15 |
| contradiction (2) 160:3 | 85:6 | daytoday (2) 7:19 8:5 | detectors (1) 106:5 | 142:4 147:12,13 | 169:11 171:14 176:7 | down (34) 3:25 4:13,19 |
| 161:16 | corridor (2) 164:6,7 | deadline (14) 47:25 | detects (1) 131:1 | 148:23 | documentation (1) 84:7 | 11:10 20:7 22:16 |
| contribute (1) 27:7 | corridors (1) 104:10 | 48:16,18,19 53:1,1 | determine (2) 84:22 | disagree (1) 80:2 | documents (16) 1:22 | 29:15 32:5 33:14,15 |
| control (18) 49:15 | couldnt (4) 52:25 63:15 | 54:5,6,12 63:9 | 139:8 | disappeared (1) 78:24 | 13:10 15:2 16:9 17:15 | 38:13 40:12 47:3 |
| 50:4,13 51:8,11 68:23 | 120:19 139:15 | 67:5,7,12,20 | develop (1) 1:13 | discharge (1) 139:22 | 45:22 63:21,24 | 48:21 58:6 70:2 74:18 |
| 73:2 74:25 75:25 | counsel (3) 3:3 4:9 | deal (1) 49:25 | developed (1) 116:4 | discharging (1) 31:10 | 64:5,9,13,25 71:16 | 77:15 78:8 79:12,13 |
| 82:11,21 96:23 104:10 | 179:4 | dealing (3) 19:25 75:24 | developing (2) 38:15 | disclosing (1) 1:23 | 78:3 84:21 127:14 | 87:7,12 92:12 |
| 131:7 161:13,20 168:3 | counted (1) 71:5 | 142:25 | 120:11 | discrimination (1) 146:1 | does (20) 22:4 26:14 | 120:9,10 133:19 |
| 176:1 | country (1) 1:11 | 154:21 | development (4) | discuss (11) 16:19 | 37:16 52:14 61:10 | 137:22,22 142:1,1 |
| convenient (4) 4:5 | couple (3) 44:10 | december (4) 72:1 | 6:10,11 175:13,14 | 19:15 45:22 66:11 | 72:7 78:16 81:1 96:6 | 147:2 158:18 165:13 |
| 46:10 106:17 107:3 | 73:12,14 | 121:6 122:8 125:10 | developments (3) | 67:2 72:21 91:20 97:2 | 106:11 120:20 123:1 | 3:18,22,23,24 |
| conversation (16) | course (11) 1:10 17:20 | decide (1) 88:10 | 113:12 116:2,7 | 119:25 123:7 153:4 | 143:9,14 150:1 151:6 | 4:10 17:21 27:1 33:12 |
| 38:5,9 39:10 54:23,24 | 31:24 44:15 76:24 | decided (3) 17:15,18 | develops (1) 16:11 | discussed (20) 5:11 | 160:2 162:24 171:8 | 46:19,21 60:7,22,25 |
| 92:8 94:24 95:21,23 | 93:13 107:14 108:2 | 41:18 | deviated (1) 80:12 | 18:2,7,13 25:9 28:6 | 177:2 | 61:16 69:7 70:2 72:4 |
| 97:13,21,23 98:2 | 112:21 173:7 176:20 | deem (1) 163:2 | deviations (1) 14:20 | 53:14 58:4 85:13 88:9 | doesnt (7) 12:1,3,5 | 76:18 79:21 80:15,24 |
| 117:13,16 119:18 | cover (2) 33:24 101:10 | defects (1) 157:7 | devoid (2) 147:8,10 | 92:18 93:20,25 97:23 | 101:10 138:20 141:15 | 81:1,11,25 84:17 87:8 |
| convey (1) 168:17 | covered (14) | defined (1) 13:25 | diagram (3) 154:12,13 | 108:14 121:24 131:22 | 143:24 | 96:5 99:4 100:13 |
| convinced (1) 53:15 | 122:11,16,23 123:8 | definition (1) 154:21 | 155:10 | 138:25 156:25 172:7 | doing (15) 9:4,25 10:4 | 101:11,19 106:22 |
| cooney (81) 3:13 | 124:4,16,18,19,23 | degree (8) 5:23 52:15 | didnt (90) 26:22 27:20 | discussing (3) 45:7 | 11:23 15:24 17:2,10 | 107:8,25 112:19 |
| 9:14,21 10:7 28:14 | 125:18 130:11 132:10 | 150:1,6,24 151:20 | 34:20,25 35:2 37:22 | 94:20 160:25 | 18:25 41:13 42:4 51:2 | 120:16 122:14 127:1 |
| 30:5 39:8,25 45:17 | 165:12 172:23 | 152:12 157:2 | 38:4,7 40:10,13,15 | discussion (14) 22:17 | 53:24 54:14 80:1 | 128:4 134:6 |
| 51:14 53:19 54:16 | covering (1) 27:5 | delay (2) 53:12 158:25 | 43:17 45:6,14 49:19 | 23:5 26:6,7 45:17 81:4 | 129:7 | 144:3,19,20 145:4,11 |
| | covers (2) 66:7 101:9 | delicately (1) 142:23 | | 87:11 88:12,22 94:21 | done (46) 2:17 6:13 | 154:7 168:21 171:21 |

| | | | | | | |
|--|--|---|--|--|---|---|
| 172:19 173:11 174:1,6 177:15,22 179:3 draft (118) 8:16 13:8 30:4,5 31:20 39:8 49:1 56:24 61:11 64:19 67:6,9 68:6,8,20,21 71:10,11,17 72:9,13,19,25 73:7,10 74:24 75:15 76:8 78:5 79:25 81:2,6,13 85:8,12,19 86:4,21 87:1,3,15,18,21 88:1,5,23 89:7,10,14,22 90:1,5 91:1,17,24 92:10 93:8,22 94:3,18 95:3,14 96:3,7,24 97:3 98:1,11,12,21 99:8,9,25 100:22 109:1 111:9 119:22,25 122:22 124:9 128:2,21 129:1,5,11 130:7,9 131:17,23 136:18,22 137:2,6,7,16 138:24 139:15,24 148:1,10,19 149:2 152:2 155:18 165:13,14 169:5 170:18,20 171:1,4,16,19 172:6,13,15 176:12,24 drafted (2) 64:23 118:25 drafter (1) 68:24 drafting (3) 28:15 62:11 66:24 drawing (2) 58:21 172:3 drawings (32) 36:5,5 44:6,7 45:13,24 46:2,6 62:17,21,23 63:4,7,12,15 68:9,20 70:8,19,20,25 71:5,12 138:3,16 151:14 156:22 157:20,23 164:14,15 168:10 drawingsdoc (1) 94:5 drawn (2) 19:2 20:2 dry (9) 109:13 158:12,21,24 159:1,11,15 160:1,11 due (17) 17:20 19:2,13 31:24 40:9,15 43:15 44:15 51:15 61:8 76:24 108:8 112:21 150:6 158:24 159:2 174:21 dunkerton (2) 91:7 125:4 during (16) 4:2 25:9 33:22 35:17 37:1 45:7 48:12 49:7 86:8 94:24 121:9 167:9,23 169:23 170:3,5 duties (2) 31:10 105:7 duty (2) 104:11,14 dwelling (3) 150:8 161:12,19 dwellings (2) 152:5,6 | earlier (17) 47:3 58:5 62:9 67:12 92:18 97:24 99:18 112:24 113:14 115:6 119:17 145:12 149:19 156:25 157:21 158:11 176:8 early (1) 96:25 eased (1) 2:19 easy (1) 107:1 eaten (1) 89:20 echo (1) 177:22 education (2) 6:22 49:22 effect (3) 50:19 94:21 159:2 effective (1) 171:8 efficacy (3) 156:8,20 157:8 eg (1) 69:15 either (9) 27:20,23 34:6 44:22,24 51:19 52:4 123:2 147:2 elaborate (1) 33:4 elaboration (1) 171:24 elapsed (1) 73:6 electrical (1) 122:18 electronic (5) 35:10 74:16 80:10 84:22 85:5 elegant (1) 134:21 elements (15) 10:22 33:20 34:12 38:1 81:14 82:8 84:18 85:13 86:11 154:2,4,19 155:24 159:4 171:11 else (16) 35:25 36:1,2 37:20 38:8,24 51:13 60:13 66:12 78:10 91:23 93:25 94:17 95:13 104:16 162:11 elsewhere (1) 176:14 email (52) 3:4 9:14,17 18:1,3,7,8,23 21:22,22 27:2 28:12 47:1,3,4,21 52:21 53:21 55:6,14 56:5,13 57:15,16 58:13 61:14,15 62:2 70:1,18 72:22 80:4 87:6,12 88:7,8 91:5 92:2,4,12,13,14 93:16,18 94:1,13 95:10 97:13 125:4 172:1 175:20 176:5 emailed (1) 44:25 emails (2) 63:17 73:5 emerge (1) 1:12 emergency (1) 147:14 employers (1) 146:2 enable (3) 2:18 59:21 64:18 end (4) 53:5 118:19,21 172:20 engaged (1) 3:15 engineer (13) 7:13,15,17 9:6 10:1,9,16 11:15 49:13 83:12 98:17 142:15 171:19 engineering (19) 6:12,16,17,22,24 10:3 14:5 15:24 16:20 39:22 48:6 49:17,22 | 52:14,15 66:6 69:16,20 82:2 engineers (1) 7:5 enhancements (1) 96:23 enough (7) 53:5 59:21 60:2 168:8,10,13,17 enquire (1) 95:13 ensure (17) 2:12 3:5,10 12:17 44:2 68:12,25 84:14 85:3 90:16 102:10 103:19 106:4 154:18 165:21 172:13 176:2 ensured (1) 1:21 ensuring (4) 12:22 69:12 95:2 103:10 entail (1) 84:19 enter (1) 162:8 entire (1) 62:14 entities (2) 30:11 123:16 entrance (7) 124:1 132:21,23 166:4,6 167:2,3 entry (1) 77:25 envisage (2) 31:8 174:18 envisaged (1) 39:18 equal (1) 68:23 equipment (1) 106:5 equipped (1) 106:4 er (1) 175:5 erection (1) 164:19 erm (1) 76:12 errors (1) 68:25 escape (17) 11:16 12:14,16,20,22 29:24 32:23 120:14 123:3,6 134:5 146:22 147:2,23 162:15 165:16 168:1 escaping (2) 141:4 162:8 essential (1) 2:9 essentially (6) 16:1,21 30:10 48:20 88:12 175:25 established (2) 96:22 117:19 establishing (1) 8:21 establishment (1) 6:23 et (3) 30:1 104:8 165:2 etc (1) 135:19 evacuate (6) 141:14,19 162:7,12,18 163:2 evacuating (1) 142:9 evacuation (29) 6:21 12:3 30:11,12,17,20,22,25 141:11 142:11 147:1,21 149:5,8,12,14,19,22,23 150:8 152:24 153:2,8 157:2 161:6,12,19 162:24 165:18 evc (1) 141:22 even (14) 1:12 2:21 54:5 86:3 101:13 102:25 118:25 128:21 129:10 137:6 148:4 152:7 156:18 171:1 evening (2) 79:19 177:25 | event (4) 60:16 131:2 141:5 149:4 ever (9) 58:18 59:5 83:8 86:10,16 90:23 95:13 97:18 152:21 every (2) 8:18 155:14 everybody (1) 135:10 everyone (2) 1:3 59:20 everything (1) 172:23 evidence (15) 1:21 2:10 3:13,17 4:13 5:11 60:14 74:5 107:11 144:22 169:14 173:19 175:23 176:8 177:24 evident (1) 84:5 exact (1) 84:3 exactly (3) 61:7 65:17 90:7 examination (2) 106:25 108:2 examine (8) 46:22 60:25 104:14 106:24 116:9 126:11 140:11 145:11 examined (1) 151:3 example (12) 10:22 16:10 29:17 57:7 101:24 140:14,17 141:2,4 146:24 153:24 155:7 exceed (1) 78:14 exceeds (2) 114:2,3 except (2) 95:9 146:11 exceptional (1) 146:11 excessive (4) 133:1 165:16 166:10 168:22 exchange (2) 9:20 88:8 excluded (2) 123:23 146:13 exercise (3) 120:25 176:1,4 exhaust (1) 63:23 exhaustfire (1) 96:21 exhaustventilation (1) 47:10 exhibits (1) 5:14 exist (2) 153:24 155:7 existence (4) 24:3 36:12 116:17 156:10 existing (117) 9:22 13:9 20:16 22:10 23:2,6,10,17,20,23 24:18,23 26:13 28:24 31:8 39:3,9 41:16,18,21 42:8 43:12 44:1,3,5,6 45:12,19 46:4 47:15,23 49:1 50:17 52:12 54:1,16 55:16 56:7 61:5 62:20 64:19 65:12 66:17,24 68:6,7,20 70:7 73:1,11 77:24 81:18,23 82:5 86:9,20 90:5 91:16,24 92:10,22 93:8,22 94:4,4,18,23 95:2,8,21 96:4,18 97:10,19,25 99:3,24 103:8,22 106:10 109:17 113:3 116:9,14,15 119:12,22 121:22 124:2,17 125:12 127:13 129:10,16,24 134:4 | 149:9 154:23 156:16,19 160:3,12 163:24 165:9,20 169:19 170:1,8,13,18,20 171:1,10,20 174:9 175:3,9 exo00000122 (2) 47:20 62:10 exo00000175 (1) 70:1 exo00000242 (2) 17:25 22:2 exo00000413 (1) 94:1 exo00000577 (1) 87:6 exo00000668 (1) 46:25 exo000006681 (2) 55:5 56:14 exo000006682 (2) 52:22 57:16 exo000006683 (2) 47:4 61:15 exo00001224 (1) 82:23 exo00001353 (2) 77:6,8 exo000015903 (1) 68:17 exo00001603 (1) 4:24 exo000016031 (1) 5:22 exo000016032 (1) 21:12 exo000016033 (4) 61:3 68:3 157:19 163:23 exo000016034 (2) 72:17 95:6 exo000016035 (1) 5:3 exo00001607 (1) 92:11 exo00001613 (3) 9:13 56:11 63:20 exo00001615 (1) 64:3 exo00001620 (2) 21:3 22:16 exo000016202 (1) 25:10 exo000016203 (1) 25:18 exo000016204 (1) 22:23 exo000017404 (1) 40:22 exo000017533 (2) 69:8 80:16 exova (44) 3:14,18 7:6,8,17 8:15 9:2,10 11:5 12:6 13:8 15:20 18:20 19:11 21:17 23:3,4 24:22 25:4 27:4,8 37:2,9 38:8 44:4 49:25 58:25 68:22 69:23 77:5 78:20 81:1 82:12,17,20,24 83:12,22 91:24 96:12,18,19 98:23 117:13 exovas (3) 90:8 116:8 175:10 expect (8) 33:8 54:15,20 61:8 115:12,16 116:3 127:10 expectation (1) 115:21 expectations (2) 85:4 116:10 expected (6) 23:18 32:9 | 36:2 103:4 113:2 117:8 expensive (1) 175:17 experience (26) 5:20 8:14,17,20,23,24 9:3 49:11 50:3,4,8,11,12,12,13 52:11,17,18 75:24 76:1,4 80:5 142:16 174:8 176:23 177:7 experienced (5) 49:13 73:3 75:1 76:14 142:15 expert (2) 38:15 120:11 explain (23) 63:13,14 76:25 80:12 83:11,19 85:11 87:17 89:12,15 110:11 119:20 126:4 136:13 139:4 148:3,18 149:1,6 157:12 159:9,12 171:22 explained (2) 18:16 169:10 explanation (1) 171:25 explore (1) 35:13 expressly (1) 124:4 extended (1) 33:24 extent (7) 12:12 76:13 106:9 128:12 153:23 155:6 176:23 exterior (3) 26:3 176:13 177:8 external (6) 53:9 57:23,25 58:2,11 154:16 extra (2) 126:10 128:11 extract (2) 45:9 168:23 extraction (2) 134:2 163:18 extraneous (1) 48:20 extremely (1) 177:19 eye (4) 76:8,11,16 143:17 | fee (53) 21:17 22:4 25:2,6 28:8 33:25 35:21 36:6,7 38:23,25 39:18 41:22 43:5 47:15 61:23 62:2,2,8,15 63:11 64:21 65:21 78:14,15,18,22,23 79:3,4,6,9 84:7,9,20 86:5 89:13,14,21,25 99:16,17 104:21 105:3 118:4,14,25 119:8,14,15 126:25 174:10,22 feedback (4) 80:6,8,11,12 feel (3) 144:7 145:6 162:12 feeling (1) 144:4 fees (5) 55:17,19 77:5 174:8 175:11 feet (4) 113:25 114:1,2,14 felt (2) 27:8 46:3 few (3) 67:25 174:6 176:17 fibre (1) 6:2 fifth (2) 49:5 165:6 fighter (1) 113:12 fighting (9) 109:11,14,15 158:13,14,17,20,23 159:2 fightingevacuation (1) 158:20 file (2) 78:13 90:10 filing (2) 84:22 85:6 filled (1) 171:13 final (9) 85:15 88:6,10,16,19 90:9,16,24 120:4 finalised (4) 91:1 95:15 171:11,13 finalising (1) 135:11 finally (1) 166:1 find (8) 4:25 31:15 36:12 99:25 119:7,10 156:2 162:16 findings (8) 36:9 37:4 125:9,19,24 126:8,15 128:6 fine (20) 70:13,14 72:25 73:8 75:8 76:20 77:1 80:5 81:7 87:10,16 95:15 99:6 108:3 136:23 137:7 139:5 148:1 171:24 172:1 finish (4) 25:15 26:8 107:14 120:4 finished (2) 177:24 178:11 finishes (1) 47:1 fire (325) 2:22 3:14 6:11,16,17,22,24 7:5,13,15,17,19 8:21,25 9:6,21,25 10:3,9,12,16,21,23 11:11,15,22,23 12:9,13 13:8,11,24 14:2,3,4,6,8,13,15,17,25 15:2,10,13,19,24 16:2,11,20,24 20:1,16 23:2,6,10,17,20 |
