



GRENFELL TOWER INQUIRY RT

Day 302

July 11, 2022

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Monday, 11 July 2022

(10.00 am)

SIR MARTIN MOORE—BICK: Good morning, everyone. Welcome to today's hearing. We're going to begin today by hearing evidence from Dr Karl Harrison, the lead forensic archaeologist who was concerned with the recovery of the remains of the deceased from Grenfell Tower.

Later on today, we shall hear further presentations from lawyers representing the bereaved.

Yes, Mr Millett.

MR MILLETT: Yes, Mr Chairman, good morning to you. Good morning, members of the panel.

Before I call Dr Harrison, the forensic archaeologist, I should just give a trigger warning. In his evidence, there will or may be accounts or images that people might find distressing, including descriptions of the identification and recovery of human remains. So I should raise that at this stage so that those following the proceedings, either in here or remotely on the live stream, can absent themselves or look away if they wish to.

SIR MARTIN MOORE—BICK: Thank you.

MR MILLETT: Subject to that, then, Mr Chairman, may I now please call Dr Karl Harrison.

SIR MARTIN MOORE—BICK: Thank you.

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DR KARL HARRISON (sworn)

SIR MARTIN MOORE—BICK: Thank you very much. Please sit down and make yourself comfortable.

(Pause)

Yes, Mr Millett.

Questions from COUNSEL TO THE INQUIRY

MR MILLETT: Good morning, Dr Harrison. Thank you very much for coming today and assisting the Inquiry with its investigations. We are extremely grateful to you.

Just a couple of housekeeping pointers, if I may: may I ask you, please, to keep your voice up so that the transcriber, who sits to your right, can get down everything you say very clearly. Also, please, if you're answering questions from me, don't nod your head or shake your head; say "Yes" or "No", as the case may be, so that the transcript can pick it up.

Now, you've provided for us — for which many thanks — a Phase 2 witness statement, which is at {KHA00000001}. We will have that in the screen in front of you.

Is that the first page of your statement?

A. It is.

Q. If we go to page 50, you can see a signature above your name in print and a date of 8 June 2022; is that your signature?

2

A. It is.

Q. Have you read this statement recently?

A. I have.

Q. Can you confirm that the factual matters that you've set out in it are true to the best of your knowledge and belief?

A. Yes, I can.

Q. Can you also confirm that the matters set out in it, which are expressions of your opinion, are your true and genuinely held professional opinions?

A. That's true.

Q. Now, it's right, I think, that this statement describes, in general terms, the approach and methodology of your team of forensic archaeologists that was engaged in the recovery of the remains of the deceased at Grenfell Tower; is that correct?

A. That's correct.

Q. Can I then start with your qualifications and your professional background.

You set those out on page 1 {KHA00000001/1} — can we go to that, please — at paragraphs 1, 3 and 4.

There is also, if we go to page 44 and on to page 45 {KHA00000001/44–45}, a CV. If we go to the bottom there, we can see that you begin to describe yourself, and that description continues over to the top of

3

page 45 there, for the record.

Summarising it, if I can, with you, I think it's right that you hold a PhD in archeology and forensic science from the University of Reading?

A. That's true.

Q. An MSc in forensic archeology from Bournemouth University.

A. I do.

Q. Also, I think, a diploma in crime scene examination from the University of Durham.

A. Yes.

Q. In addition, a BA honours degree in archeology and ancient history, also from the University of Reading.

A. That's true.

Q. I think you were awarded an honorary DSc for services to forensic science by the University of West London.

A. That's true.

Q. And listed as an external adviser with the National Crime Agency.

A. I am — or I was at the time.

Q. Right. I think you are a member as at today — is this right? — of the Chartered Institute for Archaeologists.

A. That's true.

Q. I think you sit on the expert panel for forensic archeology.

4

1 A. Yes.
 2 Q. Is it right that you've acted in the capacity of
 3 forensic archaeologist over a period of some 20 years?
 4 A. That's true, yes.
 5 Q. And that would include excavation and recovery of human
 6 remains from clandestine graves?
 7 A. Yes.
 8 Q. Lending your expertise to extended police searches for
 9 clandestine burials?
 10 A. Yes.
 11 Q. The direction and conduction — I think is the word
 12 you've used — of forensic excavations?
 13 A. That's true.
 14 Q. And the recovery of associated evidence types?
 15 A. Yes.
 16 Q. Yes. I've broken those down because they are distinct
 17 stages in a number of processes.
 18 But I think it's right, isn't it, that you are also
 19 a trained crime scene examiner and manager; yes?
 20 A. I am.
 21 Q. And you have something like seven years' experience of
 22 working in those roles within UK police forces?
 23 A. I do.
 24 Q. And a director of Alecto Forensic Services Limited from
 25 2013 to 2021; yes?

5

1 A. That's true, yes.
 2 Q. I think it was in that period that you were working on
 3 the recoveries from Grenfell Tower?
 4 A. That's correct.
 5 Q. Your current role — is this right? — is national
 6 forensic specialist adviser with the National Crime
 7 Agency.
 8 A. That's true, yes.
 9 Q. You obtained that role, I think, last year, 2021.
 10 A. Nine months ago, yes.
 11 Q. Nine months ago.
 12 So just in the round, is it fair to say that you
 13 have very considerable expertise and experience in
 14 forensic archaeology?
 15 A. I do.
 16 Q. Yes, thank you.
 17 Now, I want to go back to paragraph 1, page 1,
 18 please, of your report, your statement {KHA00000001/1}.
 19 You say here it follows:
 20 "I was Lead Forensic Ecologist and a Director of
 21 Alecto Forensic Services Ltd from 2013 to 2021, and was
 22 responsible for leading the team of forensic
 23 archaeologists who provided scientific assistance during
 24 the search and examination of Grenfell Tower."
 25 Can you briefly explain to us what it means to be

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1 a forensic ecologist?
 2 A. Forensic ecology is a catch—all definition within
 3 forensic science that includes disciplines that would be
 4 regarded as being classically ecological, dealing with
 5 insects, soil, plant life. It also tends to include
 6 archaeology and anthropology as disciplines within it.
 7 It's a catch—all term that tends to be used within
 8 forensic science contexts.
 9 Q. How is that different from a forensic archaeologist?
 10 A. It's an umbrella term within which forensic archaeology
 11 falls. So my reporting discipline, the discipline
 12 I would write statements of opinion on, is forensic
 13 archaeology, but in my position at Alecto, I would write
 14 forensic strategies and advise police forces, and
 15 I would take samples related to a broader range of
 16 evidence types that were ecological in nature.
 17 Q. Were there any such exercises in the work you did at
 18 Grenfell Tower, ecological exercises?
 19 A. No, no, it was entirely archaeological, my role.
 20 Q. Now, I think it's right that you and your team started
 21 your work within Grenfell Tower on 16 June.
 22 A. The 16th would have been around the outskirts of the
 23 tower, that's correct. I think it was the 17th when we
 24 gained entry.
 25 Q. Right. Just to help you, the 16th was the Friday —

7

1 A. Yes.
 2 Q. — and the 17th was the Saturday.
 3 I think that you had a planning meeting, though,
 4 before that with the Met on 15 June, Thursday, 24 hours
 5 or so after the fire?
 6 A. That's true.
 7 Q. Now, is it right that you and Dr Deborah Ryder managed
 8 a team of some 36 forensic archaeologists?
 9 A. We were the main co-ordinating archaeologists who
 10 managed the archaeologists that were attached to the
 11 search teams of police officers, yes.
 12 Q. Right, and you provided scientific or
 13 archaeological—specific scientific assistance to the
 14 search parties, as it were?
 15 A. That's correct.
 16 Q. Right. Could you just explain who Deborah Ryder is?
 17 A. Deborah Ryder was an employee of Alecto at the same
 18 time. She's a forensic archaeologist that I trained.
 19 She holds a PhD in forensic archaeology, with
 20 a concentration on DNA, ancient DNA. She has worked on
 21 numerous forensic archaeology cases in the past.
 22 Q. What was her role on the Grenfell Tower team?
 23 A. She took a co-director role with myself on the team.
 24 Because it required co-ordination over seven days
 25 a week, we shared the responsibilities.

8

1 Q. Right.

2 Now, your team of 36 were mostly trained to MSc
3 level in a forensic science discipline of one kind or
4 another; is that right?

5 A. That's correct.

6 Q. Did they also all have or mostly have extensive,
7 complex, major crime scene experience?

8 A. There was a range of experience, and they were utilised
9 within the tower in different spaces according to their
10 level of experience. They all had some experience, and
11 the majority of them had been educated and trained by
12 myself at Master's level in my prior university post.

13 Q. Right.

14 Can we go to page 2 of your statement
15 {KHA00000001/2}, please, and look at paragraph 5, which
16 starts at the foot of page 1, but let's pick it up in
17 the second line, second sentence at the top there.

18 Just using that as an aide memoire for you, could
19 you tell us, in broad terms, what it was that your team
20 was instructed to do — it's a very general question,
21 I appreciate — generally within Grenfell Tower, once
22 you'd started work.

23 A. The use of our team was dynamic and it altered as the
24 police response altered within the tower. It's laid out
25 in the table below, really, that there was a primary

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1 phase of work in which we were acting in a response
2 manner, so initially that was outside the tower, seeking
3 to assist police search officers in the identification
4 of human tissue. That developed into working within the
5 tower to attend areas where primarily London
6 Fire Brigade staff had said that they believed that
7 there were bodies present, and we provided some
8 confirmation around that. Once those sites were
9 confirmed, we then moved into an excavation phase,
10 focusing on those sites in the first instance where we
11 were hand excavating over the top of those remains, and
12 then the much longer period of our search, which was the
13 comprehensive sieving of all debris within the tower.

14 Q. Yes. Now, we'll look at those phases in a little bit
15 more detail shortly, but before we do, can I ask you to
16 cast your eye down the middle of the screen to
17 paragraph 6. You say there:

18 "I worked both around and inside the tower
19 throughout the forensic examination that lasted from
20 June to December 2017. Together with Dr Deborah Ryder,
21 I managed the teams of archaeologists deployed into the
22 Tower on a daily basis. I have first-hand knowledge of
23 the nature of the Tower following the fire, the state of
24 human remains and the strategies adopted to ensure their
25 recording and recovery."

10

1 Now, you say you managed the teams of

2 archaeologists; how did you go about supervising or
3 overseeing the work of those teams?

4 A. So supervision — direct supervision was very
5 challenging within the tower because of the need to work
6 within separate flats, because of the — we recognised
7 very early on the potential that mixing debris would
8 have in limiting our ability to identify people's
9 remains. So the archaeologists who were deployed within
10 the tower were working with search teams in individual
11 flats. They were effectively closed fire scenes
12 individually.

13 So the process of management underwent a number of
14 phases. We would establish strategy, so depending on
15 the nature of the fire debris within a flat in question;
16 intelligence related to whether we believed there to be
17 remains present within that flat; whether recovery had
18 already been made and, as a consequence, we believed
19 there to be more fragments of human remains to be
20 present within it. All of those then would fit within
21 our strategy of how we would approach that particular
22 flat in question.

23 So the archaeologist being tasked with the search
24 team would understand their role in the first instance.
25 They would receive some further on-site training in

11

1 identification of burnt bone, albeit that's their
2 background, so they've got that aspect of experience
3 already, and then they would work alongside the search
4 team under the authority of the lead search for that
5 flat that they're working within and provide the
6 technical expertise to assist those search officers in
7 identifying bone fragments, primarily.

8 On a daily basis we would have a series of briefings
9 and debriefings, both as a group as a whole with the DVI
10 and search teams, but also separately as a group of
11 archaeologists, and we would have representation at the
12 forensic strategy meetings to ensure that our approach
13 was recognised within those broader strategic decisions.

14 Q. Right. How frequent were the forensic strategy meetings
15 that you've just referred to?

16 A. Initially, they were very frequent and very dynamic, as
17 you can imagine. They settled into a weekly routine.

18 Q. Can we go to page 3 of your statement {KHA00000001/3},
19 and let's look at paragraphs 10 and 11. Just look at
20 those. You say there that most of the methods used by
21 forensic archaeologists relate to controlled means of
22 excavation or controlled excavation. What do you mean
23 by "controlled excavation" in those paragraphs?

24 A. Forensic archeology is most usually associated with
25 criminal recoveries, so a body buried in a clandestine

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1 grave, a hidden grave, from which the police are
2 attempting to optimise evidential recovery. In those
3 instances, you've got an area of disturbance dug by
4 an offender and filled in with a body within it. So
5 ensuring that the excavation recognises the parameters
6 of that grave, excavates within it, recovers and records
7 material in a methodical fashion, is the core of the
8 forensic archaeologist's skill set.

9 This is somewhat different, because we have a flat
10 surface and debris is gathering on top of it, so
11 accumulating through the fire and through the later
12 collapse phases, which creates layers of material. Most
13 of the human remains are very low down within that
14 stratigraphy of debris, so excavating down to ensure
15 that the body is revealed in its entirety; that
16 fragmentary remains that are still directly associated
17 with that body remain in position and continue to be
18 associated with it; and where bodies are located very
19 close to one another, that, wherever possible, the
20 material from each can be recognised and recorded as
21 being separate.

22 Q. If you look at paragraph 12, towards the foot of the
23 screen, you say that your forensic archeology work
24 differs from the process of search and digging used by
25 fire investigators. That's what you say.

13

1 What are the principal differences between your work
2 as a forensic archaeologist and the work done by
3 forensic fire investigators?

4 A. Digging out — excavation of fire scenes is a recognised
5 process that fire investigators would undertake as part
6 of their roles. The primary aim of the fire
7 investigator in doing that is to try to locate the
8 lowest point of burning within a room, because those low
9 points of burning will tend to be seats of fire and, as
10 such, might be origin points for that fire. The fire
11 investigator's key role is in identifying the cause,
12 origin and development of fire within a space.

13 This is a somewhat different goal, in terms of the
14 recovery of fragmentary human remains. So the two
15 methods look very similar, but they're structured
16 differently within a forensic strategy.

17 Q. How did your strategy or strategies as a forensic
18 archaeologist get designed to work alongside the work of
19 the fire investigators?

20 A. So there were no fire investigators working with us
21 within the scene. The fire investigators who were
22 deployed were within the flat of origin, rather than
23 within the fire — the burnt scenes throughout the rest
24 of the tower. So — and our strategy was more
25 integrated with the strategy of disaster victim

14

1 identification that the police were used to using,
2 rather than the fire investigation strategy.

3 Q. Right. So there was no overlap or need to arrange
4 things between you?

5 A. No, no. The flat of origin was sealed off and we didn't
6 undertake any work within it until their work was
7 completed there.

8 Q. Let's go to page 30 of your statement {KHA00000001/30},
9 please, and look together at paragraph 79. You say
10 there, under the heading "Deployment of archaeologists":

11 "Archaeologists were attached individually to teams
12 of DVI and LSO officers, with a remit that altered
13 depending on the phase of operation. Archaeologists
14 were recorded as being part of those teams and would
15 only change deployment location if requested by another
16 team, and when escorted by a second team member to
17 ensure they did not move alone in the Tower."

18 Now, you refer there to DVI and LSO. DVI is
19 disaster victim identification, is it?

20 A. That's correct.

21 Q. And LSO, is this right, means licensed search officer?

22 A. That's correct.

23 Q. I see. Were those teams — DVI and LSO — Metropolitan
24 Police teams?

25 A. For the most part. As the search continued, then mutual

15

1 aid was drawn upon amongst a wider range of forces,
2 primarily from the southeast of England.

3 Q. But police forces?

4 A. Yes.

5 Q. I see.

6 What is the difference between the expertise of
7 a DVI officer and an LSO, a licensed search officer?

8 A. The principal role of a DVI officer is to ensure the
9 chain of continuity that is provided by the unique
10 reference number that accompanies any identified human
11 remains. So all of the processes of DVI are designed to
12 ensure that the chances of a fragment of human remains
13 either being missed or being wrongly attributed to
14 a person and then repatriated to the wrong family are
15 absolutely minimised.

16 The role of a licensed search officer is somewhat
17 more general. They are utilised within policing to
18 search for things in accordance with the search
19 strategy. So they could be defensive searches, so
20 a location that is going to receive a visit from a VIP
21 will be searched in advance to ensure that no devices
22 have been secreted there. That would be a role that
23 would be undertaken by a licensed search officer. So
24 they are searches, but they are not directly and
25 specifically associated with the search for human

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1 remains.
 2 Q. And is it from either the DVI team or the LSO team that
 3 the primary information would come to you, such as there
 4 is a 63-year-old female with a potential disability in
 5 a particular flat?
 6 A. Yes, frequently via the DVI co-ordinator or the SERM,
 7 the search evidence recovery manager, who would be on
 8 duty on any given day.
 9 Q. And SERM, search evidence recovery manager?
 10 A. That's correct, and that's a role associated with DVI
 11 rather than with search.
 12 Q. Right. I think that answers my next question. We can
 13 pick that up, I think, in 80. You refer to the term
 14 "Crime Scene Manager (CSM), SERM and DVI Coordinator"
 15 there.
 16 SERM, you've explained, stands for scene evidence
 17 recovery manager. Were scene evidence recovery managers
 18 also police officers?
 19 A. Yes, and to confuse matters somewhat further, many of
 20 them, in their day jobs, were police search advisers.
 21 So they were generally inspectors and sergeants whose
 22 day job within policing would be to write search
 23 strategies that would be enacted by those licensed
 24 search officers.
 25 Q. Would those search strategies always be related to body

17

1 recovery or would they be other kinds of crime scene
 2 too?
 3 A. All sorts of crime searches and defensive searches.
 4 Q. I see, thank you.
 5 Now, let's go back to page 3 of your statement
 6 {KHA00000001/3}, please, if we can, paragraph 13, which,
 7 at the foot of the page, continues over on to page 4.
 8 You say at the foot of page 3 in paragraph 13:
 9 "It is important to note that forensic science
 10 advice in general, and specifically in this instance
 11 forensic archaeology support at mass fatality scenes are
 12 not directly addressed by the published national
 13 guidelines on DVI, but that some forensic specialists
 14 are noted in the NPIA (2011) document with regard to the
 15 staff roles that comprise the UK DVI cadre. These roles
 16 have traditionally focused their work on aspects of
 17 remains reassociation, deconfliction and identification
 18 in the context of mortuary operations."
 19 So just to be clear, it's right, I think, national
 20 guidelines for DVI, disaster victim identification,
 21 don't directly address forensic archaeology support for
 22 disaster scenes?
 23 A. That's correct. Currently the standing specialist
 24 cadres that support DVI efforts are pathology,
 25 anthropology and odontology. At this stage, there's no

18

1 recognition that archaeology or really scene science
 2 forms part of that specialist support. That's something
 3 that we're in the process of trying to change.
 4 Q. Right. That being so, how did you ensure that your
 5 teams were using methodologies at Grenfell Tower which
 6 were in keeping with national or international
 7 standards, or best practice?
 8 A. So communication with the mortuary, that's essential
 9 because, in essence, our role is facilitating the work
 10 that's being undertaken at the mortuary; a very early
 11 visit from a number of lead scientists from the World
 12 Trade Center to provide some further external peer
 13 review over the processes, albeit that was very early on
 14 within the response phase; and a use of standard
 15 accepted forensic archaeology processes, so an adaptation
 16 of a context recording form, which would be a standard
 17 recording form, within soil excavations in forensic
 18 archaeology that we utilised to supplement the
 19 standardised forms that already exist within the DVI
 20 packs.
 21 Q. So do I take it from that that your use of these routes
 22 to knowledge or routes to conformity, perhaps, was
 23 because of the absence of any standard operating
 24 practice which would cover a mass incident such as
 25 Grenfell Tower?

19

1 A. Yes, that's correct, and I would say that even if there
 2 were a set of standard processes, they would still
 3 require adaptation, we would still be in a position
 4 where we would be seeking to optimise them, given that
 5 the sorts of circumstances you're liable to face for any
 6 form of DVI incident are so different and so
 7 challenging.
 8 Q. Right. Does that explain the absence of a standard?
 9 A. No, I don't think so. I think the absence of a standard
 10 comes from the fact that we haven't recognised that this
 11 is a discipline that should be nested within the DVI
 12 capabilities of the UK.
 13 Q. I follow. At the top of the screen, you refer to the
 14 NPIA 2011 document. Is that the National Policing
 15 Improvement Agency's guidance on disaster victim
 16 identification?
 17 A. It is, yes.
 18 Q. I see. Is that a publicly available document?
 19 A. I'm not aware. I suspect that it probably is, but I'd
 20 have to check.
 21 Q. Did that guidance inform your methodologies or processes
 22 in working at the scene of the Grenfell Tower fire?
 23 A. It did on a high level, inasmuch as it pointed out and
 24 it recognises and enshrines the other specialisms that
 25 are working. It doesn't provide very much beyond that,

20

1 in terms of nuts and bolts to build a methodology on.
2 Q. Yes.

3 Now, let's look at page 2 {KHA00000001/2}. I just
4 want to ask you about the phases of work which you've
5 told us about just earlier this morning.

6 On page 2, you've set out a table, which sets out
7 the three phases. Am I right to summarise them as
8 follows: there was an initial phase, which was the
9 response; a secondary phase, which was excavation; and
10 the tertiary phase, search and sieve?

11 A. That's correct, yes.

12 Q. Yes. I think we also see, at the bottom, a final phase
13 which, if you go over the page {KHA00000001/3}, says:
14 "Completion, sign-off and Quality Assurance."

15 Is it fair to characterise that fourth element as
16 having been incorporated throughout the tertiary search
17 and sieve phase?

18 A. Yes. So, as you can imagine, the sieving in different
19 flats and lobbies was completed at different times. So
20 as and when those were completed, the phase 4 quality
21 sign-off would be undertaken.

22 Q. If we go to page 2 {KHA00000001/2}, back to that page,
23 please, in the column headed "Tasks", we see under
24 paragraph 1.1:

25 "Assessment of flats and lobbies suspected of

21

1 featuring human remains."

2 Do the phases in this table that we've just looked
3 at apply only to those locations suspected of featuring
4 human remains?

5 A. No. Phases 1 and 2 are directly associated with those
6 flats and lobbies that are suspected of featuring human
7 remains. Phases 3 and 4 are comprehensive throughout
8 the tower.

9 Q. Right. But not flat 16?

10 A. No.

11 Q. And how were those locations identified? In other
12 words, how were the locations covered by phases 1 and 2
13 identified?

14 A. As in physically how do we identify them?

15 Q. No, how did you decide which flats should be subject to
16 phases 1 and 2?

17 A. So initially based on the intelligence from London
18 Fire Brigade and 999 phone calls coming in via policing
19 to give approximate or confirmed locations for where
20 people were believed to have died. So that was our
21 first level of intelligence. That was then backed up by
22 the room searches undertaken by London Fire Brigade, who
23 would in turn say whether they believed there was a body
24 or bodies present within a given flat. Those areas were
25 then subject to our initial assessment to see if that

22

1 was the case.

2 Q. I follow.

3 Were any searches carried out by your teams for the
4 purposes of phases 1 and 2 in any other locations?

5 A. Ultimately, every flat was searched to ensure that there
6 was no missed body core that hadn't been seen, that
7 wasn't reported via 999 or hadn't been seen by London
8 Fire Brigade. So there was a sweep of those areas prior
9 to moving into that comprehensive phase of sieving.

10 Q. Yes, thank you.

11 Now, let's examine these phases in series, if we
12 can, first with initial phase.

13 If we go to page 4 of your statement
14 {KHA00000001/4}, please, paragraph 15, you can see
15 underneath the table there, table 2, where there's a bit
16 more detail, "Initial phase — Response". You detail
17 here the conversations which took place on 15 and
18 16 June 2017 to devise an initial recording strategy for
19 the recovery of human remains from the tower and its
20 surroundings.

21 Now, can we summarise it — and there are bullet
22 points which go over the page — like this: first, that
23 in the early stages it wasn't possible to estimate the
24 number of deceased?

25 A. That's true.

23

1 Q. And there would be likely victims who had been more
2 comprehensively burnt in the debris, as well as more
3 visible victims?

4 A. Yes.

5 Q. And some casualties might have been moved?

6 A. Yes.

7 Q. And victims in the stairways and lobbies as well as the
8 flat?

9 A. Yes, some of whom had been recovered very early on by
10 Fire Brigade gaining access through the stairs.

11 Q. Yes, and it would be best to search and examine the
12 debris in situ from the tower because of the fragile
13 nature of the remains from exposure to the fire?

14 A. That's true. So one of the key areas of concentration
15 of those early conversations about strategy was around
16 the benefits versus the potential risks of searching in
17 situ, in that we didn't know whether the tower would
18 collapse during those search efforts, and we didn't know
19 how the tower would respond as it cooled, versus a rapid
20 attempt to move the debris within those flats and then
21 search at a different location.