| E | | | | | | |
| e (10) 9:10 21:10 49:8 88:1,3 96:13,25 99:10 132:2 139:13 | | | | | | |

| | | | | | | |
|------------------------------------|--------------------------|--------------------------|-------------------------|--------------------------|-------------------------|----------------------|
| 24:4,10,18,23 26:21 | 37:16 40:4 41:3 46:25 | forwarded (4) 21:21 | give (13) 4:13 59:18 | groups (7) 7:21 8:3 66:8 | held (3) 86:1 96:10 | human (2) 6:21 16:15 |
| 27:9,16,22 28:6,23 | 47:13 48:15 49:1 | 55:3 92:9 93:24 | 60:7 64:20 65:9 67:5 | 140:4,12,13 146:12 | 139:23 | |
| 29:1,2,6,14,15,19,21 | 56:24 61:11 62:23 | forwards (1) 18:3 | 74:23 80:6,11 135:16 | guidance (31) 3:8 13:19 | help (7) 33:4 40:17 | |
| 30:6 31:8,11 32:11,12 | 63:19 67:6,9 69:4 | found (5) 38:5 54:8 | 141:2 157:23 174:16 | 15:13,15,22 16:3,4 | 59:19 70:8 101:18 | |
| 33:5,20,21 34:3,9,12 | 70:18 83:8 84:16 | 117:24 118:17 136:4 | given (44) 9:1 11:4 | 17:6 24:15 66:3,6 | 107:5 143:6 | |
| 36:22 37:25 38:1,16 | 89:10,22 90:1 | four (3) 37:17 137:22 | 12:13 24:14,17,20 | 68:10 85:8 100:7 | helpful (3) 60:5 102:18 | |
| 39:9,11,19,22 | 92:12,18,21 | 149:16 | 27:9,14 39:2 51:13 | 101:21 112:12 113:8 | 147:24 | |
| 41:17,18,22 42:8 | 98:11,12,21 102:12 | fourth (8) 33:15 58:23 | 54:25 63:8 73:1,20 | 116:1 134:22 135:16 | henceforth (1) 94:22 | |
| 43:12 44:1,5,8 45:24 | 122:9 126:10 127:3 | 112:25 115:12 126:25 | 77:1 78:22 79:3 85:25 | 138:21 140:5 142:8,12 | here (22) 1:13 5:12 | |
| 47:23 48:6 49:17,22 | 132:8 136:1 137:22 | 158:18 165:2 169:17 | 89:10 93:4 100:18 | 147:8,11,23 149:13 | 12:12 18:19 24:2 | |
| 50:5,9,14,17,21,22 | 161:2 170:7 173:8,9 | fra (10) 44:13 112:14 | 112:13 115:5 | 151:22 158:21 159:5 | 31:25 52:21 80:19 | |
| 52:12,14,17 53:2,8 | 174:8 | 122:24 124:11,20,23 | 119:15,17 121:17 | guidelines (1) 2:12 | 94:5 109:21 113:16 | |
| 54:1,16,17 55:15,24 | fit (1) 161:24 | 125:5,25 128:5,12 | 123:17 124:4 126:12 | guiding (1) 136:10 | 115:12 117:1 145:17 | |
| 56:7 57:22 61:5,11 | five (4) 7:24 46:10,13 | frame (2) 151:1 152:14 | 131:9 132:15 134:12 | | 154:11 162:2 166:17 | |
| 64:19 65:11 | 81:14 | framework (8) 15:23 | 139:2 140:22 141:3 | | 167:12 168:22 171:23 | |
| 66:6,17,24 69:16,20 | fixed (2) 89:13,21 | 16:7,17 17:2,10 | 142:25 148:1,16,22 | | 177:18 178:13 | |
| 71:11,20 72:1 73:4,11 | flag (1) 177:4 | 134:22 136:10,15 | 149:2 151:19 158:3 | | hers (1) 178:14 | |
| 75:2 76:1 77:23 81:22 | flagged (1) 132:1 | free (1) 178:4 | 171:21 175:25 | | hes (1) 49:13 | |
| 82:2 83:11 86:9,20 | flat (17) 124:1 132:21 | fresh (1) 133:25 | giving (1) 145:12 | | hi (1) 55:7 | |
| 90:5 91:16,20,24 | 141:13,14,16 142:14 | friday (4) 37:10 56:2 | glad (1) 177:24 | | high (14) 10:20 25:15 | |
| 92:10,22 93:8,22 | 150:17 152:4 157:4 | 67:17,18 | goes (8) 16:12 28:25 | | 57:5 84:14 114:2,9 | |
| 94:18,23 95:2 | 162:5,6,6,12 163:3 | front (2) 4:25 71:23 | 56:3 85:1 145:20 | | 150:1,6,24 151:20 | |
| 96:4,17,24 | 164:7 166:4 167:2 | fsr (6) 68:6,7,20 73:1 | 165:12 167:4 168:9 | | 152:10,10 167:7,19,21 | |
| 97:11,19,25 98:17 | flats (19) 30:9 32:20 | 95:8,21 | going (48) 3:17 4:16 | | 174:11 | |
| 99:3,24 100:2,11,16 | 66:9 101:10 122:5 | fss (2) 70:7 94:4 | 9:5,12,18 19:3 26:8 | | highend (1) 175:13 | |
| 102:10,12 103:22 | 131:16 132:22 142:10 | fulfil (2) 101:7 171:16 | 41:13 43:6 46:8,18 | | higher (1) 174:18 | |
| 104:7,12 106:5 | 147:11,13,23 150:17 | full (6) 12:9 116:16 | 59:12,21 60:6 62:2 | | highlevel (1) 10:17 | |
| 109:7,9,10,13,14,15,15,18,21,23,25 | 126:12 128:12,19 | 126:12 128:12,19 | 66:23 67:13 71:7 | | highlighted (1) 126:9 | |
| 110:6,12,15,21 | 162:18 163:3 166:5 | 168:4 | 79:18 82:10 88:19 | | highrise (8) 8:7 23:9 | |
| 111:1,7,16 | 167:3 | fully (2) 105:11 128:11 | 92:4 94:15,16,17,22 | | 50:10 52:18 142:20,25 | |
| 112:5,16,18 113:6,11 | floor (16) 58:23 69:11 | functional (6) 10:12 | 99:15 103:15 106:23 | | 147:17 177:3 | |
| 114:24 116:9,14,20 | 70:21 122:18,19,20 | 11:24 29:16 101:23 | 107:2,8 112:21 | | himself (3) 18:17,18 | |
| 117:9 119:12,22 | 124:24 125:1 130:18 | 102:7 105:1 | 118:9,13 120:5 | | 174:23 | |
| 120:12,14,16,18,21,23,23 | 150:15 152:16,16 | further (16) 45:11,14,18 | 128:13,15 129:18 | | hindsight (6) 108:23 | |
| 121:3,8,9,13,16,22,25 | 155:14 162:11,19 | 46:2 57:10 75:13 90:8 | 133:11 134:10 141:16 | | 139:10,17 157:9 169:8 | |
| 122:2,7 123:8,14,20 | 165:1 | 95:21 98:6 116:7 | 143:3,20 149:3 152:3 | | 174:13 | |
| 124:3,5,17 125:15,20 | floors (11) 109:12 | 123:8 136:5 151:22 | 162:21 172:16 173:15 | | hoc (1) 67:2 | |
| 126:9,13 | 110:14 111:24 112:9 | 171:24 177:16,17 | gone (8) 48:8 51:16 | | hold (2) 6:2 128:19 | |
| 127:5,6,8,10,13,20,22 | 150:16 151:1,7 152:15 | future (3) 137:5 139:7 | 52:9 78:15 87:9 92:5 | | holiday (8) 48:6 51:15 | |
| 128:23,23 129:10 | 154:15 157:25 158:2 | 160:20 | 93:13 111:16 | | 67:13,22 79:19 93:13 | |
| 130:11,20 131:3,8 | flow (1) 84:13 | | good (18) 1:3 4:10,11 | | 128:13,15 | |
| 132:16 134:1,5,21 | focus (2) 11:15 15:5 | | 47:8 51:10 59:15 | | home (1) 1:20 | |
| 135:11,14 140:25 | focusing (2) 29:12 | | 60:4,9 61:18 89:3 | | honest (3) 34:5 52:6 | |
| 141:5,12,14,18 | 120:16 | | 91:19 107:16 144:18 | | 119:24 | |
| 142:7,10,15 143:2 | folder (17) 5:1 | | 163:6 173:9,22 | | honestly (2) 73:25 80:1 | |
| 146:8 148:7,17,21 | 35:7,9,10,14,20,21,25 | gain (3) 6:15 129:20 | 178:2,16 | | honesty (1) 79:16 | |
| 149:3,9 150:7,8,15 | 36:3,15,17 44:16 | 146:5 | governing (1) 83:3 | | honour (1) 6:6 | |
| 151:6,9 152:7,15 | 37:3,15,17 44:16 | gaps (3) 75:12 98:6 | government (2) 1:6 | | hope (3) 43:3 48:14 | |
| 153:15,20,25 | 65:1,2,3,5 85:6 | 171:22 | 2:12 | | 55:8 | |
| 154:19,23 155:16 | 65:1,2,3,5 85:6 | gathered (1) 43:25 | governments (1) 3:8 | | hospital (1) 101:25 | |
| 156:17,19 157:3 | 33:17 34:25 36:11 | gathering (1) 1:21 | graduate (2) 51:23,24 | | hospitals (2) 7:21 8:4 | |
| 158:10,12,13,14,17,19,20,20 | 43:2,9 51:8 | gatherings (1) 1:6 | grange (1) 178:13 | | hour (4) 60:16 107:6 | |
| 159:2,3 160:4,10,12 | 80:8 152:17 157:25 | gave (6) 64:17 74:5 | grateful (3) 2:16 4:20 | | 144:11,13 | |
| 161:12,14,20,21 | 175:23 | 80:8 152:17 157:25 | 177:20 | | hourly (1) 175:11 | |
| 162:5,16 163:2,3,24 | gender (1) 146:4 | 175:23 | greater (3) 68:24 76:13 | | hours (14) 10:23 | |
| 167:9,24 169:19,21,23 | general (16) 2:21 8:6 | 175:23 | 168:15 | | 73:6,12,14 | |
| 170:4,8,13,14,18,20,22 | 15:17 16:4 17:6 22:17 | 175:23 | greatly (1) 2:23 | | 77:18,19,20 78:3,12 | |
| 171:1,10,19,20 174:10 | 32:22 70:24 76:25 | 175:23 | grenfell (38) 3:15 7:1 | | 79:5 81:5 110:2 112:5 | |
| 175:3,9 176:15 | 83:21 111:4 129:2 | 175:23 | 9:8 15:3,19 17:23 | | 175:11 | |
| firefighters (1) 131:5 | 131:5 147:25 151:17 | 175:23 | 18:10 20:1,17 21:14 | | house (2) 142:20 176:15 | |
| firefighting (10) 101:2 | 157:25 | 175:23 | 22:19,21 26:4,16 | | housing (2) 138:7 | |
| 106:5 110:8,13,22 | generalised (1) 142:11 | 175:23 | 27:15 37:17,21 38:10 | | 175:14 | |
| 111:19,24 112:4,8,17 | generally (6) 48:5 50:22 | 175:23 | 45:9 47:24 52:13 | | however (26) 2:11 12:1 | |
| fires (3) 176:13,13 | 140:20 142:4 147:13 | 175:23 | 71:21 72:2 77:15 94:4 | | 15:1 30:9 33:22 | |
| 177:4 | 163:1 | 175:23 | 95:9 110:7 114:6,13 | | 48:7,22 54:12 58:20 | |
| firestop (2) 154:8,16 | generals (1) 2:3 | 175:23 | 117:17 121:23 122:19 | | 66:25 72:22 80:8 | |
| firestopping (2) 154:18 | generated (1) 100:15 | 175:23 | 143:8 149:20 150:23 | | 85:22 91:2 101:3 | |
| 156:10 | get (20) 4:19 36:16 | 175:23 | 163:19 164:11 170:9 | | 108:11 113:9 121:24 | |
| firestops (1) 154:11 | 44:17 45:23 47:25 | 175:23 | ground (7) 25:15 58:2 | | 126:14 135:19 146:17 | |
| first (51) 3:13 4:12 5:3 | 57:10 62:5,23,24 | 175:23 | 122:17,19,20 130:18 | | 151:6 153:4 160:10 | |
| 9:8,13 13:16 18:10 | 63:4,10,12 101:12 | 175:23 | 131:3 | | 168:16 172:5 | |
| 19:24 21:19 25:11 | 107:9 108:20 118:3 | 175:23 | grounds (1) 165:16 | | htm (1) 101:25 | |
| 28:11 29:12 35:15 | 128:19 130:1 143:3 | 175:23 | group (2) 140:18 148:5 | | huge (1) 53:20 | |
| | 153:9 | 175:23 | | | | |
| | 156:16 | getting (1) 178:12 | | | | |

| | | | | | | |
|--|--|--|--|--|--|--|
| <p>individuals (1) 140:23</p> <p>infections (1) 1:8</p> <p>influence (3) 24:2,8,12</p> <p>inform (9) 29:1,14 30:5 32:1 105:4</p> <p>127:5,19,22 130:20</p> <p>information (32) 43:25 44:3,11</p> <p>45:11,14,19,22 47:9</p> <p>57:1 61:19 63:19</p> <p>64:18,20 75:13 77:3</p> <p>98:6 108:4,5,20 121:7</p> <p>124:22 128:3 129:20</p> <p>130:1 134:11 136:3,4</p> <p>137:12 139:14 150:22 164:24 171:12</p> <p>informed (2) 33:5 41:11</p> <p>informing (1) 128:23</p> <p>informs (1) 101:6</p> <p>inherent (1) 20:16</p> <p>inhibited (1) 153:21</p> <p>initial (4) 17:22 59:2,5 96:2</p> <p>initially (4) 19:22 41:24 84:7 116:13</p> <p>input (1) 25:24</p> <p>inquest (1) 176:22</p> <p>inquiry (9) 1:17,20 2:8 3:4 4:9,23 39:25 74:5 179:4</p> <p>inserted (1) 125:20</p> <p>insist (1) 96:23</p> <p>insitu (1) 25:15</p> <p>inspect (1) 156:4</p> <p>inspection (1) 151:23</p> <p>instance (4) 104:24 136:6 173:8,9</p> <p>instead (2) 15:25 139:5</p> <p>institute (2) 6:3 7:5</p> <p>institutions (1) 7:2</p> <p>instruct (1) 66:1</p> <p>instructed (8) 24:6 28:14 30:5 39:7 45:18 62:11 65:11 128:24</p> <p>instructing (1) 9:21</p> <p>instruction (2) 24:20 83:14</p> <p>instructions (8) 9:2 13:3 15:17 17:9 24:14 25:6 46:1 65:9</p> <p>insufficient (1) 136:5</p> <p>insulated (1) 25:13</p> <p>integrity (1) 154:19</p> <p>intend (1) 1:25</p> <p>intended (1) 87:25</p> <p>intending (1) 174:23</p> <p>intention (3) 42:24 43:14 92:3</p> <p>interest (1) 2:9</p> <p>interested (1) 74:7</p> <p>interim (1) 91:19</p> <p>internal (5) 46:23 82:24 85:8 135:1 138:4</p> <p>interpreted (1) 53:15</p> <p>interpreting (2) 58:16,19</p> <p>interrogation (3) 96:24 97:3,7</p> <p>interrupt (2) 102:3,17</p> <p>interruption (1) 1:24</p> <p>intervention (1) 134:5</p> <p>into (13) 1:11 5:17 49:2 110:1 120:21 121:22</p> | <p>128:21 144:6 146:8</p> <p>151:11 152:3 165:15 176:10</p> <p>introducing (1) 54:11</p> <p>introduction (2) 112:25 115:13</p> <p>invasive (2) 154:3 155:25</p> <p>investigate (1) 156:3</p> <p>investigation (4) 120:20 151:4,11 176:10</p> <p>investigations (5) 119:6 120:17 121:21 136:5 177:19</p> <p>investigative (1) 139:7</p> <p>invoice (4) 89:17,19 98:12,20</p> <p>invoiced (3) 89:13 98:16,23</p> <p>invoicing (2) 98:11,14</p> <p>involve (5) 7:18,22,25 136:7 152:3</p> <p>involved (13) 1:17 7:19 9:8 10:15 19:5,7,11 37:16 41:5 69:23 88:22 92:21,24</p> <p>involvement (7) 17:22 18:10 86:8,16 95:8 97:10 117:17</p> <p>involves (4) 9:6 68:8,23 69:10</p> <p>involving (2) 147:1 177:8</p> <p>irritated (1) 55:14</p> <p>irritating (1) 54:9</p> <p>isnt (4) 37:8 104:16 157:1 168:16</p> <p>iso (3) 82:13,18 83:3</p> <p>issued (4) 82:24 85:15 102:3 138:25</p> <p>issues (10) 8:21 26:20 137:2 143:4,7 147:9 148:7,18 149:4 172:7</p> <p>items (4) 29:20,23 120:13 172:17</p> <p>its (81) 1:11 5:2 9:13 10:11 11:9,9,20 12:13 13:25 17:5,6 22:2 23:25 26:24 28:9,19 37:8 47:20 53:17 56:4 61:3 63:20 67:3 69:1 70:1 74:8 75:9,11 76:19 78:24 80:19 87:21 88:1 90:1,2,2,9 99:7,8,9 104:5 105:18 106:17 109:3 110:1,15 116:17 121:14 122:8 125:1 126:6 127:2 133:8 134:10,24 135:19 136:14 140:15,19 142:6,7 146:13 147:7 148:11,11 150:19 153:21 157:1,8,19 160:15 161:24 165:12,13 167:12 169:14 172:1,1,21 173:4 177:23</p> <p>itself (5) 75:5 76:5 99:3 109:2 126:16</p> <p>iv (1) 69:17</p> <p>ive (12) 6:13,19 19:24 53:15 56:15 93:21</p> | <p>127:1 136:16 147:5 155:5 156:1 170:9</p> <hr/> <p>J</p> <p>james (24) 34:7,17 36:13,17,22 37:1,6,8,19 38:9,23 40:8,19 41:21 42:11 43:10 53:14 58:14 111:18 117:13,16 118:18 132:14 174:22</p> <p>james (1) 36:9</p> <p>jean (3) 87:7,10,14</p> <p>job (26) 35:6,9,10,14,20,21,25 36:3,15,17,25 41:25 44:16 51:17 64:25 65:2,3,5 77:14 78:9 79:10,11 116:8 174:9,12 175:25</p> <p>jog (1) 125:14</p> <p>journey (1) 177:23</p> <p>july (27) 1:1 9:9,18 18:1 21:1,16 22:12,20 28:12 34:22 37:9,17 42:20 45:4 47:5 48:5 58:5 61:16 62:8,15 64:7 118:4,5 119:7 163:15,21 178:22</p> <p>junctions (1) 154:19</p> <p>june (6) 21:17 25:6 28:11 64:22 65:22 174:10</p> <p>junior (2) 7:23 9:1</p> <p>justification (1) 165:15</p> <hr/> <p>K</p> <p>kctmo (2) 45:2,3</p> <p>keep (3) 4:18 46:18 149:3</p> <p>keeping (1) 148:23</p> <p>kensington (1) 99:9</p> <p>kept (2) 29:25 33:9</p> <p>kind (6) 74:14 81:4 89:1 97:18 139:7 142:8</p> <p>knew (12) 22:20 27:14 31:15 42:16 50:5,14 51:4,8 74:19 86:13 99:12 118:22</p> <p>knock (1) 163:4</p> <p>know (107) 1:5,13,14 2:8 8:11 13:9 19:10 22:7 31:12 34:17,20,20,25 35:2,3 38:8,11 39:2 40:19 42:13 43:10 44:21 47:18 49:10,21,23 50:8,11 52:8,9,20 53:6 54:10 58:18,20 59:20,23,25 62:14 74:11 76:6 79:7,18 88:7,21 91:23 92:2 94:8 95:1,4 96:2,8 98:12,13,23,25 100:4 101:17 102:12 103:2 105:3,21,22,24 106:22 110:9 111:11,18 114:6,13,16,22 116:23 117:20,24 118:21,22,24 119:1 120:8,17 121:3,7,20,21 122:23</p> | <p>128:9 132:7,14 133:5 134:7,8 138:12 139:10,17 144:17 155:2,20 156:7 157:15 164:10 173:4,4</p> <p>174:19,19,21 175:1</p> <p>knowing (1) 33:6</p> <p>knowledge (5) 6:15 38:16 58:5 120:12 171:12</p> <p>known (5) 21:6 114:17,18 134:3 139:20</p> <hr/> <p>L</p> <p>lack (5) 75:23 83:19 157:16,17 171:12</p> <p>lakanal (2) 176:15,23</p> <p>landscaping (1) 58:2</p> <p>lanes (1) 76:18</p> <p>large (2) 1:6 48:8</p> <p>last (15) 48:13,17,23 49:9 57:20 61:6,23 67:14,17 73:20 95:18 102:19 127:25 144:13 161:11</p> <p>late (1) 92:24</p> <p>later (16) 1:11 9:19 23:22 33:13 85:25 94:2 108:14 113:12 116:2,4,5 123:6 131:22 132:1 137:11 143:24</p> <p>lawyers (1) 59:22</p> <p>lay (1) 54:3</p> <p>layout (4) 53:9 57:23 151:23 158:1</p> <p>layouts (7) 70:21,24 103:9,11 151:17 157:25 158:2</p> <p>lba (2) 102:24 115:10</p> <p>lead (7) 40:20 41:8,21 42:7 43:6,13 135:20</p> <p>leadbitter (2) 25:25 26:11</p> <p>leader (2) 42:11 43:22</p> <p>leading (1) 42:1</p> <p>leads (1) 167:22</p> <p>leap (1) 39:7</p> <p>learn (1) 35:4</p> <p>least (4) 55:15 119:22 121:10 148:16</p> <p>leave (11) 4:4 48:13,23 49:9 51:21 52:7,8,9 56:1 143:23 163:6</p> <p>leaving (1) 83:20</p> <p>led (2) 17:9 65:22</p> <p>lee (20) 34:7,17 35:4 36:17,22 37:6,8,19 38:9,23 40:19 43:10 53:14 58:14 64:22 65:22 111:18 117:13 118:18 120:17</p> <p>lees (4) 36:13 41:21 42:11 112:14</p> <p>left (18) 37:8,10,17 40:8 41:7 43:13 77:12 78:18 95:3 98:24 117:13,15,17,19 118:23 119:19 120:19 175:1</p> <p>lefthand (2) 77:13,15</p> <p>legal (2) 3:2 5:13</p> | <p>legislation (2) 29:9 32:1</p> <p>legs (1) 60:7</p> <p>length (1) 91:3</p> <p>lengthier (3) 89:11,11,12</p> <p>less (6) 133:1,2,9 142:22 166:10,11</p> <p>lesser (1) 76:13</p> <p>let (22) 13:16 17:8 28:2 37:6 105:15 110:20 111:6,12 112:22 117:20 124:8 125:14 126:6 136:9 142:22 143:25 144:17 150:20 156:25 169:1 173:3 175:10</p> <p>lets (23) 18:25 22:3 25:9 26:7 28:8,19 39:7 68:3 69:8 71:23 72:17 79:1 83:25 90:21 91:5 92:11 93:16 118:3 122:7 130:4 132:18 158:5,18</p> <p>level (15) 10:20,22 57:5 58:3 122:20,20 135:5,12 141:18 150:15,18 154:4 155:14 163:3 165:22</p> <p>levels (5) 32:20 70:22,22 130:9 159:3</p> <p>lfb (1) 96:19</p> <p>life (4) 11:20 12:1 23:25,25</p> <p>lift (4) 130:19 132:23 166:6 167:4</p> <p>lifts (10) 130:21,25 131:2,5,5,10,11 147:3,21 158:20</p> <p>light (2) 76:18 145:12</p> <p>like (18) 1:17 40:23 46:22 60:10,25 77:6 83:16 98:9 99:2 109:4 115:6 126:9 134:25 135:4 144:8 145:6 149:10 177:8</p> <p>likely (5) 10:14 14:16 15:10 67:3 135:18</p> <p>limit (1) 164:19</p> <p>limited (5) 2:6 61:9 78:17 124:10,11</p> <p>limits (2) 153:23 155:6</p> <p>line (15) 15:6 49:6 65:13 76:9,10 77:16 82:18 132:20 133:19 158:18 159:15 161:11 165:2 166:3 169:18</p> <p>lines (2) 77:17 137:22</p> <p>link (2) 170:20,25</p> <p>list (7) 20:21 21:7,9 23:4 84:16 129:7 139:7</p> <p>listed (1) 90:11</p> <p>little (19) 11:2 27:7 33:13 35:13 39:8 55:14 59:18 74:21 80:6 90:7 93:4 103:24 113:5 129:2 135:23 155:3 173:2 174:14,20</p> <p>live (4) 2:24 53:12 143:9 146:6</p> <p>lives (2) 141:15 176:2</p> <p>loadbearing (2) 33:20 38:1</p> | <p>lobbies (4) 32:19 44:12 57:8 63:23</p> <p>lobby (8) 109:16 130:19 150:18 162:9,10,14,17 168:3</p> <p>local (2) 49:14 91:20</p> <p>located (2) 109:16 158:2</p> <p>lockdown (2) 1:11 2:18</p> <p>logic (1) 69:19</p> <p>london (36) 4:13 5:24 20:5,5,13 29:7 35:8 39:19 40:2,10,13,14 43:1,17 50:2 51:18,20,22 52:5 55:13 56:21 58:7 88:13 90:19 94:15,16 97:16 100:3,12,20 101:14 113:8,14,17 114:19 174:14</p> <p>londonbased (1) 43:13</p> <p>long (9) 9:20 21:6 59:19,21 73:10 110:1 112:18 172:24 174:7</p> <p>longer (6) 19:22 32:9 117:8 144:17 173:2,16</p> <p>look (92) 6:17 9:12 12:24 13:10 15:21,21 16:11 17:25 18:9,25 21:7,11 22:4,16 25:9 28:8,9,19,21 32:17,18,20,22 40:23 44:15 46:25 47:3 57:20 59:5 61:3 64:13 68:2,3 69:7,9 70:25 72:17 74:12 76:24 77:5,8 79:2 82:23 84:1 86:23 87:6 91:5 92:11 93:16 94:1 95:6,12,17 96:9 99:3,7,17,24 103:24 109:3,4 110:5 111:16 112:16 115:6 118:3 122:7,9 123:3 125:15 127:16 129:1 130:4,7 132:18 134:24 135:4,22 137:17 140:3,9 143:3 145:15 146:23 149:10 150:4 153:14 156:22 158:17,18 161:2 163:13</p> <p>looked (36) 36:16 57:21 58:20 61:15,22 71:3 72:12,14 80:24 86:7 90:12 92:13 99:18,21 110:6 112:24 113:14 114:8 115:5 119:23 127:3 128:3,7 137:19 156:13 158:7,10 161:4 162:22 163:15 165:4 166:9,14 169:13 175:23 176:8</p> <p>looking (26) 11:17 12:1,2,14,16,21 56:13 58:25 64:10 65:11 72:23 74:21 76:18 86:24 103:13 106:14 109:1 112:14,18 116:11 136:10 147:7 156:16 160:18 169:16</p> <p>looks (1) 104:13</p> <p>lot (9) 8:17,23 9:3 17:7</p> | <p>19:22 40:13 48:7 49:14 163:25</p> <p>low (6) 150:7 157:3 174:11,15,16,20</p> <p>lower (2) 128:18 158:2</p> <p>lump (1) 89:13</p> <p>lunch (4) 107:6,9 109:1 158:8</p> <p>luxury (3) 175:4,8,13</p> <hr/> <p>M</p> <p>m (1) 145:21</p> <p>mad (2) 48:8 51:16</p> <p>main (24) 7:19 47:13 49:6 90:12,12 109:14,16 112:6 158:12,21,22,23,24 159:6,10,11,15,17 160:1,2,6,11 161:7 162:24</p> <p>mainly (1) 6:14</p> <p>mains (4) 109:9,15 158:10,13</p> <p>maintain (2) 162:14 167:25</p> <p>maintained (4) 31:13,17 84:14 102:11</p> <p>maintenance (1) 121:11</p> <p>makes (1) 122:4</p> <p>making (6) 60:3 81:13 82:4,6 138:19 175:21</p> <p>management (27) 12:4,9,10 14:18 15:6,11,14,21 29:2 30:6 104:11,14 105:5 127:6,8,11,20,23 128:24 130:20 141:21,25 142:7 143:2 147:16,18 148:21</p> <p>manager (5) 40:25 42:19 84:5,15 94:14</p> <p>managing (3) 42:20,22 140:25</p> <p>manchester (3) 6:3 35:7,14</p> <p>mandatory (1) 136:14</p> <p>manual (5) 12:10 130:12,12 132:10,11</p> <p>manuscript (1) 129:21</p> <p>many (9) 84:3 72:4,11 130:5 136:23,23 137:8,8 147:16</p> <p>march (2) 1:5 39:25</p> <p>margaret (1) 18:4</p> <p>margarets (1) 21:21</p> <p>marked (3) 77:18 86:21 172:2</p> <p>markup (4) 53:13 58:14,21 72:21</p> <p>martin (54) 1:3 3:24 4:4 46:12,15,18 59:15,18 60:4,10,18,22,24 80:18 101:18 102:2,16 106:19 107:4,8,16,21,23 143:17,20,23 144:2,6,10,16,20,24 145:4,6,9 151:14 159:14,17,19,21 167:11,16 172:24 173:7,11,18,21 174:1 177:22 178:2,8,11,16,19</p> |
|--|--|--|--|--|--|--|

| | | | | | | | | | |
|--|---|---|---|---|--|---|--|--|--|
| <p>martyr (1) 52:4</p> <p>masonry (2) 151:1,7</p> <p>matched (1) 85:4</p> <p>material (2) 5:24 59:22</p> <p>materials (5) 1:23 10:14,19 151:15,23</p> <p>mathematics (1) 69:20</p> <p>matter (1) 152:1</p> <p>matters (6) 1:13 2:17 136:24 139:19 172:12 173:13</p> <p>maximum (2) 132:24 166:7</p> <p>maybe (3) 46:16 123:17 143:8</p> <p>mccracken (7) 9:9 17:24 18:13 19:16 51:15 56:1 66:20</p> <p>mccrackens (1) 28:12</p> <p>mean (26) 10:20 12:2 30:14 40:25 42:18,18 43:11 58:1,2 61:10 81:23 118:13,14 124:6,15 141:2 150:25 154:10 162:4,25 163:4,7 166:22 168:3,20 174:9</p> <p>meaning (3) 87:20 118:1 131:14</p> <p>means (21) 11:16 12:14,16,20,22 29:20 58:8 106:11 109:10 112:8 120:14 123:3,6 130:8 140:16 146:22 147:23 154:12 162:19 163:1 168:1</p> <p>meant (10) 1:18 15:20 20:7 40:5 58:10 73:3 75:1 88:2 135:15 155:9</p> <p>measure (1) 39:4</p> <p>measurements (8) 71:14 133:7,13 138:5,14 165:4 166:24 167:20</p> <p>measures (13) 14:3,17,18 15:11 57:13 102:10,11,13,15 124:3 127:19 146:8,19</p> <p>mechanical (3) 165:20 168:12,19</p> <p>mechanically (1) 134:3</p> <p>mechanism (1) 131:7</p> <p>meet (6) 11:24 89:4 102:6 103:14 115:18 154:15</p> <p>meeting (56) 9:10 16:18 18:17,18,19 20:6,25 21:4,13,13,16 23:1,5 24:14,21 25:10 26:6 27:7,21 28:7 34:21,22 35:6,16 37:11 41:9 42:12,13,14,16,20 45:4,7 48:9 51:21 52:7 53:24 55:12 58:6 64:5,6,7,15,16 88:9 91:12 92:3,6 94:10 96:10,25 97:5 118:5 135:25 163:14,17</p> <p>meetings (3) 86:1 130:2 136:8</p> <p>meets (3) 10:12 29:16 101:22</p> | <p>member (6) 3:20 7:2,5 50:2 52:3 177:17</p> <p>members (5) 1:20 2:21 7:23 40:14 43:16</p> <p>memorandum (1) 102:1</p> <p>memory (4) 52:1 82:2 125:15 147:6</p> <p>mention (7) 44:13 56:14 100:1 101:13 102:25 104:24 126:15</p> <p>mentioned (7) 17:24 20:21 48:9 104:16 120:23 147:12,22</p> <p>mentions (1) 110:7</p> <p>merely (1) 131:19</p> <p>met (2) 16:21,22</p> <p>met00065130 (1) 169:14</p> <p>met000651302 (2) 11:4 169:16</p> <p>met000651303 (1) 169:24</p> <p>methods (2) 16:1 51:2</p> <p>metres (8) 57:9 113:25 114:2,3,14 159:6 160:7 167:3</p> <p>metropolitan (1) 11:5</p> <p>microfiche (6) 62:21 132:25 133:8 