22 Q. Yes, I see.

23 If you go to paragraph 16 on the next page, page 5
24 {KHA00000001/5}, you set out four stages of the initial
25 phase under (a) to (d):

24

1 "a) Assessment of flats and lobbies suspected of
2 featuring human remains ...
3 "b) Development of systematic search strategies ...
4 "c) Assist in the identification of tissue at the
5 base of the Tower ...
6 "d) Assist in the recoveries of the identified
7 bodies."
8 Then you detail those over the following pages, up
9 to page 9. Let's just take this in stages.
10 First, the assessment of flats and lobbies suspected
11 of featuring human remains. You cover that at
12 paragraph 17 at the foot of your screen.
13 Could you just tell us, what were the tasks at that
14 stage?
15 A. So at that stage we were still very few in number.
16 We've spoken about archaeologists in the 30s; I believe
17 at this stage there were still three of us associated
18 with the search team. So I was outside dealing with
19 point (c) in paragraph 16. Dr Ryder and Mr Fletcher
20 were attached to the DVI-trained teams, going from flat
21 to flat and assisting them in confirming whether or not
22 areas believed by the Fire Brigade to be the remains of
23 victims were indeed so.
24 Q. Did you stay outside throughout your involvement?
25 A. I stayed outside for — no, it was for the morning of

25

1 the 16th I was outside, and then I believe I was in the
2 tower following that.
3 Q. I see.
4 At the end of this paragraph, you say that:
5 "... implementing controlled excavation ... [would]
6 minimise confusion of body elements in the mortuary."
7 Could you just explain how that could be so?
8 A. So part of that assessment process revealed that, in
9 places, we could see remains that were clearly more than
10 one person, very closely associated to one another, and
11 fragmentary, so subject to very high burning causing
12 fragmentation of bone material. If those remains are
13 recovered very rapidly and taken back to the mortuary,
14 that might assist in a very rapid identification using
15 odontology of a particular person or the dentition of
16 a person, but the rest of the body material associated
17 with them would risk becoming mixed up very quickly. So
18 our view that we took, the decision that was made, was
19 that we would excavate them carefully in situ to try to
20 optimise — maximise the amount of material that could
21 be directly associated with an identification.
22 Q. I see. Does that tell us that there was no
23 identification at the scene? That would be done at the
24 mortuary?
25 A. Absolutely, yes.

26

1 Q. So the idea would be then to excavate carefully in situ
2 in order to maximise the amount of material —
3 A. That's right.
4 Q. — which can be sent to the mortuary for identification?
5 A. So if I use the phrase "identification", it's not
6 individuation that would be done by odontologists and
7 anthropologists, it's confirmation that remains are
8 human and potentially confirmation that we have one,
9 two, three, four people within this space, and we will
10 then excavate the debris over the top accordingly.
11 Q. I follow, you're drawing a distinction between
12 identification and, you call it, individuation?
13 A. Yes, that's correct.
14 Q. That's the distinction. So it's the mortuary, is it,
15 that was responsible for individuation?
16 A. Absolutely, yes.
17 Q. I see, and they would go through the exercise of
18 matching up the information — is this right? — from
19 the police — so, for example, 63-year-old female with
20 a disability in a flat —
21 A. That's correct, and under the auspices of the coroner
22 there. So the control by the PMOC, the post-mortem
23 co-ordinator, and the authorities of the coroner to
24 oversee that process.
25 Q. Yes, I see.

27

1 Then if we go, please, to the bottom of page 5 and
2 over to page 6, there's a heading, "Development of
3 systematic search strategies". You cover that in
4 paragraphs 18, 19 and 20. If we could just look at the
5 bottom of page 5, paragraph 18, and then over to the top
6 of page 6 {KHA0000001/6}, you have the rest of that
7 paragraph, paragraph 19 and 20 there.
8 Just looking at that, casting your eye down, could
9 you tell us, in general terms, what did the development
10 of systematic search strategies involve?
11 A. So just prior to that, it's worth pointing out that the
12 very small amount of excavation that was done in a very
13 dynamic way associated with response was done without —
14 with some very early and very fundamental thoughts about
15 how we would approach these scenes, but not really with
16 a written set of strategies in place.
17 By going into the flats and beginning to understand
18 the nature of the debris, that gave us an early
19 opportunity to then come up with a system. It's a very
20 simple system. In the flats that were most
21 comprehensively burnt, most of the internal walls were
22 almost entirely destroyed. The walls were stud walls of
23 wood and plasterboard and, generally speaking, the line
24 of those walls was only represented by heaps — lines of
25 collapsed plaster associated with the slots that the

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1 wooden uprights fitted within. So we decided to utilise
2 those natural landmarks within the flats to be our
3 points of division within them. So each flat was
4 divided into sectors, one-bedroom flats divided into
5 three, two-bedroom flats divided into four, on the basis
6 of the room layouts that covered most of the space,
7 other than the halls and the bathrooms that tended to
8 cut across those lanes.

9 Q. I see.

10 At the top of the screen, very end of paragraph 19,
11 you say:

12 "As a result, the search and sieving of all debris
13 was restricted to the flat or space in which the
14 material was located."

15 Why did you decide to search and sieve all debris in
16 the flat or space in which the material was located?

17 A. So there's a number of reasons for that. The first is
18 related to health and safety, that we had no asbestos
19 safety certificates for the material that we were
20 excavating through, as a consequence of which, anything
21 that was removed from the tower — were we to decide to
22 remove material and search it elsewhere, we would have
23 to treat that material as if it were contaminated with
24 asbestos. That would greatly slow us down in comparison
25 with adopting asbestos safety ourselves and going into

29

1 those spaces to search. So that immediately ensured
2 that we were working within the tower.

3 Our next concern is one of evidential continuity,
4 that we want to ensure that there is no opportunity for
5 a mixing of material between flats. So, again, any
6 movement of bags is likely to raise complications that
7 could result in an intermixing of material. So
8 searching — retaining material within flats then
9 becomes paramount. So even when we've sieved and we're
10 storing those bags of material, they're still stored
11 within those flats with the flat name written on them.

12 Then, finally, because we have flats where we have
13 numerous — multiple individuals who have died,
14 sometimes in different zones, sometimes in one zone
15 together, to mark the zone number — the zone letter
16 where those people have come from ensures that we've got
17 the highest possible resolution about where that debris
18 has come from.

19 Q. Thank you.

20 You go on at paragraph 19 to describe how you
21 decided to divide the one-bedroom flats into three
22 sectors and the two-bedroom flats into four sectors.
23 Could you just explain for us why you did that?

24 A. Those sectors represent the natural room spaces, by and
25 large. So in the one-bedroom flats, they represented

30

1 the bedroom, kitchen, lounge layout that tends to cut
2 across the flats. In the two-bedroom flats, bedroom,
3 bedroom, kitchen, lounge layout. On the basis that,
4 unless there had been some subsequent disturbance of
5 remains following the end of the fire, then the remains
6 of an individual will be within one of those natural
7 room spaces.

8 Q. And what would account for a subsequent disturbance of
9 remains following the end of the fire?

10 A. Well, there was always the potential that a — you know,
11 whilst the tower was still smoking, a search undertaken
12 by the Fire Brigade might have resulted in a movement of
13 material by stepping through between spaces, if
14 visibility was very poor. Or, alternatively, some flats
15 required shoring. So the lightweight concrete floors of
16 the flats had begun to bow as the strength of the
17 reinforcement bars within them was giving out, so we
18 were not able to search two flats that were directly
19 adjacent to one another in terms of their height to try
20 to provide a little bit of a mitigation space. Some
21 flats required shoring prior to us being able to get
22 into them at all. So in order to get the feet of the
23 Acrow props down, then debris had to be moved in order
24 to make sure that they were stable on the ground.

25 Q. Right. When the debris was moved, either by the LFB

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1 search and rescue teams or other teams, or by whoever
2 was responsible for putting the Acrow props in place,
3 was any protocol followed about disturbing the remains
4 so that your job, when you came in with the DVI and
5 LSOs, would be easier?

6 A. Yes, protocol was adopted. Some of the very early
7 propping, I believe, took place prior to the protocol
8 being in place, because it was part of the response
9 nature of the attendance at the scene.

10 Q. Right. When you came along or your teams came along
11 after the process of either search and rescue or the
12 propping by the Acrow props, did you regard any movement
13 of material as significant or problematic in any way?

14 A. There was some movement of material that complicated
15 understanding. So when you're working as
16 an archaeologist — I've described this very much in
17 terms of sectors and flat numbers. These are people,
18 and we're trying to excavate through debris and
19 understand the positions that they're in and where they
20 are within the spaces and what activities they might
21 have been engaged with as they lost consciousness. So
22 in understanding that fine detail of someone's position,
23 then yes, where there was extensive disturbance, then
24 that — you can no longer make sense of that kind of
25 positioning.

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1 Q. I see. We may come back to that in a moment.
2 You say in the same paragraph, paragraph 19, that
3 you used the remnants of internal partition walls as
4 divisions between the sectors. What was the purpose of
5 doing that?

6 A. The purpose of doing that was to recognise that, as
7 individuals lost consciousness and died within those
8 spaces, the flat at the time would have had walls in
9 situ, they would have been present either within the
10 living room or a bedroom space or the bathroom
11 primarily, so it made sense that our zones recognised
12 those boundaries. It was a physical boundary that
13 everybody within a team could see and understand. So if
14 you were the person who was shovelling debris for it to
15 be sieved, there was a very clear end to the sector that
16 you were excavating within, but also it made sense
17 within understanding the space as a whole.

18 Q. I see, thank you.

19 In paragraph 20 on the same page, you say:

20 "A further fundamental tenet of the search was
21 established from the outset of deployment; that all
22 spaces within the Tower subject to destructive burning
23 should be subject to the same degree of search, whether
24 that space featured reports of human remains present or
25 persons reported missing."

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1 What do you mean by "destructive burning"?

2 A. So flats that were subject to destruction by fire would
3 be searched — the debris within it would be searched by
4 sieving, wherever possible. So for flats — starting
5 from about the 9th floor upwards, we've got flats that
6 have extensive amounts of burning, and then between the
7 fifth and the 9th floor, the burning is less
8 comprehensive, so there's a lot more charring, much
9 bigger material that you can't really sieve quite as
10 effectively. So there's a change in response lower down
11 within the tower structure that responds to the nature
12 of the fire.

13 However, although we prioritised based on when we
14 went into flats in an intelligence-led way — if we were
15 told that there was believed to be a person deceased
16 within a flat, then we would prioritise that area — we
17 still adopted the same processes of sieving and
18 searching in areas that had no intelligence associated,
19 because we couldn't — we didn't want to be in
20 a position where we had some kind of class B approach
21 for spaces that nobody had said somebody was present
22 within, only to later find that there was remains within
23 it.

24 Q. Right, I see.

25 The third stage in that initial phase was, as you

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1 say in paragraphs 21 and following, under the heading
2 "Assist in the identification of tissue at the base of
3 the Tower", that precise stage. Now, you go on to
4 describe that in the following paragraphs, 21 and 22.

5 Is it right that your team worked with the victim
6 recovery dogs officers on 15 and 16 June 2017 to search
7 the base of the tower and the outside areas of the
8 building?

9 A. That's correct. The team at the time I think was still
10 only three. So I started off searching directly at the
11 base of the tower. Some of the cladding materials,
12 insulation, as it burnt had an appearance not dissimilar
13 to tissue. Some of the material had a degree of
14 interest from some of the victim recovery dogs, so there
15 was a need for us to assess very quickly, while bits
16 were still falling from the tower, as to whether there
17 were human remains directly associated with the ground
18 at the foot of the tower.

19 Q. Right. I'm going to show you and others, of course,
20 following these proceedings a photograph of that
21 process, so I think this deserves probably its own
22 trigger warning. So those who are not keen to see
23 debris at the foot of the tower in the day or so after
24 the fire now, please, should look away or leave the
25 room.

35

1 Can we then go, please, to page 8 {KHA0000001/8}
2 figure 2. That is a photograph of early search activity
3 at the base of the tower.

4 Could you just explain to us what's going on there?

5 A. Yes. So I didn't know this photograph was taken at the
6 time. I wasn't aware that there were press already
7 around the outside. So you can see the corner of the
8 tower standing and the grassed, landscaped area
9 surrounding the tower, with some of the fittings still
10 surviving, the lamppost in front of us. There's a lot
11 of material, lightweight metals and cladding, that have
12 fallen from the exterior of the tower primarily, that
13 are — it's littering the ground, it's on the ledges of
14 the tower. So that area was searched by victim recovery
15 dogs, so dogs that are trained to scent for human
16 remains, and those dogs came up with some points of
17 interest.

18 We had intelligence to suggest that there had been
19 at least one person who had jumped from the tower, so it
20 was imperative that we searched the grounds around it as
21 soon as possible to see if there was material associated
22 with those people.

23 So that was — I regarded — it was something of
24 a moot point. I thought that was probably the most
25 dangerous thing to do, so I sent Dr Ryder and

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1 Mr Fletcher up on to the parapet of the lower level
 2 flats, looking at other parts of debris, and I went with
 3 the searchers to look for this material.
 4 Q. And were any fragments of human tissue identified
 5 through this process?
 6 A. There were some that I couldn't discount at the time.
 7 I don't believe any of them came back as human material
 8 ultimately.
 9 Q. Right, thank you.
 10 Then let's go on to paragraphs 23 to 26 under the
 11 heading, "Assist in the recoveries of the identified
 12 bodies", and you cover that in your statement at
 13 paragraphs 23 through to 26 on pages 8 and 9
 14 {KHA00000001/8-9}.
 15 Is it right that the interior of the tower became
 16 accessible to your team of archaeologists and the
 17 DVI-trained officers on and from 16 June, the Friday?
 18 A. That's correct.
 19 Q. What were the first tasks you carried out on gaining
 20 access to the inside of the tower?
 21 A. So the first tasks that we carried out were to go to
 22 spaces where London Fire Brigade crews or other forms of
 23 intelligence suggested that there was a strong
 24 likelihood of bodies being present and to confirm
 25 whether that was the case or not. So, again, when I'm

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1 using the term "identified", I don't mean in terms of
 2 individual identification; simply that there's something
 3 that looks like a body and, yes, we can see there are
 4 human remains associated with it.
 5 Q. I see.
 6 In paragraph 25, if we turn the page, please, to
 7 page 9 {KHA00000001/9}, you note that recoveries from
 8 residents' flats was subject to the approval of the
 9 structural engineers who advised the Metropolitan Police
 10 on the structural integrity and health and safety
 11 concerns for each area. That's right, is it?
 12 A. It is, and it makes the point that this very early work
 13 was dynamic because it was still part of an emergency
 14 response. So if we turned over debris to try to look
 15 further to see — to confirm whether remains were human,
 16 it was still hot enough that it would reignite at this
 17 time. So it's very much a response-led effort.
 18 Q. Right. You say in the last sentence in paragraph 25
 19 there on the screen:
 20 "Recoveries inside the tower from residents' flats
 21 began on 17th June 2017 [which was the Saturday],
 22 subject to the approval of structural engineers who
 23 advised the MPS on the structural integrity and health
 24 and safety concerns for each area and advised
 25 precautions and structural supports required."