138:3,16 166:8</p> <p>mid2012 (4) 8:14 14:7,24 15:12</p> <p>middle (1) 106:16</p> <p>might (10) 8:12 36:5,8 53:11 89:19 129:2 131:15 142:21 161:16 172:25</p> <p>millett (61) 3:19,20 4:1,3,7,10 46:7,14,16,21 59:11,17,19,25 60:9,17,24,25 80:18,22 102:2,17,18 106:16,21 107:5,7,15,24,25 143:17,19,22,25 144:3,7,9,12,18 145:9,10 151:19 159:14,18,20,23 167:11,15,18 172:19 173:1,9,12 174:2,5,6 177:14 178:8,10,12,18</p> <p>mind (9) 78:25 85:9 93:13 97:9,17 99:11 104:13 106:13 176:23</p> <p>minor (1) 135:18</p> <p>minute (5) 35:3 92:14 95:12 161:4 163:12</p> <p>minutebyminute (1) 3:1</p> <p>minutes (17) 21:3 22:13 46:10,13,17 59:25 60:1,2 106:20 144:4,5,12,15,16,19 163:15 173:1</p> <p>misleading (1) 135:21</p> <p>missed (1) 108:21</p> <p>missing (2) 128:20 139:14</p> <p>mistake (1) 7:11</p> <p>misunderstood (1) 123:17</p> <p>mitigated (1) 168:23</p> <p>mitigating (1) 57:13</p> | <p>mmhm (11) 14:23 15:8 18:6 19:9 29:11 57:19 73:9 77:22 105:23 117:7 161:9</p> <p>mobility (12) 141:5,9 142:19 143:3,7,11 145:13 147:9 148:7,13,18 149:4</p> <p>moment (16) 17:24 18:9 29:12 46:1 56:11 59:14,24 60:1 66:15,15 97:9 106:18 160:23,25 162:22 173:1</p> <p>monday (2) 1:1 92:15</p> <p>monitor (1) 3:7</p> <p>month (2) 93:2 98:15</p> <p>months (2) 48:5 121:9</p> <p>moorebick (54) 1:3 3:24 4:4 46:12,15,18 59:15,18 60:4,10,18,22,24 80:18 101:18 102:2,16 106:19 107:4,8,16,21,23 143:17,20,23 144:2,6,10,16,20,24 145:4,6,9 151:14 159:14,17,19,21 167:11,16 172:24 173:7,11,18,21 174:1 177:22</p> <p>more (49) 7:23 9:19 11:2 12:10 36:8 37:4 39:3 41:17 46:12,16 60:2 64:20 74:21 77:3,17,23 79:9 80:8,11 87:20 95:8 98:10,24 99:5 104:25 108:4,5,16,19 113:5,25 128:3,18 130:1 132:22 135:17 136:8 137:11 142:11,23 143:25 147:24 163:16 166:5 167:2,13 169:2 174:2 175:17</p> <p>morning (14) 1:3 4:2,10,11 73:15 87:16 108:2 117:19 127:3 152:18 157:21 158:8,11 169:14</p> <p>most (10) 2:22 11:23 17:5,16 49:24 51:1,2 66:3 146:16 153:2</p> <p>mouth (2) 20:15 51:7</p> <p>move (6) 14:11 39:17 90:21 112:22 143:15 158:5</p> <p>moved (1) 77:12</p> <p>moves (1) 16:13</p> <p>ms (97) 3:13,20 18:8,23 19:10,15,25 30:5 39:25 45:17 51:14 53:19 54:16 55:10 56:5 59:13 61:7 62:11 63:21 64:21 66:1,23 67:15 68:5,19 70:1,18 71:17 72:9,13,24 73:1 74:5 75:8 76:3 78:5 79:25 81:2,13 85:7 86:25 87:13,17 95:14</p> | <p>99:12 104:13 106:8 108:3,6,17 110:11 111:9,13 112:7 115:11 116:3 119:25 121:21 122:22 123:1,7 124:3,9 125:5,23 126:20 127:12 128:5,19 130:23 133:5 134:7 136:11 138:12 141:3 142:24 148:1,19 149:1 150:12,22 151:10,21 153:1 154:10 155:18 157:13,24 166:15 167:7 170:18 171:9,21 172:11 176:24 177:17 178:13</p> <p>much (34) 3:21,24 4:8,12,14 8:5,14,20,24 24:12 27:7 60:15 71:2 76:2 89:11,12,21 90:3 98:24 107:12,16,23 116:25 129:20 143:24 144:13 172:19 173:21 174:16 177:15,18,23 178:4,16</p> <p>multioccupancy (1) 24:5</p> <p>must (1) 173:7</p> <p>myself (3) 55:25 97:21 119:5</p> | <p>N</p> <p>name (1) 5:4</p> <p>namely (2) 30:21 54:6</p> <p>native (2) 77:7,8</p> <p>natural (4) 134:4 168:7,10,13</p> <p>naturally (1) 134:3</p> <p>nearly (1) 178:11</p> <p>necessarily (13) 10:24 12:1,3,5 51:24 81:17 110:5 112:4 116:11 128:14 131:15 172:15 175:6</p> <p>necessary (12) 2:14 3:4 33:23 34:4,9 147:4 150:9 151:24 152:25 157:6 161:14 163:2</p> <p>need (46) 4:2 5:16 10:23 21:11 22:7 24:4,10 27:3,16 28:4 31:13 45:18 47:19 55:19 57:1 67:10 74:8 79:2 86:23 91:16 96:18 97:2 102:12 104:14 110:5 138:22 140:24 141:4,19 142:9,18 143:21 144:7,16 146:9 147:15 154:16,17 157:18 162:12 165:7 170:4 172:25 173:2,14 176:9</p> <p>needed (35) 31:16,21 46:3,6 48:25 49:1 58:16 77:3 79:9 85:13,23 90:6,7,11 91:25 92:5 97:15 98:7 108:4,6,13 112:6 118:9 120:5 128:2,3 138:18 146:19 163:23 171:6,11,17 172:7,17 176:7</p> | <p>needs (8) 53:2 96:22,24 146:9,18,20 170:22 173:13</p> <p>negative (1) 126:6</p> <p>negotiate (1) 142:3</p> <p>neither (2) 46:2 127:11</p> <p>neutrally (1) 169:2</p> <p>never (7) 37:23 38:3 76:22 91:1 98:4 116:16 171:16</p> <p>next (35) 13:7,7 22:17,25 26:8 32:6 35:18 40:5 46:9,12,22 47:18 53:5 55:4,18 56:1 64:3,3 65:18 67:1 69:7,25 70:12 81:6 88:9 97:1 125:20 127:24 128:8 130:16 141:15,16 146:14 172:13 178:14</p> <p>nine (1) 71:5</p> <p>nobody (1) 20:5</p> <p>nods (4) 34:23 39:20 63:25 64:8</p> <p>noncompliance (1) 127:18</p> <p>nonetheless (2) 82:7 136:17</p> <p>nonresidential (1) 32:24</p> <p>nor (1) 127:11</p> <p>norm (2) 80:13 89:24</p> <p>normally (7) 40:1 50:21 80:11 81:1 123:24 129:14 148:12</p> <p>north (3) 132:23 166:6 167:4</p> <p>nose (1) 122:15</p> <p>note (16) 59:3,5 72:22 74:10,13 84:6 96:3 104:19 106:17 119:18 130:22 146:23 147:24 151:3,10,13</p> <p>notebook (3) 74:10,12,18</p> <p>notebooks (1) 74:6</p> <p>noted (2) 74:17 134:10</p> <p>notes (4) 48:22 64:5 74:2 117:14</p> <p>nothing (2) 144:13 148:5</p> <p>notice (12) 106:8 109:20 122:22 125:23 126:18 128:4 159:13 160:3 166:15 167:6,9,23</p> <p>noticed (2) 128:8,20</p> <p>notwithstanding (3) 53:12 104:20 137:8</p> <p>number (16) 1:8 2:6,14 3:13 5:14 21:4 31:21 48:8 50:18 66:7 85:22 89:2,3 106:24 114:8 172:7</p> <p>numbered (2) 11:9 130:17</p> <p>numbers (4) 77:14 139:2,3 175:11</p> <p>numerous (1) 91:17</p> <p>nursery (5) 30:10,18 122:19 130:11 132:10</p> | <p>O</p> <p>objectives (1) 14:6</p> | <p>obligation (1) 106:3</p> <p>obligations (5) 105:18 139:22 142:6,17 145:25</p> <p>obtain (4) 6:6 44:10 45:18 108:19</p> <p>obtained (5) 5:25 6:12 44:4,6 139:14</p> <p>obvious (1) 46:9</p> <p>occasions (2) 44:10 139:3</p> <p>occupant (1) 141:12</p> <p>occupants (6) 135:19 140:12,23 141:8 143:2 163:1</p> <p>occupied (1) 29:22</p> <p>occur (4) 115:20 118:8 142:23 170:24</p> <p>occurred (1) 67:4</p> <p>oclock (7) 21:5 96:11 107:10,17 178:17,18,19</p> <p>offer (1) 171:25</p> <p>offering (1) 92:6</p> <p>office (34) 7:23,24 8:1,1 20:5,6 37:2 39:19 40:2,6,11 41:19 43:1,17 47:24 51:13,18,18,20,22 52:3,5 54:13 55:13 56:20,21 65:19 67:1,16 73:20 79:20 97:16 118:1 140:18</p> <p>officer (1) 91:20</p> <p>offices (3) 122:20 140:6 142:2</p> <p>often (1) 91:3</p> <p>oh (2) 30:16 80:21</p> <p>okay (30) 8:13 12:11 20:12 21:3 26:7 28:19 32:4 39:16 44:19 45:16 48:19 51:12 80:3 85:18 90:21 97:17 99:14 103:3 114:15 123:6 133:15 134:14 144:5,23 149:7 155:21 158:4 160:23 173:17,20</p> <p>old (2) 23:14 177:9</p> <p>omissions (1) 171:21</p> <p>once (10) 25:2 29:22 48:9 53:14 62:5 75:15 90:18 101:5 153:10 171:5</p> <p>ones (2) 7:4 141:13</p> <p>onsite (1) 133:13</p> <p>onthejob (1) 6:14</p> <p>onwards (1) 94:19</p> <p>open (1) 3:9</p> <p>openings (4) 154:18,20 155:11 156:15</p> <p>operate (3) 30:17,20 153:5</p> <p>operates (1) 134:1</p> <p>operation (3) 130:21,25 131:11</p> <p>operations (2) 158:24 159:2</p> <p>operator (1) 77:7</p> <p>opportunity (3) 37:19 108:21 173:6</p> <p>opposed (10) 17:3,10 23:22 39:11 75:9 76:4</p> | <p>78:19 100:22 133:13 153:7</p> <p>option (1) 26:11</p> <p>orally (3) 65:14,15,16</p> <p>order (37) 2:11 3:6 23:16 24:4,9 29:6 31:11 36:6 44:4 45:19 64:18 67:5 68:9,11 79:9 97:6 100:2,11,16 104:12,15 105:4 118:9 119:21 120:4,18 139:21 151:24 156:8,18,23 163:23 165:21 167:25 168:4 171:8 172:22</p> <p>ordinarily (3) 61:10 66:16 72:19</p> <p>ordinary (1) 65:5</p> <p>origin (5) 150:8 152:19 157:4 161:13,20</p> <p>original (1) 44:7</p> <p>originally (3) 35:8 113:4 152:13</p> <p>others (3) 27:6 96:13,14</p> <p>otherwise (3) 49:2 116:10 154:17</p> <p>ought (3) 26:23 60:1 61:3</p> <p>outlets (2) 109:14 158:13</p> <p>outline (4) 22:10 27:24 54:17 170:14</p> <p>outlined (2) 85:21 165:17</p> <p>outlining (1) 160:19</p> <p>outside (3) 58:3 152:7 173:3</p> <p>outstanding (2) 2:2 119:9</p> <p>over (27) 23:25,25 25:14 36:6 41:10 43:4,7,15 50:3 52:12 53:15 61:8,9 74:19 78:15 98:5,7 114:1 117:18 119:7 137:20 146:14 158:22 159:6 160:7 165:7 172:17</p> <p>overall (1) 53:2</p> <p>overclad (2) 26:15 27:15</p> <p>overcladding (4) 26:3,12 50:9 58:4</p> <p>overview (1) 135:13</p> <p>own (4) 38:22 54:11 142:10 162:7</p> | <p>P</p> <p>pages (2) 25:11 136:17</p> <p>pandemic (1) 3:9</p> <p>panel (4) 3:5,20 106:23 177:17</p> <p>paper (4) 74:14 120:25 176:1,4</p> <p>paragraph (61) 5:22 11:8,9 14:13 19:4 21:12 25:12 26:25 27:2 32:6 33:15 47:13,21 49:6 57:20 61:2,22 68:4,16 69:9 72:17 74:22 80:17,22 91:15 95:6,18,24 104:2 109:5 112:25 115:12 127:4</p> |
|--|---|---|---|---|--|---|--|--|--|

| | | | | | | |
|--------------------------------|---------------------------------|--------------------------------|---------------------------------|-------------------------------|---------------------------------|------------------------|
| 130:16,17 133:19 | 32:17 33:10 34:7 | 178:21 | primary (1) 170:22 | 47:22 48:12 49:7,12 | published (6) 13:13 | 72:4,7,11,15 |
| 135:4,22 136:1 | 49:25 100:24 101:6 | points (5) 3:4 84:16 | primed (1) 158:25 | 50:1 53:11 55:17 58:6 | 15:2 16:8,10,11,15 | 73:10,14,19,23 |
| 137:18,19,22 145:16 | 102:13 105:8,13 106:4 | 90:13 130:13 132:11 | priming (1) 159:1 | 79:13 82:24 | pulling (1) 42:14 | 74:2,5,13,21 75:17,23 |
| 146:22 149:11 150:4 | 139:21 140:25 141:15 | police (2) 11:5 169:15 | principal (5) | 83:15,17,22 | pumping (1) 158:25 | 76:2,8,11,13,18,24 |
| 153:15 155:22 157:19 | 147:18 172:14 | policy (8) 30:8,24,25 | 7:7,13,15,17 171:19 | 84:2,5,15,18 85:17 | purely (1) 75:8 | 77:4,23 |
| 158:9 159:10,11 | personal (2) 38:22 | 141:11 149:24 151:19 | principals (1) 149:12 | 86:1,9,11 88:12 89:17 | purpose (17) 7:21 8:3 | 78:3,7,11,16,22 |
| 161:3,10 162:21 | 48:20 | 153:6 157:2 | principle (1) 165:18 | 90:3,3,18 91:4,21 92:9 | 24:17 32:16 66:8 | 79:8,14,18,24 |
| 163:22 165:6,14 167:1 | persons (3) 145:17 | polycstrategy (1) | principles (5) 69:17 | 93:21 94:12,14,15,16 | 140:4,12,13,18 148:5 | 80:3,11,15 |
| 169:17,25 | 146:10 148:14 | 149:23 | 83:25 85:21 136:16,17 | 96:10 97:14,15 117:3 | 160:12,15 169:10,22 | 81:4,9,16,22 |
| parlance (1) 31:2 | pertinently (1) 77:17 | position (3) 7:13 36:23 | printed (3) 70:8,19 | 119:7 163:14 172:17 | 170:8 171:16 172:25 | 82:4,10,16,20,23 |
| part (24) 26:2,16 28:5 | phase (1) 77:14 | 96:21 | 172:2 | 174:13 175:4,8,13 | purposes (3) 47:19 | 83:3,6,8,10,18,25 |
| 31:14 55:17 68:22 | phd (3) 6:2,7,12 | positioned (2) | prior (3) 118:24 134:5 | 177:12 | 134:5 168:1 | 84:12 85:1,11,16,18 |
| 90:8,15 94:12 103:21 | phone (1) 53:15 | 133:21,24 | 169:20 | projects (7) 7:20 37:1 | push (1) 63:11 | 86:3,8,15,19,23 |
| 105:4 107:2 108:7,17 | photograph (1) 135:24 | possessed (2) 34:9 | private (7) 122:17 | 48:9 84:3 87:2 91:2 | pushed (1) 144:6 | 87:6,22,24 |
| 116:8 118:6 123:25 | photographs (4) | 49:11 | 123:22,24 124:6 | 136:21 | puts (1) 37:14 | 88:4,10,14,16,19,22,25 |
| 125:22 126:13 134:12 | 35:1,22 111:21 119:23 | possible (11) 1:7 | 175:4,8,14 | prompted (1) 27:4 | putting (5) 31:14 102:9 | 89:7,10,16,19,24 |
| 145:21 151:3 152:23 | physical (4) 14:17 15:10 | 2:5,11,20 3:11 25:13 | probability (2) 150:7 | proper (8) 1:15 78:19 | 159:24 167:17,18 | 90:4,14,20 91:1,5,10 |
| 175:13 | 146:2 167:20 | 96:22 144:12 161:16 | 157:3 | 79:10,11 81:14 171:9 | | 92:4,11,21,24 |