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1 Now, did the advice about structural integrity only
 2 start on 17 June or had that been a question at the
 3 point and from the point at which you became involved?
 4 A. It was a question from very early on. It was recognised
 5 that the structural integrity was going to be a key
 6 issue to how we approached the spaces, the flats and the
 7 lobbies. I can't remember when the first opinion was
 8 given about the structural integrity.
 9 Q. Right. At what point did the structural supports go in
 10 to the various rooms?
 11 A. I would have to go back to my records for when they
 12 began. Certainly the work that we were undertaking on
 13 the 17th, we didn't have any structural supports at that
 14 time. The processes that we undertook were ones of
 15 mitigation. So we would only search every other floor.
 16 So if we had flats that needed searching on the
 17 18th/19th/20th floors, we would search on the 18th and
 18 20th and not put a team in on the 19th, on the case that
 19 if the floor collapsed, we wouldn't have both one team
 20 injured by falling and one team injured by a crash
 21 collapse, mitigate that.
 22 Q. Yes, I see.
 23 In addition to that, how did the concerns about the
 24 structural integrity of the building affect the recovery
 25 work of your teams and the DVI teams during that early

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1 period?
 2 A. We were limited in staffing, so although the teams at
 3 that time numbered five or six, so an archaeologist and
 4 the DVI or — not LSO at this stage, I think it was just
 5 DVI teams at this stage. We were only allowing three of
 6 those six people entry into a flat at any given time,
 7 again trying to limit the loading on floors that (a) we
 8 didn't understand the structural integrity of, and (b)
 9 we were very aware that moving through a rapid heat ramp
 10 has an effect on diminishing structural integrity,
 11 moving through a cooling ramp does the same thing. So
 12 you're risking — it's the second riskiest time when it
 13 comes to collapse of those structures. So we were very
 14 aware of the need to limit the number of people going
 15 in, so that slowed us down, because we were cycling
 16 through people working within spaces, bringing in
 17 archaeologists, bringing in a photographer, everybody
 18 else being stood within the more robust concrete upright
 19 of the lobby and stair spaces.
 20 Q. So the risks were structural integrity and re-ignition?
 21 A. Those were the first initial risks. So one of the tools
 22 that was utilised by the USAR, the urban search and
 23 rescue teams, is called a WASP, which is a building
 24 collapse detector. In essence, it's an extremely
 25 sensitive machine that monitors the integrity of

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1 a floor, and it then issues an audible alarm if it
 2 senses any change in that flooring to allow you time,
 3 hopefully, to evacuate.
 4 Q. Right.
 5 Let's then turn to the second phase: excavation.
 6 You cover this on pages 9 through to 12, starting at
 7 paragraph 27, under the heading "Secondary Response —
 8 Excavation". If you go to page 9, paragraph 27 in
 9 detail, you see that you say there that the areas of
 10 priority interest identified for the primary response
 11 phase were then subjected to excavation by forensic
 12 archaeologists. I've summarised very broadly, but is
 13 that right?
 14 A. That's correct, yes.
 15 Q. In that paragraph, the last line says this, let's look
 16 at it:
 17 "This entailed the search and recovery for the more
 18 fragmentary remains, and the fragment clusters
 19 associated with the earlier initial response
 20 recoveries."
 21 What are or were fragment clusters?
 22 A. So if you — and I apologise in advance, because this
 23 will be fairly detailed about the nature of body
 24 fragmentation, if you're content for me to continue?
 25 Q. Yes, please.

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1 A. If you imagine a body high up within the tower subject
 2 to intense and extensive heating, that will result in
 3 the destruction of most associated soft tissue, not
 4 necessarily all, low down in association with the
 5 flooring. But elements of the body that are higher up
 6 within that room — so if somebody falls on their back,
 7 the tops of a ribcage, a hand if it's leaning up against
 8 an item of furniture — they're going to be — there's
 9 a higher surface area that's directly associated with
 10 the heat, and they're in a hotter part of the
 11 compartment, as you'd say in fire investigation. So
 12 ultimately that will result in a core of a body — so
 13 primarily head, thorax, pelvis and thighs — that can be
 14 identified, and that's our primary phase of
 15 identification that, yes, that is the remains of
 16 a person. That core can be recovered as a whole, but in
 17 lifting it and engaging in those DVI processes,
 18 elements, smaller elements — fingers, wrists, bits of
 19 bone that will chip off from longer bones — will fall
 20 directly down within the debris. So they'll form
 21 clusters or fragments.
 22 So we know where the body has been recovered from,
 23 both in terms of a zone but also those initial
 24 photographs, we recognise that that's going to be
 25 an area where there will be a need for very, very close,

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1 detailed, fine work that will be directly associated,
 2 and we know that those remains, particularly if it's
 3 a flat that only has one person that has died within it,
 4 will be associated with them.
 5 Q. Yes, I see.
 6 Now, I'm going to show you a photograph of the
 7 interior of Grenfell Tower after the fire on page 10 of
 8 your report, but before we turn to it, I need yet
 9 another trigger warning, just to make sure that people
 10 are aware of what we're about to see, and if they wish
 11 to absent themselves from here or to look away from the
 12 live stream, then they should do that.
 13 Can we then look, please, at page 10
 14 {KHA00000001/10}. Here is a photograph, figure 3,
 15 "An example of a Flat requiring shoring prior to the
 16 tertiary phase of examination".
 17 Now, you described earlier this morning and in your
 18 report at paragraph 28 on pages 9 and 10 the
 19 installation of the Acrow props as one type of risk
 20 mitigation during this phase of the work. Can we see
 21 those in this photograph?
 22 A. Yes, so this is this network of steel props that is
 23 visible from the floor to the ceiling in the centre of
 24 the photograph.
 25 Q. Yes. Would I be right in thinking, as you have I think

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1 told us, that the risk that the Acrow props helped to
 2 mitigate was the risk of collapse?
 3 A. That's correct.
 4 Q. Now, when they were erected, can we take it from the
 5 photograph that the debris on the floor on which they
 6 stood was swept clear?
 7 A. Yes. So the debris, as you see it there, cleared down
 8 to the concrete floor in the middle, is not as it would
 9 have been in that primary phase when we've looked into
 10 this flat. There would have been greater levels of
 11 debris accumulation along the interior wall lines that
 12 have gone. So this looks like a huge space; it would
 13 have been a flat with stud walls within it that we've
 14 now lost. In order for that system of props to be put
 15 up, the debris has had to be moved to the sides in order
 16 to access the floor area. So, in moving that, that
 17 would have been moved within the sections. So this is
 18 a two-bedroom flat; there would have been four separate
 19 sectors of material recovered from within it. There
 20 would be — the material would be retained within the
 21 sector. So I think it's sector B and C, looking at
 22 this.
 23 Q. Well, that's it, sector B and C. Was material
 24 attributable to sector B retained in sector B and
 25 vice versa?

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1 A. Yes, it was. So as the plaster wall line was followed,
 2 that demarcates those two sectors, so the clearance
 3 would have been undertaken to that line.
 4 Q. I see.
 5 Now, just breaking that up a little bit. First, who
 6 was responsible for clearing the floor initially?
 7 A. DVI search teams were responsible — DVI teams, sorry,
 8 not LSO teams, were responsible for clearing those floor
 9 areas.
 10 Q. Right. So is it the case that when you came on the
 11 scene and your teams came on the scene, this had already
 12 been done?
 13 A. It was partially completed, and then as it continued to
 14 be done and as our staffing of archaeologists grew, we
 15 could then attach an archaeologist to those efforts, so
 16 we could have somebody with them to ensure the chance of
 17 disturbing remains was minimised.
 18 Q. Right. Was the process of sweeping or clearing the
 19 floor conducted by the DVI teams in accordance with
 20 an established protocol?
 21 A. Inasmuch as the protocol was to not — to disturb things
 22 as little as possible and keep things within their
 23 sector, but that's as far as it went.
 24 Q. Did the movement and dispersal of the debris, as we can
 25 see from the photograph, jeopardise the integrity of

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1 your own work and your own conclusions?
 2 A. It poses a challenge. So in this particular instance,
 3 were there to have been a highly fragmented body
 4 directly where that shoring needed to be put, our
 5 ability to reconstruct where that body is, other than to
 6 say it's within that sector, would be hampered. We
 7 would still find the elements, but they would be
 8 dispersed within that sector.
 9 Q. Right. How did you seek to minimise or meet the
 10 challenge, minimise the risk?
 11 A. Well, by attaching the archaeologist. So once we
 12 realised that work was underway, to increase our numbers
 13 and have somebody go with them.
 14 Q. Now, if we go above the photograph, please, but sticking
 15 on page 10, within paragraph 28, where you've described
 16 the installation of these supporting Acrow props and the
 17 clearing of the floor, you say in the last three lines,
 18 just above the photograph:
 19 "Wherever possible, this moved debris was kept
 20 within the Sector in which it was found."
 21 Just pausing there, were there instances where it
 22 wasn't possible, so that the moved debris was not kept
 23 within the sector in which it was found?
 24 A. I couldn't speak to it in detail because some of the
 25 movement had occurred prior to an archaeologist being

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1 attached to it, hence the doubt that I express within
 2 that sentence.
 3 Q. I follow.
 4 You go on to say:
 5 "When it was moved beyond the Sector of origin, the
 6 debris was not moved out of the floor or lobby from
 7 which it originated."
 8 In what circumstances would debris have been moved
 9 to a sector other than the one from which it was found?
 10 A. So debris is only moved outside of a flat if — so, if
 11 you can imagine a highly — a flat with a much thicker
 12 level of debris than the one that we see in this
 13 picture, where you've got debris up to sort of mid-calf
 14 level right from walking in the front door, it poses
 15 a bit of a challenge, like one of those children's
 16 puzzles with one square space. So how do you begin to
 17 move things to clear floor to work within?
 18 So, in those circumstances, a degree of clearance
 19 within bags, recorded bags, might have to then move out
 20 into the lobby space directly outside the front door of
 21 that flat, the lobby having been previously cleared, so
 22 we know we're not going to mix up material, before an
 23 area can be cleared such that material can be moved back
 24 in.
 25 Q. I see. So it was an initial pre-clearance clearance?