| participants (3) 1:23 | physically (2) 64:24 | 171:25 172:2 | probably (17) 31:18,20 | 172:8 174:12 | Q | 93:4,10,16,20 |
| 2:22 3:2 | 156:4 | possibly (13) 19:13 | 46:16 59:23 70:9,23 | properly (2) 79:22 | q (631) 4:12 5:7,9,11,14 | 94:1,8,11,16,21 |
| particular (6) 8:22 | pick (2) 148:9,11 | 20:4,8 23:24 54:11 | 78:8,14 90:18 91:19 | 167:25 | 6:2,6,8,10,25 | 95:1,5,17 96:1,9,16 |
| 26:20 90:5 168:20 | picked (3) 160:5,9 | 74:17 121:20 138:24 | 106:17 110:15 128:25 | property (1) 11:20 | 7:4,6,9,11,15,17 | 97:5,9,17,23 |
| 176:6 177:4 | 170:25 | 142:12 155:4 157:17 | 134:17 139:10,17 | proposal (37) 21:17 | 8:1,3,9,13,20,24 | 98:2,4,9,18,23 99:1,14 |
| particularly (1) 121:18 | picking (1) 172:14 | 174:18,21 | 173:15 | 25:6,14 26:15 27:18 | 9:5,12,17,25 | 100:8,18 101:11 |
| partly (2) 103:22,23 | picture (1) 171:5 | post (1) 79:14 | problem (4) 20:16,18 | 28:8,13 34:7,18 | 10:3,5,7,9,14,20 | 103:3,10,21 104:23 |
| parts (13) 30:9,21,22 | piece (2) 101:21 129:17 | postdated (1) 119:15 | 168:24 169:4 | 38:23,25 39:18 41:23 | 11:1,8,14 12:5,11,24 | 105:3,7,10,15,22,24 |
| 31:16 32:24,25 72:12 | place (23) 31:1 41:8,21 | potentially (1) 129:25 | problems (2) 26:20 | 43:5 47:15 61:23 | 13:2,5,16,19,21,23 | 106:1,8,13 |
| 123:13,15,20 | 42:11 57:13 76:3 | practice (7) 87:2 113:8 | 141:6 | 62:8,15 64:21 65:21 | 14:10,24 15:5,9,16 | 108:16,21,24 109:9,23 |
| 124:10,22 142:2 | 102:10,15 116:7 | 131:1,13,20 136:17 | procedure (12) 12:3 | 78:24 84:8,20 86:6 | 17:1,8,14,18,20 | 110:1,4,18,20,24 |
| pas (3) 134:19 136:9,15 | 118:12,17 127:19 | 153:5 | 16:23 | 99:16,17 104:21 105:4 | 18:7,12,21,23,25 | 111:6,12,18,22 |
| pass (1) 176:1 | 140:19 141:17 142:21 | practices (1) 136:19 | 30:11,13,20,22,25 | 118:4,14,25 | 19:10,15,18,23 | 112:1,7,11,13,18,21 |
| passenger (1) 131:5 | 143:8 148:13 149:20 | precautions (2) 1:15 | 82:17,20,21,24 83:15 | 119:8,14,15 126:25 | 20:8,12,20,24 | 113:20,22,24 |
| paul (2) 91:7 125:4 | 154:2 160:21 165:18 | 135:14 | proceedures (9) 11:18 | 174:10,22 | 21:3,16,19,24 | 114:6,10,12,16,18,22 |
| pause (15) 1:19 39:1 | 169:21 178:13 | precise (4) 118:22 | 12:2,25 14:18 | proposals (4) 22:5 | 22:1,7,10,12,23 | 115:1,4,16,20,23 |
| 77:9 80:20 91:3 | placed (2) 2:4 161:22 | 133:7,13 138:14 | 15:6,11,14,21 78:20 | 35:21 36:6,7 | 23:9,13,15,20 | 116:2,8,14,22,24 |
| 101:16 105:20 107:13 | plan (22) 29:2 30:6 | precisely (1) 138:5 | proceed (11) 23:3 | proposed (19) 22:10 | 24:2,8,13,17,22 | 117:8,13,18,23 |
| 111:10 112:2 121:19 | 70:21 105:5 | predates (1) 113:7 | 24:22,23 25:4,5 39:8 | 27:17,24 28:20 32:16 | 25:1,3,8,18,24 | 118:3,12,15,18,21,24 |
| 135:3 176:25 177:5,10 | 125:9,19,24 126:8,17 | premises (2) 2:13 106:4 | 79:1 133:6,11 134:7 | 33:1,2 38:14 58:24 | 26:7,18,23 27:13,20 | 119:2,6,13,17,25 |
| pd (2) 17:3,11 | 127:6,9,11,15,20,23 | premium (1) 175:16 | 138:13 | 64:23 96:20 99:20 | 28:2,8,17,19 29:12 | 120:3,7,9,20,25 |
| pearson (4) 51:22 | 128:6,20,24 142:1,7 | preparations (1) 1:25 | proceedings (1) 2:24 | 100:8 102:20 117:1 | 30:3,14,16,19,21,25 | 121:3,9,17,21 |
| 81:1,11,25 | 143:2 148:21 | prepare (4) 9:21 43:25 | process (16) 1:21 11:19 | 118:3 160:14 165:21 | 31:2,5,7,14,19,23 | 122:1,6,13,16 |
| pearsons (2) 69:7 80:15 | planned (1) 91:12 | 89:1 163:24 | 31:19 68:1,22 | 175:10 | 32:4,16 33:1,4,7,12 | 123:1,4,6,11,17 |
| peer (24) 8:15 66:19 | planning (1) 53:1 | prepared (3) 68:6 | 69:10,23 81:14 82:7 | proposing (1) 38:23 | 34:6,16,22,24 | 124:2,8,13,15,19,22,25 |
| 68:1,7,7,21 69:10,23 | plans (10) 69:12,14 | 125:10 174:22 | 87:17,22 89:8,11 | protection (4) 11:20 | 35:3,9,11,13,20,23,25 | 125:2,8,14 |
| 78:20 80:6 81:1,14,24 | 124:24 125:1 132:25 | preparing (3) 11:11 | 90:15 97:6 162:8 | 33:20 34:3 37:25 | 36:2,11,16,21 | 126:2,4,6,18,23 |
| 82:7 83:13 85:18,19 | 133:9,12 166:8 | 68:21 116:14 | processes (1) 46:24 | protest (1) 54:22 | 37:6,12,14,16,19,23 | 127:22 128:4,10,17 |
| 86:3 88:14,17,19 90:1 | 167:14,19 | prescriptive (4) 14:4 | produce (17) 24:23 44:4 | provide (10) 10:23 | 38:4,8,12,19,21 | 129:1,7,10,14 |
| 151:4 172:10 | plant (1) 138:7 | 15:3,25 16:17 | 46:9 50:21,22 54:16 | 16:19 64:21 72:20 | 39:6,14,16,21,25 | 130:3,16 |
| penultimate (1) 49:6 | plate (1) 73:21 | presence (4) 141:21,25 | 56:24 61:5 65:11 | 137:11 151:2 154:5 | 40:4,18,22 41:7,15,20 | 131:4,9,17,24 |
| people (29) 2:6 11:16 | play (1) 170:12 | 147:16,18 | 67:6,10 68:9 87:1,3 | 160:13 168:12 170:15 | 42:1,4,6,10,13,17 | 132:6,8,18 |
| 12:21,22 17:5 48:7 | please (72) 3:22 | present (72) 2:20 21:7 | 119:21 120:4 156:18 | provided (25) 14:19 | 43:2,9,18,20,24 | 133:10,15,24 |
| 56:15 131:16 135:24 | 4:17,18,24 5:3,21 9:13 | 26:20 32:18,19 59:23 | produced (16) 29:14 | 53:13 58:14,18 64:24 | 44:13,15,19,21 | 134:14,19,21 135:8 |
| 140:18 141:4,19 | 11:3 17:25 21:4 | 96:12 | 31:9,20 59:1,3 61:11 | 69:12 81:20 84:6,8 | 45:1,3,7,11,14,16,22,25 | 136:13,16,20,22 |
| 142:9,13 143:3,10 | 22:2,24 25:11 43:20 | presented (2) 20:14,18 | 71:11 93:23 96:2,6 | 109:12 110:8,14,17 | 46:5 47:7,13,18 | 137:4,6,13,15 |
| 145:18,23 | 46:18,25 47:3 | presenting (1) 50:24 | 100:14 118:10 120:1 | 112:15 122:5 123:14 | 48:4,19 | 138:2,12,23 |
| 146:4,6,12,17,24 | 60:12,13,18 61:4,14 | pressed (1) 27:4 | 127:24 148:19 169:14 | 134:9 138:20 | 49:4,16,18,20,24 | 139:2,12,19 |
| 147:9 148:18,23 149:4 | 63:19 64:4 68:2,4 70:7 | pressing (4) 40:16 | producing (6) 20:16 | 147:13,21 151:15 | 50:7,12,20 | 140:1,9,21 141:2 |
| 153:9 162:6 | 71:25 72:16 77:6 | 41:17 63:3,6 | 24:18 52:17 83:13 | 160:11,19 165:22 | 51:6,12,19,25 | 142:5,15,22 |
| peoples (1) 20:19 | 78:25 80:15 82:23 | pressure (2) 53:20 54:3 | 89:21,25 | 168:19 | 52:2,5,10,18,21 | 143:6,12,15 145:20 |
| per (2) 140:5 174:10 | 87:6 91:5 92:11,17 | presumably (2) | production (9) 28:22 | providers (1) 146:1 | 54:5,8,15,22,24 | 147:24 148:9,15,25 |
| perform (1) 119:20 | 93:17 94:1 95:5 | 130:21,22 | 50:16 63:9 86:9 87:22 | provides (1) 15:23 | 55:3,23 56:10,21 | 149:7,19,22,24 |
| performance (4) 10:18 | 96:9,16 99:20 103:24 | presume (1) 146:12 | 93:7 97:10 170:13 | providing (2) 116:8 | 57:1,4,15,20 | 150:1,4,12,19 |
| 14:19 16:19 165:19 | 105:14 107:10,10,17 | presumed (1) 152:18 | 174:9 | 119:3 | 58:4,9,12,18,22,25 | 151:3,8,10 |
| performancebased (2) | 109:5 112:23 122:8 | presumptions (1) 132:3 | professional (3) 6:10,11 | provision (12) 109:9 | 59:5,8 61:14,22 | 152:6,10,17,21,23 |
| 15:25 16:6 | 125:3 129:1 130:7 | prevailing (3) 113:3 | 7:2 | 130:19 143:14 145:23 | 62:8,14,19,22 | 153:12,18 |
| performs (1) 134:4 | 132:19 133:18 | 115:14 116:4 | progress (2) 2:5 60:3 | 147:11 148:8 150:25 | 63:2,8,16 | 154:10,14,21 |
| perhaps (10) 11:2 22:1 | 134:24,25 135:5 | prevent (1) 155:14 | project (75) 3:16 7:1 | 154:5 158:10,19,23 | 64:1,3,9,15,21 | 155:1,3,5,18,21 |
| 45:4 61:3 77:17 90:22 | 137:18 140:3 | prevents (1) 155:15 | 8:18 13:3 17:23 | 165:17 | 65:2,5,8,14,16,20 | 156:6,8,16,22,25 |
| 155:3 157:16 158:8 | 144:21,21,25 145:14 | previous (2) 25:19 | 20:3,25 21:4 32:7 | provisions (6) 103:15 | 66:1,5,11,14,21 | 157:6,11,16,18 |
| 169:11 | 149:9,10 153:13 161:2 | 95:24 | 35:7,9,10 40:1,20,25 | 114:24 141:17 143:10 | 67:5,8,12,15,19,22,24 | 158:4,17 159:9,13 |
| period (2) 8:9 61:9 | 166:25 169:16 173:18 | previously (1) 175:3 | 41:7,10,21 | 146:15 148:13 | 68:15 69:4,7,25 | 160:1,8,12,17,23 |
| periodically (1) 121:14 | pm (7) 107:18,20 | primarily (3) 123:12,18 | 42:1,11,19,20,23,25 | public (3) 2:9,21 3:11 | 70:5,12,17,25 | 161:10,19 162:2,20 |
| person (17) 2:23 19:25 | 145:1,3 173:23,25 | 127:16 | 43:6,11,11,12,19 | publicly (1) 5:18 | 71:2,5,7,10,14,16,20,23 | 163:7,9,11,21 |

| | | | | | | |
|--|--|--|---|---|--|--|
| 164:3,10,13,16,21 165:1,12 166:1,19,21,24 167:1,9,22 168:3,20 169:1,7,9 170:12,16,18,24 171:8,16,18 172:10 174:16,19 175:1,3,6,10,18,20,23,25 176:8,16,18,20 177:2,7 qualification (2) 49:17 52:14 qualifications (3) 49:10,16 52:11 quality (3) 25:15 68:22 138:16 quantity (1) 22:24 quarter (3) 60:16 144:10,13 queried (1) 34:6 queries (1) 72:21 question (41) 4:17 8:24 11:21 17:8 24:2,7 28:4 31:23 33:13 40:4,5 41:20 75:6 76:25 90:22 99:24 102:19,24 103:12,23 104:18 105:14 108:1 111:12 115:10,20 126:6 133:10 134:6 137:6 139:12 142:22 148:15,24 150:21 154:22 158:5 160:2 161:24 166:15,25 questioning (1) 1:25 questions (21) 2:2 3:3,6 4:9,16 5:19 59:8 67:25 70:17 82:10 98:10 145:13 167:22 172:21 173:2,12 174:3,6 177:16,17 179:4 quickly (4) 1:15 11:2 13:23 163:17 quiet (1) 48:5 quite (16) 9:3 57:5,5,6,14 74:6 79:20,21,23 87:2 89:17 91:3 99:8 110:1 143:23 163:25 quote (2) 40:23 78:18 quotes (1) 153:18 | ready (2) 60:22 107:21 realistic (1) 54:15 reality (2) 79:14 128:10 really (10) 23:12 26:17 39:2 63:15 76:6,15 79:25 102:5 108:8 122:3 reason (11) 19:10 20:10,11 27:20 28:2 54:24 74:23 75:3 78:12 79:24 164:4 reasonable (4) 60:3 138:17 145:23 146:16 reasons (1) 128:1 recall (6) 54:23 63:3,6 64:12 111:22 129:3 receipt (1) 152:2 receive (4) 62:17,20 141:13,15 received (12) 15:18 18:15 25:2 47:14,18 91:17,22 93:18 95:10 136:3 164:12 171:4 receiving (2) 73:15 81:5 recent (1) 121:18 recently (2) 1:12 5:7 recipient (1) 169:5 recollection (11) 18:15 21:2 26:9,14 27:5,11 34:2 71:24 72:7 96:5 125:12 recommendations (4) 85:23 90:11 91:18 149:13 recommended (6) 14:20 151:10 154:3 164:19 165:19 168:16 recommends (1) 16:17 reconcile (1) 161:23 reconciled (1) 162:3 record (3) 5:17 22:13 33:8 recording (1) 24:22 records (2) 23:1 62:9 recovered (1) 55:8 rectify (1) 139:24 refer (6) 12:8 50:12 106:11 149:22 151:6 160:1 reference (15) 14:4 31:25 56:10 57:25 103:25 104:4,19,20 109:21 110:15 113:15 124:19 127:8 145:16 167:20 referred (13) 18:18 44:16 62:9 68:10 95:24 99:23 100:21 104:20 119:8,14 159:19 163:12,21 referring (5) 87:18 118:18 154:24 155:10 176:5 refers (5) 27:2 57:17,21 58:13 164:23 reflect (2) 140:11,14 reform (10) 24:3,9 29:6 31:10 100:2,11,15 104:11,15 139:21 refresh (1) 147:5 refuge (3) 141:22 142:4 147:19 refuges (4) 141:10 | 147:1,12,13 refurbished (3) 22:21 23:25 103:16 refurbishment (27) 3:15 22:15,18 24:19 26:3,16 27:25 36:7 41:11,14 53:23 54:14,18 86:2 93:3 95:9 129:18,22,23 134:12 160:14,21 170:2,5,22 177:7,12 regard (3) 24:21 26:21 30:8 regarding (6) 44:3,11 47:9 92:17 93:17 139:24 regardless (4) 24:11 145:24 146:4 175:12 regeneration (1) 169:20 region (2) 138:4,18 regret (1) 2:23 regular (1) 85:25 regulations (12) 10:13 11:25 12:19 29:17 50:6,15 102:7 105:2 113:5 145:21,22,25 regulatory (13) 17:5 24:3,9 29:6 31:10 50:24 51:4 100:2,11,15 104:11,15 139:21 reiterate (1) 143:9 relate (1) 100:18 related (1) 116:20 relates (1) 106:3 relating (10) 2:2 22:14 29:4 49:22 100:9 102:22 103:6 114:23 115:8 166:22 relation (12) 15:18 21:13 23:22 24:18 27:17 41:2 45:4 119:12 127:17 142:7 164:5 166:24 relationship (1) 160:25 relationships (1) 13:6 relatively (1) 177:9 relayed (1) 41:12 relevant (25) 8:21 14:21 29:4 49:10 50:16 68:10 99:22 100:6,9,18 101:4,12,19,21 102:22 103:6 113:15 114:22 115:8 116:1,19 123:21 135:14,18 136:4 reliable (1) 171:9 reliance (4) 76:3 161:6,22 162:23 reliant (1) 167:24 relied (4) 139:15 150:23 151:20 157:2 rely (3) 76:13 141:11 150:1 relying (1) 152:8 remain (2) 31:1 141:24 remained (2) 119:9 167:18 remaining (1) 162:18 remaininplace (2) 141:11 153:6 remember (95) 8:11 18:14 19:17 21:1,19 | 23:7,8 24:16,20 25:16 26:5,5,7,17 35:15,20 36:1,10,11 37:6 41:8 44:2,18,20,22 45:15 48:21 52:6 55:2 58:15 61:7 62:25 64:14,17 65:4,17 66:22,25 67:4 70:20,24 71:4,9,10,15,22 72:12 73:12,13,14,25 74:1,4,13,15,15,17 78:11 80:9,14 81:8,9 83:9,17 87:25 88:20 92:7,22,23 93:11,20,24 94:8,20,25 97:6,18 99:13 105:25 106:1 108:10,11 110:23 111:5,6,18 112:20,20 114:11 151:9 170:12 172:4 175:7 176:20 177:11 remembering (1) 19:19 remind (1) 99:18 reminder (1) 99:4 remotely (1) 173:5 removal (1) 26:12 repeat (3) 13:15 17:8 24:7 rephrase (5) 4:16 105:14 148:24,25 166:25 replaced (1) 43:10 replacement (1) 156:13 replied (1) 72:24 replies (1) 52:21 report (132) 8:16,19 9:22 28:23 29:1,13 30:4 31:14,20 32:1,13 33:6 36:4,18,24 38:15 43:25 47:25 53:22 56:23,24 57:2,5 63:10 66:18 68:8,10,11,12,24 69:10,11,12,18 72:9,10,20 73:7,11,23 74:3 75:4 76:5,19,23 79:6,22 80:7 81:2,6,22,24 82:3,8 85:8,12,15,21 88:10 90:9 98:1,5 99:9 101:15 103:1,21 104:14,17,25 106:24 108:3,8,12,18 109:2 111:9,14 118:9 119:18 120:11,12 121:1 122:1,3 125:22 127:5,10,16,22 128:21 129:1,21,24 130:7 131:17,23,25 134:9 136:22 137:16 138:15,24 139:5,24,25 140:2,11 142:24 143:16 148:5 151:3 152:2,23 153:14 156:17 157:20 158:8 161:3,15 164:16,18 169:3 170:20,21,25 171:6,20,23 172:2,3,8 176:21 reporting (1) 73:7 reports (3) 10:4 83:13,13 | representative (1) 85:2 representatives (1) 3:2 represented (1) 27:8 request (1) 45:11 requested (3) 45:8 95:22 163:17 require (4) 113:6 148:13 160:19 162:3 required (25) 25:24 29:18,19,20 33:19 34:11 38:2 56:25 75:13 84:15 104:7 109:11 112:9 113:9,24 117:21 118:16 136:6 140:17 141:23 152:14 156:15 160:6 169:21 174:12 requirement (7) 12:19 41:16 109:6 136:7 141:8,10 142:4 requirements (31) 10:13,18 11:24,25 12:18 16:14 24:9 29:5,16 57:7 89:4 100:1,10,19,23 101:1,1,8,14,23 102:7,23,25 103:7,14 105:2,12 114:23 115:9 164:5 166:22 requires (2) 57:8 145:23 rescue (5) 147:20 161:6,22 162:23 163:7 rescued (1) 141:24 research (1) 6:14 residential (41) 7:21 8:4,5,7 23:9 30:22 32:20,23 50:10 52:18 63:23 66:9 70:22 101:9 104:8 109:11 110:14 111:24 112:9 122:17 123:13,14,19,22,24,25 140:6,9,15 141:7,9,20 142:20 143:10 147:17 148:12 149:12 153:5 164:5 165:1 177:3 residents (5) 142:19,25 148:4 152:3 165:23 resistance (13) 10:21,23 29:19 34:10,12 110:16 112:6 113:7 123:14 141:18 150:15 152:15 159:3 resolved (1) 2:3 resources (3) 46:23 47:22 56:17 respect (4) 138:14 147:9,11 148:6 respectively (1) 63:18 respects (1) 121:2 respite (1) 145:7 respond (1) 70:12 responding (2) 52:24 57:17 response (1) 3:8 responsibilities (1) 13:7 responsibility (4) 94:12,18 117:18 172:11 responsible (10) 1:9 83:12 95:1 98:11 100:24 105:8,13 106:3 139:21 140:24 | rest (3) 53:10 57:24 106:25 result (1) 2:4 resulted (1) 160:22 results (2) 133:1 166:10 resume (3) 2:5,18 60:12 retained (2) 9:2 12:6 retrospective (1) 28:23 return (1) 131:3 returned (2) 91:13 93:1 review (63) 8:15,19 66:17 67:11 68:1,5,7,8,19,21 69:23 70:7,17 71:2,8,17 72:8 73:23,24 74:10,13 75:9 76:2,5,6 78:4,11,19,20 79:15,15,24 80:6 81:14,24 84:19,21 85:7 86:3,5 88:1,14,17,19 90:1 97:1 104:18 106:8 108:7,17 109:20 110:12 123:9 125:23 127:12 136:2,3 151:4 157:14 160:9 167:6,9,23 reviewed (24) 8:17 53:6 66:18,19 70:13,14 71:10 72:10,24 74:2,16 75:11 80:4 81:2 82:25 85:18 86:21 99:5 121:5 122:22 123:2 157:20 160:3 161:15 reviewer (1) 172:10 reviewing (19) 7:25 68:8,24 69:10 72:13 73:10 78:17 79:5 81:1 82:7 83:13 85:19 136:11,18 148:10 157:24 164:17 171:19 176:24 revisit (1) 31:23 riba (3) 48:12 49:8 57:10 rider (1) 126:11 ring (2) 92:17 93:17 riser (1) 159:1 rising (15) 1:8 109:13 112:6 158:12,21,22 159:6,10,11,15,17 160:1,2,6,11 risk (66) 29:2,2,14,21,22,24 30:6 44:8 45:24 71:20 72:1 100:25 101:7,8 102:14 109:13,19,21,24,25 110:6,12,21 111:1,8,16 112:16,18 120:24 121:8,13,16,25 122:8 123:8,13,19,20,25 124:1,5 125:15,20 126:9,13,16 127:6,6,8,10,13,20,23 128:23,23 132:16 133:4 140:15,16 151:6,9 152:7 158:19 160:10 166:13 177:4 robert (1) 11:5 role (10) 7:17 39:17 | 41:5,13 42:7 68:1 147:25 170:12,15 172:10 roof (1) 138:7 roofs (2) 153:25 155:8 room (5) 2:7 59:23 60:11,14 107:11 round (2) 29:23 159:22 routes (3) 29:24 32:23 147:2 rro (23) 100:20,23,23 101:8,14,20 102:4,9,24 103:7,11 104:1,4,16,19,24 105:8,13,18 106:3 142:6,17,18 rubric (2) 125:18 145:15 run (5) 40:1,10 42:25 148:23 149:4 running (1) 97:14 rushed (1) 178:3 |
| S | | | | | | |
| safe (7) 12:22 37:24 121:17 131:17 141:23 148:23 149:4 safest (3) 11:16 12:14,16 safety (152) 2:13,17 8:21,25 9:6,21,25 10:9,12,16 11:11,20,22 12:1,9,13 13:8,11,25 14:2,3,6,8,13,15,17,25 15:3,11,13,19 16:2 20:1,17 23:17,21 24:4,18,23 26:21 27:9,23 28:23 29:1,6,14 31:8,11 32:1,11,12 33:5 38:16 39:9,11,19 41:22 42:8 43:12 44:1,5 50:9,17,21,22 52:12 53:8 54:16,17 56:7 57:22 61:5,11 64:19 66:6,17,24 71:11 73:4,11 75:2 81:22 86:10,20 90:5 91:24 92:22 93:8 94:18,23 95:2 96:4 97:11,20 99:3,25 100:2,11,16 102:10 103:15,22 104:12 116:9,14,20 117:9 119:22 120:12,14,16,18,21,23 121:3,9,22 122:2 124:3,17 127:5,20 128:23 129:10 140:25 142:7 143:2 145:17 146:8 148:7,17,21 149:3,9 156:19 160:4,13 163:24 165:22 167:10,24 170:8,13,14,18,21,22 171:1,11,20 174:10 175:3 same (24) 8:24 14:12 16:23 18:4 26:10 39:21 55:5 58:13 65:19 67:1 94:2 95:17 107:2 112:24 121:4,4 124:10 130:16 133:16 | | | | | | |

| | | | | | | |
|--------------------------|---------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|--------------------------|
| 134:6 139:12 152:23 | 35:23 36:16,21 38:17 | 132:8 | 71:25 77:11 111:2 | 96:20 131:1 133:16 | stages (4) 48:12 49:8 | stored (2) 84:21 85:5 |
| 175:6,12 | 39:6,21,22 40:18 | separate (4) 30:11 | 136:16 138:16 145:14 | 137:18 153:20 162:8 | 57:10 91:4 | storeys (1) 114:8 |
| samples (1) 25:13 | 43:18 46:1 | 33:25 123:16 126:17 | 147:5 155:5 156:1 | 163:12,18 164:23 | stair (9) 29:18 32:21 | straightforward (1) 39:3 |
| sat (1) 67:1 | 47:2,5,11,16,19 48:2 | separately (3) 27:21 | 161:10 | 167:24 168:3,23 | 109:16 110:16,19 | strategies (12) 7:20 |
| satisfactorily (4) 84:19 | 51:6,12 52:21 | 44:17,21 | shows (2) 84:13 154:15 | social (1) 175:14 | 158:1,14 164:7,20 | 23:21 50:5,9,14 52:17 |
| 86:12,14 168:18 | 53:13,18 54:8 55:4,21 | separating (1) 154:19 | side (10) 24:2 50:19 | solidly (1) 89:3 | stairs (5) 132:21 142:3 | 54:20 73:4 75:2 76:1 |
| satisfactory (3) 121:12 | 57:18 58:12 61:20 | september (14) 5:2 | 51:3,4 77:13,15 93:3 | solved (2) 134:15,17 | 153:6,10 166:4 | 134:22 175:9 |
| 154:6 165:22 | 62:6,10,19 | 49:3 59:3 75:19 77:24 | 174:15,16,20 | somebody (8) 10:10 | stairways (3) 104:10 | strategy (155) 9:22 |
| satisfied (3) 75:4 85:3 | 63:18,20,22 64:4 65:8 | 92:15,25 93:12 94:2 | sides (1) 102:5 | 18:20 20:7 40:16 | 146:25 147:3 | 10:17,24 11:11,22,24 |
| 86:17 | 66:14,21 67:19 | 95:10 96:1,3,10 97:24 | sign (3) 79:22 136:22 | 118:1 141:23 147:16 | stakeholders (3) 16:18 | 12:13 13:8,11,25 |
| satisfy (2) 111:8,13 | 68:13,15 69:2 | series (2) 106:21 167:22 | 137:7 | 162:11 | 136:4,8 | 14:2,8,13,15,25 |
| satisfying (1) 14:5 | 70:3,10,15 71:23,24 | serve (4) 29:1 127:5,22 | signature (2) 5:4,5 | someone (1) 68:23 | standard (7) 13:13 | 15:3,13,19,24 |
| saved (1) 176:3 | 72:2,10 73:5 | 130:20 | signed (7) 65:22 75:7 | something (22) 23:18 | 15:23 16:5,9 29:18 | 16:20,24 17:2,10 |
| saves (1) 158:23 | 77:4,13,13,16,18,19,21,25 | server (4) 35:8,8,12,15 | 77:1 95:15 108:3 | 34:6,14 38:24,24 | 84:14 146:16 | 20:1,17 |
| saw (9) 20:15 21:19 | 82:16 83:1,18,25 | serves (1) 127:19 | 148:19 149:1 | 42:14 44:22 54:1 | standards (10) 83:3 | 23:2,6,10,17,19 |
| 28:11 36:17 43:5 | 84:10,24 85:16,18 | service (8) 109:7 114:24 | significant (9) 53:7 | 78:10 83:22 106:13 | 113:4,11 115:14,18 | 24:5,10,18,24 27:23 |
| 61:14 118:14,16 | 86:15,19 87:24 | 131:8 134:5 146:1 | 121:14 125:9,19,24 | 108:21 110:9 128:7 | 116:4,13,19 133:3 | 28:6,15,23 |
| 142:24 | 88:4,14 90:4,20 91:8 | 161:14,21 163:2 | 126:8 127:14 128:6,19 | 131:21 132:12 141:16 | 166:12 | 29:13,15,21 30:2 31:9 |
| saying (5) 4:20 12:12,24 | 92:12,14 94:8 96:14 | services (11) 10:3 12:6 | signing (2) 139:5 148:1 | 148:9 158:7 160:8,24 | start (10) 2:10 4:1 5:19 | 32:12 33:6 39:9 |
| 70:12 123:18 | 98:18 99:23 102:15 | 25:18,19 84:6,20,23 | similar (1) 152:17 | 169:1 | 63:15 89:7,10 92:21 | 41:17,18,22 42:8 |
| scale (1) 177:12 | 103:13,17,25 | 85:4 86:5 104:21 | similarly (2) 147:21 | soon (3) 2:10 42:23 | 137:19 162:18 169:13 | 43:12 44:1,5 47:23 |
| scaled (5) 132:24 133:8 | 104:3,6,8 109:7 110:7 | 156:10 | 152:23 | 63:11 | started (3) 62:5 63:4,10 | 48:25 49:1 |
| 138:6 166:7 167:13 | 114:8 117:6,11 | set (7) 9:7 84:20 86:5 | simple (1) 175:14 | sooner (4) 52:24 53:3 | starting (2) 6:13 116:18 | 50:17,21,23 52:13 |
| scaling (1) 133:12 | 118:5,24 121:3 | 98:14 146:15 149:16 | simultaneous (4) | 54:5 57:17 | starts (1) 25:19 | 53:2,8 54:1,16,17 |
| scenario (1) 129:19 | 122:1,10,11 | 174:19 | 30:12,17 150:8 153:8 | sort (1) 129:22 | stated (6) 109:12,18 | 55:15,25 56:8 57:22 |
| scene (1) 162:16 | 125:6,17,22 127:8,9 | sets (2) 29:15 71:5 | simultaneously (1) | sorts (1) 7:20 | 112:17 166:16,20 | 61:5,11 63:10 64:19 |
| schedule (1) 5:15 | 130:3,14 131:10,24 | shaft (23) 109:14 | 152:24 | sound (5) 53:11 69:1,17 | 167:7 | 65:11 66:17,24 71:11 |
| scheme (2) 53:2,6 | 133:22 134:14 135:6 | 110:8,13,22 111:19,24 | since (3) 6:12 23:10 | 131:15 156:18 | statement (32) 4:22 | 73:11 77:23 81:22 |
| schools (2) 7:22 8:4 | 137:15,25 138:10 | 112:4,8,17 132:23 | 52:16 | sounes (21) 9:17 21:9 | 5:7,11,14,21 11:4,8 | 86:10,20 89:2 90:6 |
| science (2) 5:24 6:3 | 140:1,7 142:22 143:12 | 133:25 134:1,4 138:8 | single (4) 57:9 135:13 | 26:23 27:21 28:10 | 21:12 26:23 37:14 | 91:16,19,25 92:10,22 |
| scope (39) 2:2 9:1 | 145:16,18 149:16,17 | 158:13,20 165:3 166:6 | 164:19,20 | 34:6 47:5 52:21 53:20 | 40:22 41:4 61:2 | 93:8,22,24 94:19,23 |
| 12:5,15 13:2 17:12 | 150:10 153:16 | 167:4 168:8,10,13,16 | sir (54) 1:3 3:24 4:4 | 54:18 56:19 57:15 | 68:3,15 69:8 72:16 | 95:2 96:4,24 |
| 24:15 28:17,20 32:5,7 | 158:1,15 161:8,15 | shafts (5) 137:24 | 46:12,15,18 59:15,18 | 58:15 59:1 63:3 79:8 | 74:22 75:19,24 80:16 | 97:11,20 25:9 99:3,25 |
| 33:1,14,16,18,23 | 162:20 163:11 164:24 | 138:2,6,14 158:17 | 60:4,10,18,22,24 | 91:6,25 92:5 96:13 | 81:11 95:5,18 103:12 | 102:12 103:22 106:11 |
| 38:14 64:22 65:10 | 165:10,24 169:11,25 | shaftssic (1) 109:11 | 80:18 101:18 102:2,16 | 120:3 | 152:23 157:18 163:22 | 116:9,14 119:12,22 |
| 84:6,20,22 85:3 86:5,7 | 173:16 174:4,19 | shall (5) 3:7,9 4:2 | 106:19 | space (2) 2:15 77:11 | 164:4 169:13,15 | 124:17,18,19 |