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1 A. It was about entry into the flat to give you enough
 2 working space to then conduct your work. Other than
 3 that, it was only at the point when material was moved
 4 via the external hoist that material was taken out, and
 5 then it was bagged.
 6 Q. Was that process in accordance with best practice or
 7 some kind of established protocol?
 8 A. Yes. So the recording on the bags, the nature of the
 9 bagging, the order in which material was moved from
 10 flats, the way it was moved between sectors in different
 11 areas and how it was stored ultimately within the cargo
 12 containers it was stored within, all of that was
 13 documented.
 14 Q. As part of recording the continuity of the evidence
 15 where debris was moved from its original location, was
 16 it the case that the original locations were documented
 17 digitally by way of photographs and logged in reports?
 18 A. Yes. So every DVI team has, within their equipment,
 19 a camera. The teams, while they may feature crime scene
 20 investigators among their number, are omni-competent
 21 across their skills, so any member of the team should be
 22 able to pick up that camera and use it, so every flat
 23 had associated photography with it as early as possible.
 24 Q. Were the majority of remains removed from their original
 25 location before being identified throughout the

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1 archaeological processes?
 2 A. Sorry, I don't think I follow. By identification,
 3 do you mean that we knew there were human remains —
 4 Q. Yes.
 5 A. Yes, yes.
 6 Q. Yes.
 7 Given the process of removing debris from their
 8 original location or locations in the flats, to what
 9 extent do the archaeological conclusions that your teams
 10 were able to reach give an exact or accurate account of
 11 the deceased's location or position at the time of
 12 death, rather than simply the general location, the
 13 area, flat, lobby?
 14 A. So in the more extensive report that was prepared
 15 following our work, a series of graphics with posed
 16 figures was presented for each recovery of
 17 an individual, and they were colour-coded to give
 18 a level of confidence. So where we had 90% of
 19 an individual laid out, so we'd removed all of the
 20 debris from over the top of them, we know exactly the
 21 position they're in, we have a very high level of
 22 confidence whereabouts in the flat they are, what
 23 position they're in, who they are associated with, what
 24 material is directly associated with them, right the way
 25 through to where we have a much more fragmentary

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1 recovery, a recovery that becomes disturbed as
 2 a consequence of shoring, where we don't have that level
 3 of confidence.
 4 Q. Were there any other limitations or challenges to your
 5 work which arose from the removal of debris or the
 6 movement of debris, of which this is an example?
 7 A. The environmental challenges were many. So very early
 8 on in the response we had, as you can imagine, vast
 9 amounts of firefighting water pumped into the tower, so
 10 we were walking against a waterfall that was coming down
 11 the central staircase. That would have the potential to
 12 move fragmentary, lightweight, powdery remains within
 13 it.
 14 Prior to the screens being put up around the windows
 15 and the external scaffolding being put up, the wind —
 16 ultimately we had Sitex, so metal grid work placed on
 17 doors, but prior to that the wind would pass directly
 18 through the tower. So, again, not vast amounts, not
 19 clouds of debris being moved from flat to flat, but
 20 certainly a very challenging environment to work within.
 21 Q. And on page 10, lower down, in paragraph 29, below the
 22 image, if we can go to that, please, you say:
 23 "Excavation is a collection of techniques used by
 24 archaeologists to remove any material to better
 25 understand relationships between buried objects or

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1 remains. Those relationships can be spatial (in the
 2 context of the Grenfell Tower search, locating the
 3 remains of individuals later to be identified by the
 4 mortuary teams in specific parts of specific rooms that
 5 might correlate or add detail to what might already be
 6 suspected of that person's movements from witness or
 7 survivor accounts), the physical relationships between
 8 excavated objects or remains can also be chronological,
 9 when a sequence of collapsed material provides an order
 10 in time to deposition (again, in the context of Grenfell
 11 Tower search, this might take the form of noting whether
 12 the remains of a body suggest that a person was sitting
 13 or lying on a bed in their final position in life, or if
 14 furnishings in a flat had subsequently fallen over their
 15 bodies)."
 16 Now, I've read that all to you because I have
 17 a number of particular questions.
 18 First, what was or is a spatial relationship in this
 19 context?
 20 A. It's physical proximity. So where — either we say this
 21 person is definitely within the living room space or
 22 these persons are and they're very close together, then
 23 we're talking about physical location.
 24 Q. And chronological relationship?
 25 A. Is — the best example would be to take a deck of cards

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1 and drop them off this desk. You know, some of those
 2 cards will be isolated and not associated, but the core
 3 of the pack of cards will fall in a bunch and, by
 4 picking them up one at a time, you can see which one
 5 fell first and which one fell last. So exactly that: if
 6 an individual died on a bed, then archaeologically that
 7 would look very different to somebody dying under a bed
 8 or somebody having another item of furniture falling on
 9 top of them later on in the fire.
 10 Q. And which procedures or methods enabled you to make
 11 findings about the victim's location within the tower?
 12 A. So primarily the trowelling, so the prime method of
 13 archaeological excavation — so the archaeologists
 14 within the team utilising trowelling techniques to
 15 remove the unrelated — sort of the grey, powdery debris
 16 of concrete and plaster you can see in that figure 3 on
 17 the top of the page, leaving behind, as much as is
 18 entirely possible, both the body core and the
 19 fragmentary remains directly associated with those
 20 remains.
 21 Q. Right. Now, you used the word, I think, "trowelling";
 22 is that right?
 23 A. Yes.
 24 Q. Could you just explain to us what that is?
 25 A. So the primary tool of an archaeologist in the UK would

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1 be a three-inch pointing trowel, so with straight sides,
2 a small plasterer's trowel that provides you with an
3 ability to excavate without digging destructively into
4 something. So clearing from the side to ensure that you
5 can move debris without moving the thing that you're
6 trying to preserve the relationships of.

7 Q. I see.

8 Where remains believed to be human tissue were
9 recovered, did you retain the debris directly associated
10 with those remains?

11 A. Yes, so all debris was retained because we recognised
12 that even after this period of excavation, a sieve
13 process would be required, so that debris was still
14 available. It was cleared from the direct association
15 with the body in question to allow a photographic record
16 to be taken of the position of that body in relationship
17 to where it is in the room and the pose that it's
18 adopted.

19 Q. But it was retained in situ otherwise, was it?

20 A. Yes, that's right.

21 Q. Right. So if I can envisage it, a body part or remain
22 is identified through the trowelling process, lifted
23 carefully out, removed with the debris associated with
24 it around it, but that's left in situ for later sieving?

25 A. That's correct.

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1 Q. Right.

2 A. And by that process of excavation, if we — and its
3 integration with DVI processes, if we find a body core
4 and we uncover it, that has one URN, unique reference
5 number, associated with it, it undergoes all the DVI
6 recording processes. If we have a second element of
7 human remains that isn't — you know, say it's the end
8 of a leg and there is a leg missing on this body, it
9 would receive its own number, but, archaeologically, we
10 would be very interested in ensuring that the
11 relationship between those two is recorded, because that
12 primary act of association in the mortuary is to see if
13 those two things relate.

14 Q. Yes, I see. I think it's right you go on to say, as you
15 do at paragraph 33 {KHA00000001/11}, that you sought to
16 understand the position that the victims of the fire
17 were in at death.

18 A. Yes, that's correct.

19 Q. And how were those positions recorded?

20 A. They were recorded photographically and they were
21 recorded in sketch plans both within the DVI recording
22 packs, but also on the supplementary archaeological
23 record that we put together.

24 Q. Then there's the tertiary phase, search and sieve. If
25 we go, please, to page 12 of your statement

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1 {KHA00000001/12}, and we pick that up at paragraph 37,
2 under the heading "Tertiary Response — Excavation".

3 Now, there's a lot here, paragraphs 37 and 38, but
4 I think it's right, isn't it, that you say that the
5 areas of the tower that were subject to the tertiary
6 phase were a proportion of the flats between the 4th and
7 the 9th floors and all the flats and lobbies from
8 floor 10 and above, plus stairway and the basement
9 sub-floors where material was carried down by
10 firefighting water?

11 A. That's correct.

12 Q. Have I summarised that correctly?

13 A. Yes.

14 Q. Yes.

15 What was the proportion of the flats between
16 floors 4 and 9 that were subject to the tertiary phase?

17 A. It varied, and if you think about the origin of a fire
18 within a room space, very low down it will have a single
19 point of origin that's quite small, so down at the 4th
20 and 5th floors it's very low, and then as it Vs
21 outwards, as the fire spreads laterally as well as
22 upwards, then more and more becomes involved within it.
23 So it's a gradual inclusion of more and more flats and,
24 within those flats, more and more proportions of the
25 space that either are charred, so partially combusted,

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1 or then totally combusted.

2 Q. Yes, I see.

3 Can you explain briefly exactly what the tertiary
4 phase of excavation involved in those areas of the tower
5 you just mentioned?

6 A. So having engaged in that initial recovery in the
7 primary phase, having excavated and recovered as much
8 fragment clusters as we can in the secondary phase, the
9 tertiary phase is designed to ensure that we have
10 a comprehensive search and recovery of any other
11 remaining material. So this is a sequential and
12 organised sieving operation in which the team of DVI
13 officers or LSO officers with an attached archaeologist
14 will enter a flat and, sector by sector, will put all of
15 the debris through sieves, either small, handheld, round
16 sieves, looking very similar to garden sieves, or later
17 on through some purpose-built standing sieve arrays that
18 were put up within some of those structures.

19 Q. Yes, I see. Could you tell us, who was in each team?
20 How big were they and who was in —

21 A. Five or six to a team. So there's a — it was
22 recognised that there was a — there were some
23 efficiencies to be had around numbers of five or six,
24 where you could swap out searchers. So the course of
25 this work is for eight hours, you've got your head down

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1 with a head torch on, with buckets of material being
 2 tipped into a top sieve that you'll then pick through by
 3 hand and look for elements that might be bone fragments
 4 or might be plaster fragments. It could be very
 5 difficult to tell the difference under some
 6 circumstances. So that is quite intense searching work.
 7 So having some team members who are also shovelling up
 8 the debris to be put into the sieve or bagging up the
 9 debris or writing up the paperwork and cycling through
 10 those roles is essential to keep people focused.
 11 Q. So five to six, and how many of those were your
 12 archaeologists?
 13 A. One.
 14 Q. One. And what was the role of that? Were they sieving
 15 as well or were they supervising the sieving process by
 16 the DVI team?
 17 A. Primarily they're supervising. So they're looking at
 18 the material that's going through the sieve that is
 19 being looked at by the DVI teams. The briefing that we
 20 gave to those DVI and LSO teams was one of elimination,
 21 so if you're content and you're confident that something
 22 isn't bone, then pass it through; if you've got any
 23 doubts, then run it past that archaeologist as that
 24 second look.
 25 MR MILLETT: Yes, thank you.

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1 Mr Chairman, we've come to a natural break —
 2 SIR MARTIN MOORE-BICK: Have we? Yes.
 3 MR MILLETT: — although not the end of the topic, but it's
 4 a natural break within it for our morning break.
 5 SIR MARTIN MOORE-BICK: So that would suit you to stop at
 6 that point?
 7 MR MILLETT: It would, yes.
 8 SIR MARTIN MOORE-BICK: Yes.
 9 Well, Dr Harrison, we have a break during the
 10 morning as a matter of course. This sounds like a good
 11 time to take it. So we'll stop there for the time
 12 being.
 13 We will resume, please, at 11.30, and I have to ask
 14 you, while you're out the room, please don't discuss
 15 your evidence with anyone else. All right?
 16 THE WITNESS: Thank you.
 17 SIR MARTIN MOORE-BICK: Thank you very much. Would you go
 18 with the usher, please.
 19 (Pause)
 20 Thank you very much. 11.30, please.
 21 (11.16 am)
 22 (A short break)
 23 (11.31 am)
 24 SIR MARTIN MOORE-BICK: Right, Dr Harrison, are you ready to
 25 carry on?

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1 THE WITNESS: I am, thank you.
 2 SIR MARTIN MOORE-BICK: Thank you very much.
 3 Yes, Mr Millett.
 4 MR MILLETT: Yes, thank you very much, Mr Chairman.
 5 Can we please have Dr Harrison's report back up on
 6 the screen and go, please, to page 12 {KHA00000001/12},
 7 paragraphs 37 and 38, where you have, at paragraph 38,
 8 your description of the division of the areas into
 9 sectors and then the sieving process. You set out
 10 underneath that a table which runs over on to page 13.
 11 Are you able to summarise for us how the process of
 12 sieving worked?
 13 A. Yes. So the process is designed to ensure that every
 14 piece of debris is looked at down to a minimum size of
 15 6 millimetres, and that as the smaller debris passes
 16 through the sieve, it's captured within a bucket and
 17 it's bagged. So as the search is ongoing, we're not
 18 then putting the loose material back into the flat; it's
 19 all being bagged and recorded in terms of flat number,
 20 sector and the date of search.
 21 Q. Yes.
 22 If we look at the bottom of page 12 and over on to
 23 page 13, you can see that there is a table, table 3,
 24 which begins there and continues over the page. If we
 25 turn the page, please, to page 14, you can see the rest

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1 of it.
 2 You've explained here the pathways for the various
 3 types of material which would be found during the act of
 4 sieving. Without going through every single one, could
 5 you explain what would happen to human remains if they
 6 were found during this process?
 7 A. So human remains found during this process would move on
 8 to the previous DVI standard. So those remains would be
 9 photographed, they would be given a unique reference
 10 number, they would be packaged accordingly and then
 11 transported to the mortuary. So, in effect, that's
 12 the — it's the strongest line of material handling
 13 streams that come from this because it's the process
 14 that's already enshrined within the process.
 15 Q. Right.
 16 Now, you can see from this table {KHA00000001/13}
 17 that "Human remains" is just above the bottom of your
 18 screen there, among other things, such as "Reinforced
 19 safety glass", "Door furniture", "Medical implants" and
 20 other things like that.
 21 What other significant finds would justify being
 22 recovered and recorded, or would it be everything?
 23 A. So the reinforced safety glass, the wire-reinforced
 24 glass that was present in some of the kitchen doors was
 25 important because of the fire protection qualities that

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1 come with it, so that was retained.
 2 Door furniture, where we still had hinges or door
 3 closers present on doors, was retained to try to
 4 understand fire spread within individual flats.
 5 Medical implants would be treated as per human
 6 remains, in that they will frequently have numbers
 7 associated with them that can assist in identification,
 8 individual identification of a person, so that again
 9 follows DVI standards.
 10 We recognised early on that some animal remains are
 11 going to have particular importance to people, to
 12 survivors from the tower, so ensuring that animal
 13 remains are treated — are identified as early as
 14 possible and differentiated from human remains, but
 15 still treated with dignity, and separated from animal
 16 food waste, which clearly also was present in many of
 17 the flats.
 18 And then intimate jewellery, either jewellery
 19 directly associated with bodies, which would have been
 20 treated as per DVI standards, but then other valuables
 21 that you would come across excavating through anybody's
 22 bedroom and then ensuring they entered into the exhibit
 23 chains and were recorded and retained.
 24 Q. Yes, I see. So is it right that some of the things that
 25 were retained as a result of the sieving process were