| 99:20 100:8 102:20 | 175:1,25 | 153:19 178:14 | 107:4,8,16,21,23 | spaces (2) 153:16,21 | 170:10 | 129:10,16 135:9,11,13 |
| 104:21 115:5 116:24 | seeing (4) 36:10 72:8 | shes (4) 87:20 131:14 | 143:17,20,23 | speak (4) 2:8 37:19 | statements (6) 1:22 | 142:8 148:22 |
| 117:1,3 118:3,6 120:9 | 74:7 88:7 | 134:9,10 | 144:2,6,10,16,20,24 | 39:11 92:7 | 110:25 111:14 | 149:3,9,14,19,22 |
| 126:24 127:2 152:7 | seeking (1) 168:6 | shopping (1) 139:7 | 145:4,6,9 151:14 | specific (10) 13:3 17:12 | 161:17,23 162:3 | 150:1 151:19 153:2,8 |
| screen (5) 4:25 25:20 | seem (1) 66:6 | short (10) 9:20 19:2 | 159:14,17,19,21 | 27:22 65:9 66:25 | states (2) 122:3 160:10 | 154:23 156:17,19 |
| 73:24 74:23 78:24 | seemed (2) 41:17 66:9 | 20:2,3 60:20 107:19 | 167:11,16 172:24 | 84:21 113:15 135:14 | statutes (1) 100:20 | 157:8 160:4,13 163:24 |
| scroll (1) 55:5 | seems (1) 48:7 | 145:2 172:22 | 173:7,11,18,21 174:1 | 146:18 147:25 | statutory (8) 29:4 96:21 | 167:10,24 168:6,8,11 |
| scrolling (1) 93:4 | seen (13) 21:17 49:5 | 173:15,24 | 177:22 | specifically (9) 27:17 | 100:9,19 102:23 103:6 | 169:19,21,23 |
| se (1) 96:25 | 58:13 70:19 83:8,9,16 | shot (1) 128:22 | 178:2,8,11,16,19 | 49:23 50:8,11,17 | 114:23 115:8 | 170:1,5,9,13,14,19,21 |
| sea00000068 (1) 91:5 | 113:19,22 134:20 | should (59) 5:18 12:7 | sit (2) 3:24 65:18 | 86:25 94:20 102:20 | stay (4) 149:20 150:1 | 171:1,11 174:10 175:4 |
| sea0001427351 (1) | 138:25 155:22 156:1 | 14:19,25 15:14 | site (59) 32:9,16,17 | 153:4 | 161:1 165:18 | 176:2 |
| 26:25 | selfevacuate (2) 142:13 | 17:1,15 19:6,11 27:22 | 33:2,6,8,11,12,22 | specification (3) 45:8 | stayingplace (1) 153:1 | straw (3) 19:2 20:2,3 |
| seasons (1) 25:24 | 163:1 | 28:5 33:22 36:11 53:3 | 34:13,18 35:4 | 63:22 163:18 | stayput (7) 30:8,24,25 | streamed (1) 2:24 |
| second (18) 3:17 | selfevacuation (1) | 59:19 60:3 69:4 77:14 | 36:9,18,23 37:5,20 | specifications (1) 14:20 | 151:19 153:2 157:1,8 | stretch (1) 60:7 |
| 11:9,10 15:6 19:4 | 141:12 | 84:5 85:5 90:22 | 38:6,9 58:3 111:19 | specified (4) 12:6 14:6 | steadily (2) 1:9 2:1 | string (2) 87:8 92:13 |
| 25:12 61:22 70:2 | seminars (2) 6:19,20 | 100:24 106:14,22 | 117:5,15,21,25 | 29:9 30:1 | steady (1) 2:4 | strongly (1) 165:19 |
| 87:7,12 91:15 92:12 | send (6) 63:3,21 64:5 | 109:13,15 111:22,23 | 118:2,7,8,12,13,16,18,23 | specify (2) 10:21 135:15 | steps (4) 3:9 44:2 | structural (4) 33:19 |
| 127:4 133:2 159:15 | 94:6 98:20 108:12 | 126:21 135:10,20 | 119:2,3,8,11,13,18,19,21,24 | speculating (1) 20:8 | 119:10 156:22 | 34:3,12 37:25 |
| 161:5 166:11 169:25 | sending (5) 47:9 61:19 | 138:6 139:11,18 | 120:1,5 124:25 131:9 | speed (1) 129:2 | sticking (1) 149:8 | structure (7) 10:23 |
| section (20) 13:24 15:7 | 64:14 67:9 73:7 | 140:11 141:19 143:2 | 132:15,25 133:14 | spend (5) 73:10 112:18 | still (9) 1:14 38:13 | 11:18 33:20 38:1 |
| 29:7 70:23 84:1 | sends (1) 87:10 | 146:5,20 148:17,21 | 134:16,17 138:6,19,22 | 129:7 154:21 174:24 | 39:22 52:8 76:19 | 113:6 153:21 159:4 |
| 100:2,25 112:25 | senior (5) 36:22 50:2 | 151:12,21 154:23 | 141:21 165:5 166:8 | spent (7) 49:13 50:18 | 78:23 79:4 164:22 | structures (1) 10:15 |
| 113:17,22 114:18,23 | 83:11 171:20 172:10 | 156:19 157:9 | 167:5,21 | 78:17 79:5,25 | 174:14 | studio (9) 9:10 21:10 |
| 115:9 133:16 140:4 | seniority (1) 68:24 | 158:12,13 159:9,10,15 | sited (2) 109:15 158:14 | 89:18,20 | stipulated (2) 56:18 | 88:1,3 96:13,25 99:10 |
| 147:12,22 155:5 165:6 | sense (1) 147:25 | 160:5,8 165:4 166:1 | sitting (2) 162:2 171:22 | spot (1) 170:19 | 59:1 | 132:2 139:13 |
| 168:9 | sensible (1) 144:9 | 167:5 168:19 169:8 | situation (1) 96:18 | spread (4) 150:7 153:20 | stokes (15) 72:1 111:1 | study (1) 14:5 |
| sections (2) 114:8 158:2 | sent (28) 36:6 56:5 | 170:24 | situations (1) 146:18 | 155:16 157:3 | 120:25 121:5 122:7 | subject (6) 9:5 33:24 |
| see (179) 5:18,22 | 63:1,18 64:12 68:20 | shouldnt (1) 174:7 | six (1) 77:20 | spreading (1) 1:15 | 123:9,21 124:4,11,16 | 41:22 93:12 124:17 |
| 9:15,15 11:12 | 71:18 76:22 85:12 | show (14) 13:16 16:20 | size (1) 29:8 | spreadsheet (1) 77:5 | 125:5,8 126:12 | 149:8 |
| 13:2,5,10 14:22 15:9 | 88:1,2,3 90:17,24 91:6 | 26:9,23 27:3 68:17 | sized (1) 153:6 | square (2) 114:2,3 | 152:8,10 | subjects (1) 6:20 |
| 17:18 | 93:23 97:25 99:10 | 69:25 74:9 77:7 81:10 | sleeping (1) 140:15 | staff (3) 7:23 9:1 52:3 | stood (4) 9:23 27:18 | submit (1) 56:17 |
| 18:1,5,8,21,23,25 | 108:9,18 128:2,5 | 101:22 111:3 146:21 | slightly (7) 43:24 82:1 | stage (22) 1:7 53:4,22 | 96:7 121:16 | submitted (1) 75:15 |
| 19:8,15,23 20:8,12 | 137:1,6 163:21 164:15 | 166:1 | 111:12 124:8 126:6 | 55:18 56:18,23,24 | stop (1) 107:4 | submitting (1) 53:4 |
| 21:8,24 22:16,25 | 172:1,5 | showed (1) 98:5 | 129:19 169:1 | 57:2,5,18 66:15 86:4 | stopgap (1) 43:21 | substantial (1) 177:8 |
| 25:3,9,11,22 26:8,25 | sentence (9) 11:10 | showing (1) 81:20 | slip (1) 25:13 | 87:15,17,19,22 | stopped (1) 97:11 | substation (1) 122:18 |
| 29:10 30:3,7,16,19 | 19:24 57:20 61:6,23 | shown (15) 5:15 11:3 | smoke (17) 16:13,14 | 88:14,25 120:3 137:11 | stopping (2) 153:15,25 | subtopic (1) 59:12 |
| 31:7,25 32:14 34:24 | 95:19 127:4 131:14 | 13:17 14:4 22:17 | 45:9 47:10 63:23 | 145:6 176:20 | stops (1) 124:1 | successful (1) 14:16 |

| | | | | | | |
|---|---|---|--|---|--|---|
| <p>suddenly (1) 53:20</p> <p>sufficient (10) 43:17</p> <p>44:3 56:17 100:25</p> <p>115:11,16 116:2</p> <p>133:14 135:16 141:18</p> <p>suggest (7) 3:3 27:20</p> <p>139:6 151:21 154:22</p> <p>155:18 170:24</p> <p>suggesting (1) 82:6</p> <p>suggests (2) 19:25 56:6</p> <p>suitability (1) 148:6</p> <p>suitable (2) 100:24</p> <p>147:3</p> <p>sum (1) 89:13</p> <p>summarised (2) 126:16</p> <p>163:25</p> <p>summarising (1) 43:3</p> <p>summary (4) 36:8,12</p> <p>37:4 43:20</p> <p>summer (5) 13:9 15:18</p> <p>46:24 61:9 82:21</p> <p>supervising (1) 7:22</p> <p>supervision (1) 42:4</p> <p>supervisory (1) 172:10</p> <p>support (1) 149:14</p> <p>suppose (6) 41:24</p> <p>42:12,13 50:18 51:10</p> <p>124:14</p> <p>supposed (1) 162:14</p> <p>sure (11) 34:5 58:20</p> <p>59:4 79:21,23 81:13</p> <p>116:18 128:11</p> <p>132:3,14 172:22</p> <p>surprise (2) 23:9 75:23</p> <p>surprised (6) 72:25</p> <p>74:24 75:17,18,20,22</p> <p>survey (7) 32:10 33:22</p> <p>34:13 117:9,15,21</p> <p>118:2</p> <p>surveying (2) 154:3</p> <p>155:25</p> <p>surveyor (1) 22:24</p> <p>suspended (2) 1:5 3:12</p> <p>suspension (1) 1:18</p> <p>system (32) 14:21 25:14</p> <p>27:18,22 32:19 45:9</p> <p>78:4 81:24 84:22 85:6</p> <p>96:19 130:12,12,24</p> <p>132:10 134:2,4,13</p> <p>135:2 136:7 141:22</p> <p>147:14 162:10</p> <p>163:13,18 165:9,20</p> <p>167:25 168:3,12,18,23</p> <p>systems (17) 16:14 30:1</p> <p>31:12,16 32:11,18</p> <p>117:10</p> <p>120:15,16,18,21,23</p> <p>121:4,10,22 122:2</p> <p>148:17</p> <p>T</p> <p>ta (1) 18:2</p> <p>table (1) 50:19</p> <p>tabled (1) 25:14</p> <p>taken (11) 1:15 35:1,24</p> <p>42:11 43:4 64:9 69:14</p> <p>116:7 118:17 119:23</p> <p>127:2</p> <p>takes (1) 43:4</p> <p>taking (4) 2:10 41:10</p> <p>94:12 172:17</p> <p>talk (5) 31:15 60:13</p> <p>107:10 144:22 173:19</p> | <p>talking (1) 104:6</p> <p>talks (2) 10:11 16:15</p> <p>tall (2) 114:6,14</p> <p>task (3) 51:23 61:8</p> <p>175:12</p> <p>team (29) 1:20 2:8,16</p> <p>5:13 6:16 39:17,19,22</p> <p>40:6,14 41:12 43:16</p> <p>50:2 53:10 57:24</p> <p>75:15 85:14,25 87:4</p> <p>88:2,9 93:23 98:14</p> <p>108:12 131:22 138:25</p> <p>152:3 171:4 172:22</p> <p>technical (2) 8:15 102:1</p> <p>techniques (2) 6:17</p> <p>16:8</p> <p>technology (1) 6:4</p> <p>telephone (5) 18:15</p> <p>92:8 94:24 97:12,21</p> <p>telephoned (2) 61:25</p> <p>93:19</p> <p>telling (2) 81:6 167:12</p> <p>temporarily (2) 43:6</p> <p>78:25</p> <p>ten (8) 52:16</p> <p>144:4,5,12,15,16,19</p> <p>173:1</p> <p>tenable (3) 162:14,17</p> <p>168:1</p> <p>tend (1) 131:6</p> <p>tended (1) 74:18</p> <p>tenminute (1) 144:20</p> <p>terminated (1) 138:8</p> <p>termination (1) 138:9</p> <p>terms (14) 6:22 8:6</p> <p>10:11,21 36:4 47:22</p> <p>49:17 82:2 83:21</p> <p>103:17 113:11 121:11</p> <p>123:3 132:1</p> <p>terry (35) 9:19 18:17</p> <p>19:21 40:8 41:10,12</p> <p>42:23,23,25</p> <p>43:6,14,15 48:10 49:7</p> <p>51:3 53:24 55:3,7</p> <p>56:22,23 88:8,11,13</p> <p>91:6,11 92:8,15 93:19</p> <p>94:3 97:13,22 98:7</p> <p>130:1 139:1 172:16</p> <p>terrys (1) 19:13</p> <p>test (2) 96:19 131:9</p> <p>147:14 162:10</p> <p>163:13,18 165:9,20</p> <p>167:25 168:3,12,18,23</p> <p>systems (17) 16:14 30:1</p> <p>31:12,16 32:11,18</p> <p>117:10</p> <p>120:15,16,18,21,23</p> <p>121:4,10,22 122:2</p> <p>148:17</p> <p>T</p> <p>ta (1) 18:2</p> <p>table (1) 50:19</p> <p>tabled (1) 25:14</p> <p>taken (11) 1:15 35:1,24</p> <p>42:11 43:4 64:9 69:14</p> <p>116:7 118:17 119:23</p> <p>127:2</p> <p>takes (1) 43:4</p> <p>taking (4) 2:10 41:10</p> <p>94:12 172:17</p> <p>talk (5) 31:15 60:13</p> <p>107:10 144:22 173:19</p> | <p>131:1,5,13 137:17</p> <p>143:13,25 144:1</p> <p>145:21 147:24 148:8</p> <p>155:10 156:16</p> <p>160:8,25 162:9,19</p> <p>164:19 167:16 170:3</p> <p>178:2,9</p> <p>theirs (3) 30:12,14,14</p> <p>themselves (5) 101:10</p> <p>122:5 140:14 152:5,6</p> <p>therefore (11) 2:25 32:7</p> <p>36:19 113:2 114:18</p> <p>117:3 123:20 126:19</p> <p>150:7 168:19 170:1</p> <p>theres (2) 102:5 141:14</p> <p>theyre (7) 99:23 102:3</p> <p>129:8 140:19 141:13</p> <p>147:22 175:6</p> <p>thing (3) 26:8 55:24</p> <p>175:6</p> <p>thinking (4) 24:3,8</p> <p>36:11 111:22</p> <p>third (7) 47:21 132:19</p> <p>133:18,19 150:4 166:3</p> <p>169:16</p> <p>thorough (1) 78:11</p> <p>though (6) 86:3 100:8</p> <p>128:21 137:6 148:4</p> <p>156:12</p> <p>thought (19)</p> <p>19:10,20,21 20:9</p> <p>36:4,8 37:3 54:6,12</p> <p>66:3 73:17 108:11</p> <p>110:12 112:16 113:4</p> <p>115:17,24 126:14</p> <p>167:12</p> <p>thoughts (1) 142:5</p> <p>three (6) 8:8,9,12 16:1</p> <p>21:8 140:5</p> <p>threequarters (2) 27:1</p> <p>89:25</p> <p>through (17) 27:2 33:14</p> <p>57:10 76:8,11,15</p> <p>80:25 81:10,12,15</p> <p>91:16,24 92:3,6 98:5</p> <p>130:5 154:20</p> <p>throughout (4) 67:3</p> <p>129:4 135:18 165:23</p> <p>thursday (2) 67:17</p> <p>96:10</p> <p>thus (1) 172:21</p> <p>tight (1) 63:9</p> <p>time (96) 7:1,24</p> <p>8:20,24 9:8 19:20,21</p> <p>20:9,11,19 26:19</p> <p>28:18 31:5 34:10,25</p> <p>35:2,17,25 37:1 39:8</p> <p>40:8,9,12 42:19 46:3</p> <p>48:6,22 49:14</p> <p>53:12,20 67:16 72:8</p> <p>75:21,22,23</p> <p>78:8,15,17</p> <p>79:4,12,12,24 80:1,5</p> <p>82:12 83:8 87:20</p> <p>89:18,20 90:21 91:19</p> <p>93:4 102:19 104:23</p> <p>105:7,10,19 106:2,17</p> <p>108:8,16 113:18</p> <p>114:6,13 115:11,22</p> <p>116:1 118:8 119:24</p> <p>127:1 128:10,14,18</p> <p>129:7 130:1 133:14,15</p> <p>142:5 144:13 152:4</p> | <p>154:21 155:3</p> <p>157:9,16,17</p> <p>158:23,24,25 165:16</p> <p>168:21 169:3 173:13</p> <p>174:12,24 176:12</p> <p>178:11</p> <p>timed (1) 70:3</p> <p>timeframe (3) 54:18,21</p> <p>56:25</p> <p>times (2) 77:23 79:14</p> <p>timescale (3) 56:18</p> <p>59:1 138:15</p> <p>timesheet (1) 78:9</p> <p>timesheets (4) 77:10,11</p> <p>78:1 98:15</p> <p>title (1) 134:21</p> <p>tmo (20) 31:9,15 79:8</p> <p>91:7 96:14 99:10,12</p> <p>105:11,17 111:22</p> <p>120:3 128:5 139:13,20</p> <p>140:24 142:5 143:1</p> <p>148:20 149:2 169:4</p> <p>tmo10001925 (1) 129:3</p> <p>tmo1000192510 (7)</p> <p>132:19 137:17 149:10</p> <p>161:3 162:23 164:21</p> <p>166:2</p> <p>tmo1000192511 (2)</p> <p>133:18 165:8</p> <p>tmo1000192513 (1)</p> <p>153:14</p> <p>tmo1000192515 (2)</p> <p>109:4 158:9</p> <p>tmo100019255 (1)</p> <p>112:23</p> <p>tmo100019257 (1)</p> <p>140:3</p> <p>tmo100019258 (3)</p> <p>103:25 130:8 161:11</p> <p>tmo10037721 (2) 28:10</p> <p>99:17</p> <p>tmo100377212 (4)</p> <p>28:20 99:19 116:25</p> <p>126:25</p> <p>tmo10037740 (1) 125:4</p> <p>tmo10037743 (2) 122:9</p> <p>125:16</p> <p>today (5) 2:18 3:17</p> <p>5:12 107:14 171:23</p> <p>today's (2) 1:4 113:11</p> <p>together (16) 14:19</p> <p>19:1 31:14 34:7 42:14</p> <p>61:16 68:3 69:8 72:18</p> <p>77:13 119:25 122:7,10</p> <p>130:4 158:18 161:24</p> <p>told (24) 8:3 12:25 17:1</p> <p>27:14 28:11 37:23</p> <p>39:25 42:2 58:5 67:12</p> <p>74:5 87:10 89:1</p> <p>93:21,22 94:14,16</p> <p>102:2 119:17 126:18</p> <p>128:4 149:19 157:21</p> <p>163:15</p> <p>tomorrow (7) 19:3 62:3</p> <p>87:16 178:1,2,13,19</p> <p>tony (2) 51:22 52:1</p> <p>too (6) 4:21 130:5</p> <p>143:24 155:3,16 174:7</p> <p>took (10) 1:9 43:7 98:5</p> <p>111:20 117:18 119:6</p> <p>144:13 150:25 156:22</p> <p>160:21</p> <p>topic (8) 13:7 28:9</p> | <p>43:24 46:8,12,23 99:2</p> <p>144:1</p> <p>total (2) 78:23 79:4</p> <p>touched (1) 90:6</p> <p>towards (2) 82:14,18</p> <p>tower (37) 3:15 7:1 9:8</p> <p>15:19 17:23 18:10</p> <p>20:1,17 21:14</p> <p>22:19,21 26:4,16</p> <p>27:15 35:1 37:17,21</p> <p>38:10 45:9 47:24</p> <p>55:16 63:24 71:21</p> <p>72:2 77:15 94:4 95:9</p> <p>110:7 114:6,13 121:23</p> <p>143:8 150:23 163:19</p> <p>164:11 165:23 170:9</p> <p>town (1) 175:14</p> <p>training (3) 6:15,16</p> <p>49:22</p> <p>transcribers (1) 4:19</p> <p>transcript (3) 47:20</p> <p>56:12 74:8</p> <p>transpire (1) 33:22</p> <p>travel (14) 20:7 27:6</p> <p>57:8,11 103:14 133:2</p> <p>164:6,10,14 165:16</p> <p>166:11 168:5,15,22</p> <p>treanor (4) 18:4</p> <p>19:10,15,25</p> <p>treanors (2) 18:8,23</p> <p>trial (1) 14:16</p> <p>tried (1) 108:19</p> <p>trigger (2) 26:14 72:7</p> <p>triggered (2) 130:12</p> <p>132:11</p> <p>triggers (2) 26:9 71:24</p> <p>true (1) 5:9</p> <p>try (7) 11:15 37:6</p> <p>105:15 126:6 139:24</p> <p>161:23 169:1</p> <p>trying (4) 12:17 101:12</p> <p>153:9 168:17</p> <p>tuesday (1) 178:22</p> <p>turn (13) 9:5 13:6 17:22</p> <p>43:24 46:8 59:12 99:2</p> <p>107:2 116:24 125:3</p> <p>134:25 153:13 157:18</p> <p>twice (1) 96:19</p> <p>twohour (4) 34:12</p> <p>110:15 152:14,16</p> <p>type (3) 53:4 56:18</p> <p>57:18</p> <p>types (1) 66:8</p> <p>typically (2) 7:18 68:23</p> <p>U</p> <p>uk (1) 176:14</p> <p>unable (3) 18:16,17,19</p> <p>uncertainties (2)</p> <p>129:12,15</p> <p>unchecked (1) 121:11</p> <p>undergraduate (1) 5:23</p> <p>underneath (5) 9:17</p> <p>18:8 19:1 34:13</p> <p>125:17</p> <p>understand (32) 4:23</p> <p>10:9 11:16 12:11</p> <p>20:20 28:17 42:10,18</p> <p>52:25 57:1 58:1 82:19</p> <p>89:19 96:18 101:11</p> <p>105:11,17 126:12</p> <p>128:17 135:11 143:6</p> <p>150:12 154:9 155:8</p> | <p>156:8,19 159:23</p> <p>160:14,17 163:9 170:4</p> <p>171:2</p> <p>understanding (19)</p> <p>4:15 10:10 14:7,24</p> <p>15:12 23:20 31:3 41:4</p> <p>42:22 48:25 53:23</p> <p>94:11 96:5 108:13</p> <p>112:5 137:2 142:16</p> <p>148:2 172:6</p> <p>understood (19) 26:2</p> <p>41:9 53:3,10 56:22</p> <p>57:24 75:13 85:13,24</p> <p>128:12 129:25 130:2</p> <p>133:20,24 149:20</p> <p>152:1,4 154:7 171:3</p> <p>undertake (2) 56:7 86:4</p> <p>undertaken (5) 6:11</p> <p>34:18 49:21 127:12</p> <p>156:14</p> <p>undertaking (2) 2:3</p> <p>56:22</p> <p>unfair (1) 43:20</p> <p>unfold (1) 3:1</p> <p>university (3) 5:24</p> <p>6:3,23</p> <p>unknown (11) 113:13</p> <p>130:10 132:9,12</p> <p>133:25 137:24 138:2,9</p> <p>139:4,8 165:3</p> <p>unknowns (5) 129:4</p> <p>134:15 136:23 137:8</p> <p>139:20</p> <p>unless (3) 12:25</p> <p>139:14,19</p> <p>unlikely (2) 150:9</p> <p>152:24</p> <p>unrealistic (3) 54:20</p> <p>55:1 91:18</p> <p>unreasonable (1) 53:11</p> <p>unsatisfactory (2)</p> <p>134:10 165:9</p> <p>unseen (2) 153:20</p> <p>155:16</p> <p>until (14) 7:6,8,11</p> <p>42:20,23 43:6</p> <p>62:11,18 63:14 108:8</p> <p>139:13 141:24 173:15</p> <p>178:22</p> <p>unusual (5) 36:22</p> <p>89:16,20 91:1,2</p> <p>unusually (2) 174:11,11</p> <p>unverified (2) 137:8</p> <p>139:3</p> <p>update (2) 87:5 171:6</p> <p>updated (3) 121:13,14</p> <p>171:17</p> <p>upgrade (4) 47:16</p> <p>55:25 59:2 96:20</p> <p>upgraded (1) 134:13</p> <p>upon (1) 149:15</p> <p>upper (2) 122:19,20</p> <p>used (12) 15:1,3 17:4,7</p> <p>65:18 68:21 89:25</p> <p>121:24 131:2,7 135:24</p> <p>163:9</p> <p>usher (4) 60:11 107:12</p> <p>144:21 173:19</p> <p>using (9) 2:13 16:24</p> <p>39:10 66:11 81:19</p> <p>94:4 96:3,7 101:5</p> <p>usual (8) 80:5</p> <p>89:17,19,23 129:10</p> | <p>131:1 153:5 174:11</p> <p>usually (7) 73:25 80:8</p> <p>98:14 121:13 154:2</p> <p>155:13,24</p> <p>V</p> <p>v (1) 69:19</p> <p>vague (1) 135:20</p> <p>valid (1) 132:4</p> <p>vary (2) 90:2 91:2</p> <p>veitch (7) 11:5,6,21</p> <p>12:12 169:12 170:12</p> <p>171:10</p> <p>veitchs (1) 170:7</p> <p>ventilated (2) 164:8</p> <p>165:2</p> <p>ventilation (21)</p> <p>32:19,21 44:11 63:23</p> <p>110:16 133:16</p> <p>134:1,13 137:18</p> <p>162:9,13 163:12</p> <p>164:12,23 165:17,20</p> <p>167:25 168:8,11,14,18</p> <p>verbatim (1) 40:24</p> <p>verified (4) 111:7</p> <p>136:25 139:15,19</p> <p>verify (5) 22:1</p> <p>110:21,25 112:14</p> <p>151:25</p> <p>version (7) 77:7 82:11</p> <p>85:15 86:20 90:17,24</p> <p>120:5</p> <p>versions (1) 95:22</p> <p>via (3) 154:1 161:7</p> <p>162:24</p> <p>virus (1) 1:14</p> <p>visible (2) 154:2 155:24</p> <p>visit (40) 32:9,16</p> <p>33:2,8,11,13 34:18</p> <p>35:4 36:9,13,18,23</p> <p>37:5,20 38:6,9 111:19</p> <p>117:5</p> <p>118:7,8,12,13,16,18,23</p> <p>119:3,3,8,11,13,18,19,21,24</p> <p>120:1,5 124:25 131:9</p> <p>134:16,18</p> <p>visitors (1) 146:6</p> <p>vital (2) 156:8,18</p> <p>voice (3) 4:18 141:22</p> <p>147:14</p> <p>void (2) 154:4 155:17</p> <p>W</p> <p>waited (1) 62:14</p> <p>walkround (1) 32:22</p> <p>wall (1) 155:13</p> <p>walls (11) 138:5 150:16</p> <p>151:1,5,7,12,24</p> <p>153:24 154:16 155:7</p> <p>176:11</p> <p>wants (1) 55:18</p> <p>warehouses (2) 7:22 8:4</p> <p>warn (2) 131:16 162:6</p> <p>warned (1) 162:13</p> <p>warning (8) 12:20</p> <p>29:20,25 106:12 130:9</p> <p>140:16 141:13,15</p> <p>warrington (16) 8:1</p> <p>20:4,7,13 40:6,6,17</p> <p>41:19 43:21 47:24</p> <p>51:18 52:3 54:13</p> <p>56:20 118:1 177:25</p> |
|---|---|---|--|---|--|---|

| | | | | |
|--|---|--|---------------------|---|
| warringtonfire (2) 6:14 52:16 | 145:5,8 163:22 167:17 173:17,20 177:21 | yet (8) 27:3 50:23 55:20 80:18 120:22 174:3 | 1990s (1) 23:19 | 317 (1) 95:18 |
| wasnt (19) 36:25 38:2 40:12,20 42:1 48:19 | 178:1,6,7,14 | 176:21,22 | 1995 (2) 5:25 146:1 | 321 (1) 130:8 |
| 67:16 75:22 83:17 | witnesses (4) 2:1 3:3,14,18 | youd (1) 145:6 | 1m (2) 133:1 166:10 | 325 (2) 104:2 161:10 |
| 85:17 86:21 98:16 | wondering (2) 19:6 63:8 | younger (1) 23:15 | | 33 (1) 154:13 |
| 108:8 111:23 123:20 | wont (2) 46:9 162:13 | youre (14) 12:25 26:24 | | 334 (5) 149:11,12 150:4 161:3 162:21 |
| 128:14 133:14 143:8 | work (66) 1:19 2:17 | 42:14 49:8 56:14 | | 336 (5) 132:18,19 165:17 166:1 167:1 |
| 168:4 | 6:13 7:19,25 8:5,17 | 60:14 83:6 96:12 | | 34 (6) 21:12 133:16,17 137:18 164:22 168:9 |
| watching (1) 173:5 | 19:14 24:15 28:20,22 | 104:6 107:11 111:2,3 | | 353 (1) 173:23 |
| watermarked (1) 99:8 | 32:5,7 33:1 38:14 | 142:12 178:4 | | 38 (1) 68:16 |
| watt (3) 87:7,10,13 | 40:14 42:4 45:5,20 | yourself (15) 3:25 59:6 | | 39 (3) 69:9 80:22 163:22 |
| way (36) 2:15 4:17 | 47:23 48:10,17,23 | 61:12 83:12 90:23 | | |
| 7:7,12 20:15 27:2 37:4 | 54:14 55:13 | 97:19 110:10,21 | | |
| 65:6 72:20 79:9 82:19 | 63:4,12,15 67:5,14 | 111:8,13 119:2,13,20 | | |
| 90:8 91:22 92:4 | 77:25 84:4 90:6,8 | 142:24 177:7 | | |
| 103:13,22 105:15 | 93:1,5,7 99:20 100:8 | youth (1) 122:18 | | |
| 107:1 110:20 111:7 | 102:20 103:4,18,20 | youve (4) 19:2 128:4 | | |
| 118:3 122:1 124:3,6,8 | 106:9 112:14 115:5 | 156:1,14 | | |
| 126:7 130:2 131:25 | 116:24 117:1,3 | | | |
| 134:15 135:17 136:21 | 118:4,6 120:9 123:1 | | | |
| 140:14 142:11 159:21 | 124:3 125:23 129:17 | | | |
| 166:18 168:11 | 136:11 140:19 146:7 | | | |
| ways (1) 53:21 | 156:13 157:24 160:21 | | | |
| wed (3) 53:24 129:25 | 168:18,24 169:22 | | | |
| 134:11 | 174:23 | | | |
| week (11) 1:10 | worked (9) 7:12 8:11 | | | |
| 35:17,17,18,18 53:5,5 | 37:1 17:1 80:9 168:24 | | | |
| 62:14 65:18 74:20 | 175:3,8 177:11 | | | |
| 97:1 | working (21) 1:20 7:6 | | | |
| weeks (6) 48:13 49:9 | 8:18 20:3 49:14 | | | |
| 56:2 89:3,3 119:15 | 50:3,13 52:15 67:7,19 | | | |
| welcome (1) 1:3 | 73:4 75:2,25 82:14,18 | | | |
| went (18) 1:11 15:2 | 93:3 133:12 148:2 | | | |
| 32:17 34:20 37:10 | 167:25 168:4 175:17 | | | |
| 41:9 51:21 52:7 55:12 | workload (7) 20:19,20 | | | |
| 76:15 81:10,15 91:24 | 40:9 128:16,17,18 | | | |
| 94:10 98:12 130:1 | 157:16 | | | |
| 132:14 137:19 | works (21) 24:19 | | | |
| werent (4) 15:20,21 | 33:16,18,24 53:9 | | | |
| 79:20 82:1 | 57:23,25 58:2,11 59:2 | | | |
| wet (7) 158:22,23 | 64:22 65:10 96:20 | | | |
| 159:6,9,17 160:1,6 | 126:24 127:2 134:12 | | | |
| weve (8) 49:5 58:13 | 160:14,21 169:20,23 | | | |
| 72:23 77:13 92:13 | 170:22 | | | |
| 110:6 143:1 155:22 | workstream (1) 41:2 | | | |
| whatever (1) 3:9 | worse (3) 103:20 160:22 | | | |
| whats (5) 98:15 104:9 | 175:21 | | | |
| 122:4 124:4 140:17 | wouldnt (21) 10:24 | | | |
| wheelchairs (1) 146:24 | 12:9 15:1 34:14 51:23 | | | |
| whenever (1) 24:5 | 59:9 60:2 78:12,25 | | | |
| whereas (3) 30:12 57:9 | 81:17,23,25 90:18 | | | |
| 154:18 | 112:3 115:17,24 121:7 | | | |
| whoever (1) 170:25 | 123:24 124:15 147:19 | | | |
| whole (4) 2:8 127:25 | 148:12 | | | |
| 167:9,23 | write (1) 75:19 | | | |
| whom (2) 1:25 62:24 | writing (4) 7:19 48:21 | | | |
| whose (2) 146:17 176:1 | 65:14 76:1 | | | |
| wider (2) 135:10 142:11 | written (2) 69:11 76:7 | | | |
| width (1) 153:11 | wrong (7) 19:7 62:1 | | | |
| window (2) 25:13 | 63:1 78:16 100:13 | | | |
| 156:13 | 112:11 141:16 | | | |
| windows (2) 26:13 | | | | |
| 155:12 | | | | |
| wish (2) 2:25 5:18 | | | | |
| withdrew (1) 178:7 | | | | |
| witness (36) 1:22 | | | | |
| 4:1,22 5:7,21 11:4 | | | | |
| 34:23 39:20 40:22 | | | | |
| 46:10,20 60:11,23 | | | | |
| 63:25 64:8 68:2,15 | | | | |
| 69:7 75:19 80:16 95:5 | | | | |
| 107:22 144:5,8,23 | | | | |