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1 not in fact for identification or individuation, but for
 2 assisting in the forensic examination of the fire?
 3 A. Yes. So there are at least three motivations to the
 4 retention: there's identification of remains,
 5 understanding of fire spread and fire protection within
 6 flats, and then the retention of valuable or material of
 7 sentimental value that may have survived the fire that
 8 we wanted to repatriate to families.
 9 Q. Now, if we go, please, to the foot of page 14
 10 {KHA00000001/14}, the next page, you'll see
 11 paragraph 40, under the heading "Burnt bone awareness
 12 training for DVI and LSO teams".
 13 Is it right that all DVI and LSO officers were given
 14 a burnt bone awareness training course by the
 15 co-ordinating archaeologists?
 16 A. Yes.
 17 Q. And that was part of their site induction?
 18 A. So as they came on site, they would have an initial site
 19 induction. We retained some of the burnt foot waste
 20 bone in order to demonstrate to them how bone discolours
 21 and changes shape and form and fragments within a fire
 22 scene, just in case they had any preconceptions about
 23 what a bone was going to look like under these
 24 circumstances. So that was done when they very first
 25 started, and then anybody who was abstracted to other

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1 duties and then came back to the scene, if they were
 2 gone for more than a week, that process would be
 3 repeated.
 4 Q. Why would the DVI team members or the LSO team members,
 5 as the case may be, not already know what they needed to
 6 know by way of burnt bone awareness?
 7 A. Even if you take the role of a DVI officer — so that's
 8 a trained role within policing. It's not a full-time
 9 job; they are police officers and police civilians who
 10 have other roles to do, and then, as and when there is
 11 a mass fatality incident, they are called into action.
 12 So they have a good degree of training, but they're not
 13 necessarily all entirely current.
 14 In addition to that, many of the incidents that DVI
 15 officers are dealing with will be collapses or car
 16 pile-ups where there's no bone modification, where
 17 actual — you know, the elements of people that are
 18 being recovered still have soft tissue associated with
 19 them. So this is quite different in terms of an
 20 environment.
 21 Q. Was part of that burnt bone training twofold: perhaps,
 22 first, to be able to distinguish osseous material from
 23 non-osseous?
 24 A. Yes.
 25 Q. And, secondly, to be able to differentiate between human

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1 bone fragments, live animal bone fragments and food
 2 waste bone fragments?
 3 A. It's certainly to make them aware of that distinction.
 4 That would be something that I would want them to — if
 5 they found a fragment that they were confident was bone,
 6 that's a good time for them to show it to the
 7 archaeologist, to make that confirmatory decision. So
 8 the DVI officer isn't making that decision.
 9 The other thing that it enabled us to do is to bring
 10 together a collection of false friends, so burnt
 11 plastics and burnt plasters that look particularly
 12 bone-like within those environments, so they recognised
 13 early on that some of this material looked very porous,
 14 it looked like bone material.
 15 Q. Apart from burnt bone analysis awareness, were the DVI
 16 and LSO teams given any other specific training before
 17 they started work within the tower?
 18 A. Not by us, not specifically. That was the extent of the
 19 training that we provided as part of our role.
 20 Q. Right. Did they get any training from anybody else that
 21 you know of?
 22 A. They received safety briefings about working within the
 23 tower but, beyond that, I don't know what else they were
 24 delivered in terms of their core training.
 25 Q. Now, if we go on two pages, please, to page 16

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1 {KHA00000001/16} and look at paragraph 43. You explain
 2 here, "Initial assessment of suspected bone fragments"
 3 and you say:
 4 "As a part of their supervision of the DVI and LSO
 5 Teams, the attached archaeologist would assess all
 6 suspect fragments found by searchers as an initial point
 7 of triage. This initial assessment was conducted
 8 utilising the flowchart outlined in Figure 4."
 9 What did you mean there by "suspect fragments"?
 10 A. So I mean an item of debris that the DVI or LSO team
 11 member cannot differentiate. So he's looking at it
 12 thinking, "I don't know whether this is bone or not, but
 13 it looks porous, it's clearly burnt, it looks a bit
 14 bony", that's something that they should be showing to
 15 the archaeologist.
 16 Q. I see. So it would be the person doing the sieving who
 17 would come across such material, not be sure what it was
 18 and then ask?
 19 A. Yes, and we wanted as much as possible to ensure that
 20 they didn't feel the pressure to regard themselves as
 21 experts. We wanted them to show us as much of that
 22 material as possible. It doesn't matter how many times
 23 we say, "No, no, that's plaster", we're quite happy with
 24 that.
 25 Q. Right.

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1 You refer there to figure 4. Figure 4 we find on
 2 the previous page, please, page 15 {KHA00000001/15}, if
 3 we go to that, please. You can see that there's
 4 a flow chart.
 5 Could you just take us through the process of what
 6 would happen if a suspect fragment was identified?
 7 A. So it carries on from my example. If the DVI officer
 8 finds a fragment where the size and the shape and the
 9 porosity is right for something that looks like bone,
 10 they would initially show that to the team
 11 archaeologist. So the archaeologist is there
 12 supervising the work of those sievers. The
 13 archaeologist has more experience of bone in general and
 14 of burnt bone in particular, and they can make that
 15 initial assessment: is it non-bone or is it confirmed to
 16 be bone? If it isn't bone, if it's just a piece of
 17 plaster that happens to look particularly porous, then
 18 it would be disposed of with the bagged debris, so it
 19 follows the chain of the rest of the debris. If it is
 20 bone, then there's a range of different things that it
 21 can fit within there. Is it confirmed as being a human
 22 bone? Then it's recorded as per DVI protocols. If it's
 23 unknown or unidentifiable, it follows that same route,
 24 because it relies upon the mortuary anthropologists to
 25 make that final assessment. If it's confirmed as being

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1 non-human bone, then it's exhibited, because it doesn't
 2 follow the DVI protocols. It still goes to the mortuary
 3 for a final confirmation. So in some instances, we had
 4 flats where people died in direct association with
 5 animals and they were commingled with animal remains, so
 6 that forms a particular challenge to that kind of
 7 differentiation.
 8 Q. So if a fragment is identified on site as a human bone
 9 and recorded as such via the DVI protocols for recording
 10 such matters, then it would go to the mortuary?
 11 A. That's correct.
 12 Q. And it would go in a bag, would it?
 13 A. It would. It would be bagged. It would have a URN
 14 number, the same as a body core or a larger body
 15 element, and it would follow exactly the same process as
 16 it goes to the mortuary.
 17 Q. Right. Would it be put in a bag with all the other
 18 associated material related to that URN?
 19 A. No. So in this process, this is sieving. So the body
 20 cores have gone and are already at the mortuary. So if
 21 a fragment is found in isolation, it would have its own
 22 URN number.
 23 Now, the anthropologist and the odontologist and
 24 pathologist will know that this is flat such—and—such
 25 and these are all the other URNs associated with that

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1 flat, and that's their starting point then for seeing
 2 how to repatriate — whether it's possible to repatriate
 3 that bone fragment.
 4 Q. Right, I see.
 5 So within the mortuary, to the best of your
 6 knowledge, when the bag with its own URN, with the
 7 suspect fragment — well, no longer suspect, but bone
 8 fragments which are identified as human bone but not
 9 individuated come in, then it's for the anthropologist,
 10 the odontologist, possibly the pathologist then to
 11 individuate by association.
 12 A. Yes. The core principle that we're working to within
 13 those fire scenes as archaeologists is to ensure that
 14 we're not — when material becomes mixed, it can't be
 15 unmixed. So if we have a bone fragment that comes
 16 through in isolation on its own, we want to record that
 17 with its own number as much as we possibly can.
 18 Q. Yes, I see.
 19 Then let's turn to completion, sign-off and quality
 20 assurance, which was I think your last phase.
 21 At page 17 {KHA00000001/17}, if we go to that, you
 22 address this topic. If we look at table 5 on that page,
 23 which is entitled "Sequence of clearance prior to
 24 completion inspection", let's just look at that. It
 25 starts with:

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1 "All suspected human remains and other significant
2 items suitably packaged and stored for onward transport
3 as per the strategy ..."

4 That's the transport to the mortuary, is it?

5 A. Transport to the mortuary or the different evidential
6 streams for glass, metals, the other non-human remains
7 related material. So everything significant has been
8 dealt with and there's nothing outstanding within that
9 flat space.

10 Q. Right.

11 Now, you then deal with metal items in the next
12 bullet point and you explain what happens to them. In
13 the next bullet point after that, you explain what
14 happens to the glass and metal sharps. Then in the next
15 bullet point after that, you deal with windowsills, and
16 you say:

17 "All window sills swept and cleared of ash and char
18 debris; all swept debris then searched and sieved as per
19 material in the flat."

20 Just explain, does it mean that you sweep the sills
21 into a hopper and then do the search and sieve as if
22 that material were within the flat?

23 A. Yes. So those windowsills are fairly deep and there are
24 gullies within them and obviously cracks have opened up
25 with the fire, so ashy debris is retained within them,

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1 and we regarded that as being part of the flat space.
2 So as part of ensuring that there wasn't — there was no
3 ashy debris left that hadn't been directly examined by
4 that team, we would use a clean new paintbrush to remove
5 all of the ash and debris from the windowsills, probably
6 recovering it into a coal shovel in the first instance,
7 into a bucket and it would go through that sieving
8 process.

9 Q. Do you recall an instance where human remains were found
10 on the windowsills?

11 A. No, not off the top of my head.

12 Q. Then you go on, all gullies, stress cracks and wall
13 slots being swept; then clean windowsills spray painted
14 to indicate full clearance; and then finally:

15 "All searched and sieved ash and char debris to be
16 retained in double-bags as per asbestos hazards
17 requirements".

18 Was there any area of the building which had been
19 affected by the fire which was not sieved and searched?

20 A. No, I'm not aware of any area that wasn't sieved and
21 searched, to the extent that we pumped out the water
22 from the two sub-basements and any material within that
23 was gathered and sieved.

24 Q. Right. We'll come back to firefighting water very
25 shortly.

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1 Just looking at this table, is it right to conclude
2 that every area of the burnt flats, including cracks or
3 slots, was searched and sieved as part of this
4 operation?

5 A. That's correct. And the reference to the spray paints
6 was because we recognised that if we completed the
7 search and then closed off a flat saying this is
8 completed, and then somebody went back in two weeks
9 later, material is still falling from the solid concrete
10 walls, dust is still blowing in through the windows from
11 the exterior, so the only way in which we could
12 definitively say this is done and finished was to use
13 the spray paint to say all of these gullies have been
14 cleared.

15 Q. Right.

16 Let's move on, then, to page 19 {KHA00000001/19},
17 paragraph 47, where you refer to the quality assurance
18 process. You say in the paragraph there, under the
19 heading:

20 "Full completion of the search of each burnt space
21 required engagement with the system of Quality Assurance
22 throughout the tertiary 'Search and Sieve' phase of
23 deployment. This was a two-stage process designed and
24 implemented from very early in the tertiary phase, with
25 the aim of adding confidence to the search process."

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1 Who oversaw the quality control system throughout
2 that phase of the operation?

3 A. The quality control — so that very early quality
4 control system was implemented by the initial DVI
5 co-ordinator and then it was managed by the SERM on
6 a day-to-day basis.

7 Q. Now, you've said that it was a two-stage process there,
8 as I've read to you; what were the two stages?

9 A. So the SERM would identify which flat spaces were being
10 searched on any particular day, and they would introduce
11 a whiteboard pen lid, if you can imagine a pen lid of
12 sort of an inch and a half in size and maybe three
13 quarters of an inch in diameter, into the debris, not
14 disturbing it within the sections but as an analogue for
15 something that was clearly alien to the scene so it
16 wouldn't be recognised as being part of the scene, it
17 could be cleaned between uses, but it demonstrated that
18 it was being found on a daily basis. It was a positive
19 control to ensure that the searches were engaged.

20 Q. Right. And who designed this two-stage process?

21 A. That process was designed by the initial DVI
22 co-ordinator, I believe.

23 Q. Was it a standard or was it tailor-made for this?

24 A. It was tailor-made for this. So there was an early
25 conversation about: what could we introduce that could

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1 ensure engagement? And the suggestion that came
 2 initially from — I think it came from the World Trade
 3 Center anthropologists, was to introduce some osseous
 4 material, which we weren't keen on, because that seemed
 5 to be adding potentially a risk of contamination, but
 6 certainly risk of confusion, and we were content with
 7 working with the size of the object as being our
 8 positive control.
 9 Q. Did the searchers know that there was a pen lid in
 10 there?
 11 A. They knew that one team would find a pen lid during that
 12 day, bearing in mind that, at our height, we had 13 or
 13 14 teams working at the time. They didn't know it
 14 would — so they didn't know they were primed for it in
 15 advance, but they were aware that it was a positive
 16 control that was functioning.
 17 Q. Right.
 18 Then at paragraph 48 you explained that a whiteboard
 19 pen lid was used as a foreign control object. You
 20 explain the reasons. Were there any occasions upon
 21 which the DVI or LSO team failed to find the foreign
 22 control object?
 23 A. No, I'm not aware of any times when it wasn't found.
 24 Q. I see.
 25 Now, while we're talking about quality control,

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1 I just want to ask you one or two questions about some
 2 of the hazards you had to be aware of and mitigate
 3 during the entire operation, not just the search and
 4 sieve part of the operation, but from the beginning.
 5 Now, we looked at the Acrow props, and you've
 6 explained in your statement, if we go to page 21
 7 {KHA00000001/21}, paragraph 53, that there were a number
 8 of hazards there. You list them in the following
 9 paragraphs, and I think you do so in alphabetical order.
 10 Is that right? It looks as if they are.
 11 A. Yes, I think I might do. Yes, I think they are in
 12 alphabetical order, yes.
 13 Q. Starting with "Access to flats" and then the next one,
 14 "Airborne contaminants".
 15 I just want to ask you about one or two of those.
 16 Can I pick up paragraph 74 on page 28 {KHA00000001/28},
 17 please. Paragraph 74, "Water":
 18 "Water posed both a hazard and a nuisance during the
 19 course of the examination of the Tower. During the
 20 initial phases of search, fire—fighting water ran down
 21 the central staircase for days following the cessation
 22 of fire—fighting activity and pooled in the sub—floors
 23 of the building, from which it required pumping out
 24 through a filter to avoid the potential loss of
 25 disturbed remains carried down by the flow of water."

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1 So, first, the water, as you say, came down the
 2 central staircase. Where did it come from before it
 3 went into the central staircase?
 4 A. It can only have been pumped through — I presume it was
 5 pumped through primarily externally. I don't know that
 6 for a fact because I wasn't within the tower during
 7 those firefighting efforts. My first memory of it was
 8 being at the bottom of those stairs on my first day of
 9 entering the tower and being aware of running water
 10 coming down the central staircase.
 11 Q. The first day of entry for you, I think, was Saturday,
 12 the 17th?
 13 A. That's right, yes.
 14 Q. How was the risk of that water removing any debris
 15 within the tower mitigated?
 16 A. The initial walkway areas were cleared in the first
 17 instance, so that if material was suddenly present at
 18 the bottom of the stairs, it would be very apparent if
 19 that were the case. The staircase was then cleared up
 20 to provide clear access. And early on, when we were
 21 walking into recovery flats, checking the bottoms of
 22 people's shoes to make sure they have not picked up
 23 material that was wet.
 24 Q. I see.
 25 Were remains found in the filter in the sub—floors

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1 of the building?
 2 A. No.
 3 Q. Right.
 4 If we go back a page, please, to page 27
 5 {KHA00000001/27}, paragraph 70, you say, "Light":
 6 "The Tower had no integral electricity supply
 7 following the fire, and the initial response phase was
 8 conducted using handheld torches and helmet—mounted
 9 lights. While the flats generally had good natural
 10 light, the staircases received very little reflected
 11 light, and were largely black with char deposition.
 12 This confounding factor made searching difficult in the
 13 initial stages of deployment, and also increased the
 14 risk of tripping and falling. In addition, loss of
 15 light towards the end of the search period in November
 16 and December further reduced natural light levels and
 17 curtailed activity and the beginnings and ends of the
 18 days."
 19 I think you mean at the beginnings and ends of the
 20 days.
 21 A. Yes.
 22 Q. Now, how did you manage the absence of an integral
 23 electrical supply in order for your teams to carry out
 24 their work?
 25 A. So, very quickly, the Metropolitan Police accessed

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1 a store of rechargeable battery lights. So in addition
 2 to carrying the rest of the equipment up the stairs, we
 3 would carry two light packs up. As I say, in the flats,
 4 that generally wasn't a huge challenge, because they
 5 were well lit through the open windows, albeit the
 6 battery lights still assisted. If you think that the
 7 debris, particularly on the lower floors, floors 4 to 9,
 8 is very blackened and charred, it's very hard to
 9 differentiate human remains within that kind of area.
 10 So the lights are really essential.
 11 The lobbies were a much bigger challenge,
 12 particularly as the metal security doors were put on to
 13 the flats so they become a darker — you've got a darker
 14 central space then in the middle, and it's very
 15 difficult then to clear.
 16 Q. Did those hazards and the risk mitigation strategies put
 17 in place have any significant adverse effect on your
 18 operation?
 19 A. It certainly increased the time requirements,
 20 particularly in those darker spaces. It meant entry and
 21 egress via the staircase in those early days was
 22 particularly challenging. I certainly had one emergency
 23 evacuation that I was present for, and that was — it
 24 was challenging to get, however many people, maybe 20
 25 people out of the tower rapidly when one of the WASP

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1 devices activated. So light was certainly a confounding
 2 factor. It certainly made things more dangerous.
 3 Q. Right. Dangerous because you were in a potentially
 4 dangerous building as opposed to holding up the actual
 5 work?
 6 A. That's right. So dangerous in the sense that you're
 7 trying to move at pace down the staircase to respond to
 8 an evacuation call. It's one more factor that's playing
 9 into that being a risky activity.
 10 Q. Yes, I see.
 11 Then let's turn to page 19 {KHA00000001/19}, go
 12 back, please, paragraph 49. I want to ask you about the
 13 phase 3 completion certificate. Paragraph 49, under the
 14 heading "Management of final searches of Recovery
 15 Spaces" there, you explain what that process was, and
 16 you refer to a phase 3 completion certificate in the
 17 third and fourth lines there, can you see?
 18 A. Yes.
 19 Q. What was that? What was the phase 3 —
 20 A. So that was a document that we designed that would be
 21 signed by the co-ordinating archaeologist and the duty
 22 SERM to say that all of those activities that we listed
 23 in that table previously around windowsills and material
 24 being bagged had been all undertaken. So effectively it
 25 was a paper record of that quality control system.

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1 Q. Right. And the co-ordinating archaeologist was, what,
 2 the archaeologist attached to the DVI and LSO teams, was
 3 it?
 4 A. No, so that would either be normally myself or Dr Ryder,
 5 who would be sat outside at our archaeologist desk, so
 6 we would come in in order to do that investigation. If
 7 neither of us was on duty, there would be another senior
 8 archaeologist who was appointed to do that role.
 9 Q. Right. What steps did you take or did Dr Ryder take, to
 10 the best of your knowledge, to satisfy yourself that you
 11 could sign this certificate?
 12 A. So we would have the list of requirements, such that
 13 we've read off there, and an inspection would be made of
 14 the flat by the co-ordinating archaeologist and the SERM
 15 in conjunction and they would go through the list of
 16 activities to make sure all had been completed.
 17 Q. Right. Did you ever observe for yourself the process of
 18 sieving and searching?
 19 A. Yes.
 20 Q. You did?
 21 A. Yes, I undertook sieving as and when I was required to.
 22 Q. Right. Was there any occasion on which you were not
 23 satisfied with any part of the process that you were
 24 observing?
 25 A. Not that I was unsatisfied with the process, but you

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1 want to engage the team that you're working with to make
 2 sure that they're working to the best of their ability.
 3 I think that's a slightly different — maybe that's —
 4 I don't know if that's a subtle distinction, but it's
 5 more about optimising that process. But at no stage did
 6 I have to stop proceedings to say I was unhappy with the
 7 work that was undertaken.
 8 Q. Which tasks were required to be completed for that level
 9 of sign-off?
 10 A. For that level — that final phase 3 completion sign-off
 11 was effectively the task that you read previously about
 12 the sweeping of the windowsills, all debris has been
 13 sieved, all debris is bagged, bags are all recorded with
 14 the floor, flat and zone number and dates of sieving;
 15 all floor gullies are cleared and are sprayed up to have
 16 been cleared, all metalwork and glass work has been
 17 appropriately bagged up. So, in effect, there is no
 18 extraneous material still present within the flat.
 19 Q. At what point in the operation between the June and the
 20 December of 2017 did you start issuing phase 3
 21 completion certificates?
 22 A. These started very late. Across the whole proceedings,
 23 I would be guessing, but I would imagine that it was
 24 probably September before we were beginning to issue
 25 those certificates.

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1 Q. Finally, after the sign-off of the phase 3 completion
2 certificates, you I think explain that the bagged debris
3 was removed from each of the search spaces, and you
4 cover that on the next page, page 20 {KHA00000001/20},
5 at paragraph 52, if you just look at that. Are you able
6 to explain how the debris was removed?

7 A. Yes, so removal of the debris is a challenge in its own
8 right, and it's one that I was aware of going on, but
9 not one that I took a commanding role over because our
10 phase of the work had been completed by that stage.

11 But, in essence, if you think that a flat might have
12 300 bags of debris within it, all of which are fairly
13 weighty, so moving that in its own right becomes
14 a challenge. So as part of the external scaffolding
15 that was put in place around the tower, a lift and hoist
16 structure was constructed and slots were cut through the
17 walls of what we called flat 1 on each of the floors.
18 So because we had no flat numbers to work with as they
19 would have been numbered by the residents, our flats
20 were numbered 1 to 6 in a clockwise direction, and then
21 numbered by floor as well. So flat 1, which was one of
22 the two-bedroomed flats, would have had a hole cut in
23 it, and then initially the bagged material within that
24 flat would be taken out and cleared via the hoist and
25 put into one of the cargo containers, and then, working

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1 around clockwise, the material from the other flats on
2 that floor would be moved into flat 1 on that floor and
3 then out through the hoist.

4 Q. I see. Who was responsible for overseeing that
5 operation?

6 A. That operation was overseen by the SERM with — and
7 staffed by DVI and LSO teams, the actual physical
8 movement of those bags.

9 Q. Now, for the last set of questions, I just want to ask
10 you about the chain of custody of human remains.

11 If we can go, please, to page 39 of your statement
12 {KHA00000001/39}, paragraph 87, halfway down that page,
13 you have a title: "The chain of custody of human
14 remains". You explain there that:

15 "The chain of custody that governed the transfer of
16 human remains from their Recovery Space of origin to
17 final reception at the Westminster Mortuary was a vital
18 aspect of the security underpinning the investigation of
19 the Tower. To achieve this, the HAA (Holding Audit
20 Area; temporary remains storage area) was located
21 adjacent to the Search Control building and the SERM's
22 office ... The DVI human remains recovery protocols
23 mandated by international published standards provided
24 the URN reference system to ensure that a single, unique
25 reference number was issued on the location of human

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1 remains, and was directly associated with the bagged
2 remains throughout its transfer. The URN is then
3 repeated on the front of the PM Book, which was used to
4 record sketches and written descriptions associated with
5 remains."

6 You then continue with further details in the
7 following paragraphs, 88 and following.

8 But just on the basis of what I've read to you,
9 are you able to explain why it was important, first, to
10 have a system in place regarding the chain of custody of
11 human remains recovered from Grenfell Tower?

12 A. This chain of custody is the core of the responsibility
13 that comes with DVI training. So when those remains are
14 within the flat within which the living person had died,
15 they are — they're secure in the sense that we know
16 that they're in that flat, we know it's a closed space.
17 As soon as those remains are bagged up and they come
18 down to a common area, like the HAA, the temporary
19 storage area, then you're elevating the risk of numbers
20 being mistranscribed or elements that weren't in the
21 room being confused before you then get to a mortuary
22 phase.

23 So ensuring that that numerical system is
24 underpinned by the URN system, that the URN number
25 features on the packaging or the bag of the remains,

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1 clearly displayed on the outside, is then clearly
2 written up and transcribed on the storage area
3 whiteboard and is copied across on to all of the
4 subsequent DVI paperwork, that's the fundamental thing
5 to get right. If the remains can then reach the
6 mortuary with that number associated, all other records
7 can come from that.

8 Q. And is it right that where there were human remains
9 located, a URN is allocated to the remains in the
10 location?

11 A. Yes, absolutely, and a photograph is taken of the
12 written URN number. The URN number on that initial
13 piece of paper is printed, it isn't written out by
14 somebody, so it is an automatically generated number
15 that comes with those books in advance, like a raffle
16 ticket, and the photograph is taken with the remains and
17 the number sat next to them.

18 Q. And that number — is this right? — is continuously
19 associated with the remains throughout their transfer
20 from Grenfell Tower to the mortuary?

21 A. Yes.

22 Q. How would you ensure that the bags which contained those
23 remains were secure?

24 A. So those bags would be — there would be a number of
25 different levels of wrapping. So if it were the core of

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1 a body that was at risk of fragmenting, then that would
 2 initially be lifted very carefully onto a piece of clean
 3 white plastic, so a body sheet. It would be wrapped and
 4 the ends sealed, like a Christmas cracker, and
 5 tape—sealed, so that's all contained, and then that
 6 placed within a sealed body bag, and then the body bag
 7 zip—sealed with a numbered seal that repeats that
 8 printed URN number.
 9 Q. When you say it is sealed, is it initially on the body
 10 sheet sealed so that parts can't then move with gravity
 11 or movement?
 12 A. Yes, so the sealing activity is designed both to ensure
 13 that nothing is lost or confused, but also that movement
 14 is at an absolute minimum. Because obviously these are
 15 highly fragile remains, and simply in their transfer
 16 from the flat down the stairs to the mortuary, there
 17 will be further fragmentation. So to ensure that the
 18 anthropologists can be — and the pathologists and
 19 odontologists can be content that that fragmentation
 20 relates to that initial set of remains.
 21 Q. How would those remains then travel physically from the
 22 base of the tower to the mortuary?
 23 A. They would travel by undertakers, by private ambulance.
 24 Q. Private ambulance. Was that —
 25 A. A custody — sorry, a chain of custody would still be

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1 maintained around them. They would travel with a police
 2 officer, I believe.
 3 Q. Right. Was that chain of custody then applied to items
 4 of note that were not human remains?
 5 A. So items of note that were intimately associated with
 6 somebody, say a wedding ring on a finger, would be
 7 transferred as part of that DVI process. They would be
 8 regarded as being a part of that person.
 9 Items of note that fall outside of that area, in the
 10 blue boxes on that chart that I showed you previously,
 11 wouldn't come within that DVI system, they would pass
 12 through an exhibit system. So we had Metropolitan
 13 Police exhibit officers present at the tower, and they
 14 would take custody of items of note.
 15 Q. So things like wallets, phones —
 16 A. If a wallet couldn't be directly associated with
 17 somebody, yes. Wallets, phones, surviving printed
 18 matter, jewellery that wasn't automatically associated
 19 with an individual, yes.
 20 Q. Yes, I see. What about animal bones?
 21 A. Animal bones would be packaged and exhibited as per
 22 exhibits, because they're not — they don't fall under
 23 the DVI process. However, they went to a separate part
 24 of the mortuary that was specifically put aside for
 25 animal remains, partly because of the need to continue

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1 to show due concern around them, where they had been
 2 family pets, but also as a final check by the
 3 anthropologist to ensure that no human remains had
 4 become commingled with those animal remains.
 5 MR MILLETT: Thank you.
 6 Well, Dr Harrison, you will be glad to hear that
 7 I have come to the end of my prepared questions for you.
 8 It is customary now for me to ask the Chairman to take
 9 a short break while I review our notes, and also to make
 10 sure that there is an opportunity for those in the room
 11 or outside the room to consider whether there are any
 12 further questions for you.
 13 THE WITNESS: Thank you.
 14 SIR MARTIN MOORE—BICK: Well, Dr Harrison, Mr Millett has
 15 explained now why we have to have a short break.
 16 I'm just looking at the clock. Do you think
 17 ten minutes is long enough, Mr Millett?
 18 MR MILLETT: Yes, I think so. If we need longer, I can ask.
 19 SIR MARTIN MOORE—BICK: Yes.
 20 So we'll stop there. We'll come back, please, at
 21 12.20.
 22 THE WITNESS: Thank you.
 23 SIR MARTIN MOORE—BICK: And then we'll see if there are any
 24 more questions for you at that point. All right?
 25 Thank you very much. Would you go with the usher,

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1 please.
 2 (Pause)
 3 Thank you very much. 12.20, then, please.
 4 (12.08 pm)
 5 (A short break)
 6 (12.20 pm)
 7 SIR MARTIN MOORE—BICK: Right, Dr Harrison, let's see if
 8 there are any more questions for you.
 9 THE WITNESS: Thank you.
 10 SIR MARTIN MOORE—BICK: Yes, Mr Millett.
 11 MR MILLETT: Mr Chairman, there are no further questions.
 12 Dr Harrison, it only remains for me to thank you
 13 very much for your statement and for coming here to the
 14 Inquiry today to assist with our further investigations.
 15 We are extremely grateful to you, so thank you very
 16 much.
 17 THE WITNESS: Thank you.
 18 SIR MARTIN MOORE—BICK: Dr Harrison, before you go, it's
 19 right that I should thank you very much on behalf of the
 20 panel. I think I can speak for us all when I say we
 21 found your evidence very interesting and very helpful.
 22 Thank you for such a detailed report and for all the
 23 work that you've done not just for the Inquiry, but in
 24 connection with the DVI process generally.
 25 THE WITNESS: Thank you.

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1 SIR MARTIN MOORE—BICK: We are very grateful to you. Thank
 2 you very much indeed, and now of course you are free to
 3 go. Thank you.
 4 (The witness withdrew)
 5 SIR MARTIN MOORE—BICK: Thank you very much, Mr Millett.
 6 Now, later on, we're going to hear two further
 7 presentations; that's right, isn't it?
 8 MR MILLETT: That is right, and they relate to the occupants
 9 at the time of flat 202 on the 23rd floor.
 10 SIR MARTIN MOORE—BICK: Yes, and those have been set in the
 11 timetable for 2 o'clock.
 12 MR MILLETT: Yes.
 13 SIR MARTIN MOORE—BICK: So we shall rise at that point and
 14 resume at 2 o'clock this afternoon.
 15 Thank you very much.
 16 (12.22 pm)
 17 (The short adjournment)
 18 (2.00 pm)
 19 SIR MARTIN MOORE—BICK: Yes, Mr Millett.
 20 MR MILLETT: Yes, Mr Chairman.
 21 I would now invite Danny Friedman Queen's Counsel,
 22 please, to come to the podium and make the presentation
 23 on behalf of the family of Majorie Vital and
 24 Ernie Vital, who lived in flat 162 on floor 19. Ernie
 25 was visiting Majorie Vital on the night. They were both

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1 recovered from flat 202 on floor 23.
 2 Again, before Mr Friedman starts, I should give
 3 a general trigger warning that the presentation may
 4 contain material or discussions which some may find
 5 distressing, and may wish to leave now or to look away
 6 from the live stream, as the case may be.
 7 SIR MARTIN MOORE—BICK: Yes, thank you very much.
 8 Yes, Mr Friedman.
 9 Presentation relating to MAJORIE AGNES VITAL and ERNIE VITAL
 10 by MR FRIEDMAN
 11 MR FRIEDMAN: Majorie Agnes Vital was born in Soufrière,
 12 Dominica, on 14 November 1948. She was 68 years old
 13 when she died. She moved into flat 162 in
 14 Grenfell Tower in 1978. She was one of the longest
 15 standing residents. The flat was on what became the
 16 19th floor.
 17 Her son, Ernie Celestine Vital, was born in London
 18 on 11 January 1967. He was 50 years old when he died.
 19 Ernie lived in a north London address, but he would
 20 often stay with his mother, as he did on the night of
 21 the fire. Ernie and his brother both grew up at
 22 Grenfell Tower.
 23 Sir, you will recall that, at a commemoration
 24 hearing on 23 May 2018, a statement written by Majorie's
 25 sister, Paula, on behalf of the whole family was read by

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1 their solicitor. You also saw a video prepared by
 2 Majorie's other son and Ernie's brother, who is
 3 a private person and did not wish to be identified by
 4 name.
 5 In the statement, you were told about Majorie's
 6 childhood in Dominica. You heard how proud she was of
 7 her home at Grenfell Tower, so much so that her parents
 8 jokingly referred to Grenfell as "Majorie's Tower".
 9 From her son, you heard about life in the tower,
 10 which he also loved, and which provided a safe haven
 11 growing up.
 12 Majorie Vital worked to support her family as
 13 a seamstress. Her son described how his mother was
 14 ambitious and talented, but put her children first. He
 15 recalls her using her skills as a seamstress to make her
 16 own clothes so that they could afford to buy clothes for
 17 them.
 18 As for Ernie, he was a lively and engaging person,
 19 a very good dancer, but also down to earth.
 20 Ernie and his mother, Majorie, were especially
 21 close. Ernie's brother remembered him constantly in
 22 their mother's arms as a child and, even when grown up,
 23 he described it as if the umbilical cord had never been
 24 cut.
 25 Majorie, at 68 years old at the time of the fire,

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1 had health difficulties which were known to the TMO.
 2 A disclosed email of 31 October 2014, sent to both Rydon
 3 and TMO recipients, described Majorie as elderly, with
 4 a diagnosis of Parkinson's disease. Based on the
 5 information about Majorie's diagnosis, it is likely that
 6 she was significantly impeded in her ability to
 7 independently evacuate down the single stairs from
 8 floor 19 in the event of a need to do so.
 9 As with other cases of this type, there is no
 10 evidence in the available records of any consideration
 11 by any relevant body as to how Majorie would evacuate in
 12 the event of a need to do so in response to a fire.
 13 Neither were there any arrangements in place to assist
 14 her to do so, such as a personal emergency evacuation
 15 plan, nor was there any pre-arrangements with the LFB to
 16 ensure assisted evacuation or rescue.
 17 Majorie was captured on CCTV footage in the lift
 18 lobby at 3.14 pm on 13 June. Ernie, who was visiting
 19 his mother on the night, can be seen in the foyer, first
 20 at 1.31 pm, and then again in the lift lobby on floor 13
 21 at 7.07 pm.
 22 As presented last week, the fire spread would have
 23 affected floor 19 at approximately 01.26. We time that
 24 on the basis that Shah Ahmed, who lived in flat 156
 25 below, made a call at 01.27, when he was already out of

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1 his flat due to it being on fire .
 2 We know that before 01.28, residents of floor 19
 3 began to evacuate their flats . This can be timed from
 4 the call of Hiwot Dagnachew from flat 26, who made
 5 a call to her niece, Meron Mekonnen, who lived in
 6 flat 163, to tell her that the building was on fire and
 7 that she needed to get out. Records show that the call
 8 was made at 01.24 and must have completed between 01.27,
 9 after which Meron left her flat .

10 Ms Mekonnen saw light smoke in the lobby, but
 11 a few minutes later, both Nicholas Burton and
 12 Fadumo Ahmed on the same floor encountered deep, black
 13 smoke. A potential source of the smoke is that the door
 14 of flat 166, where the Tuccu family lived, was not
 15 self-closing. Meron saw Amal Ahmedin and her cousin,
 16 Amna Idris, rush out of the flat and then back in, with
 17 the door remaining open.

18 It is known that, while residents of floor 19 and
 19 the surrounding floors descended the staircase at around
 20 1.30, Majorie and Ernie Vital were among a number of
 21 people that ascended the staircase. At this point in
 22 time, the conditions in the stairwell were sufficiently
 23 clear for occupants who were able to do so to safely
 24 evacuate via the communal stairs. Those who descended
 25 did so without endangering themselves or each other.

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1 During the presentation of Debbie Lamprell on
 2 6 July 2017, we referred the panel to the known relevant
 3 facts about why some people went up rather than down.
 4 For these purposes, I simply refer to the transcript .
 5 That is {Day300/4:12} to {Day300/10:3}.

6 Fadumo Ahmed is a sole survivor of the group that
 7 reached floor 23, and what she has to say is important
 8 evidence in terms of understanding what happened to the
 9 Vitals .

10 Ms Ahmed from flat 164 and Debbie Lamprell and
 11 Gary Maunders from flat 161 went upstairs together. On
 12 the top floor , they met with a group of people that
 13 Fadumo has positively identified to include
 14 Raymond Bernard from flat 201, Ernie Vital from
 15 flat 162, Amal Ahmedin and Amna Idris from flat 166, and
 16 Berkti and Biruk Haftom from flat 155.

17 We do not have evidence from Majorie and Ernie about
 18 why they went upstairs, but we do know that five other
 19 people from their floor went to the top of the building
 20 at the same time. Majorie, as with others who travelled
 21 up, including Sakina Afrasehabi and Hamid Kani from
 22 other floors , would have found the walk to the top of
 23 the building less physically daunting than walking all
 24 the way down to the ground floor.

25 Majorie and Ernie then sought shelter from the

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1 deteriorating conditions on the lobby of floor 23 by
 2 going into flat 202. That was the home of the young
 3 Italian couple Gloria Trevisan and Marco Gottardi, whose
 4 presentation will follow this one.

5 We know that Majorie and Ernie entered flat 202
 6 before 01.34. That is because they can be heard in the
 7 background as Gloria Trevisan spoke to her mother,
 8 Emanuela Disaró, in Italy during a telephone
 9 conversation that begun at that time.

10 There are no telephone calls from Majorie and Ernie
 11 to emergency services or family members. However, as
 12 I return to briefly — and you will hear in more detail
 13 from counsel this afternoon — Gloria and Marco made
 14 a number of calls to their respective parents in Italy .
 15 From those calls, the timing and facts of Majorie and
 16 Ernie's death can be established.

17 Before I do that, there are general matters relating
 18 to all the people who took refuge on floor 23 that
 19 I briefly summarise.

20 First , there were calls between 01.30 and 01.40,
 21 especially from Mariem Elgahry, Biruk Haftom and
 22 Jessica Urbano Ramirez, and then from Debbie Lamprell
 23 beginning at 01.41, all of which indicated that the
 24 4th floor kitchen fire now dangerously affected the top
 25 of the building. Every caller was told to stay put and

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1 that crews were coming.

2 Second, the highest LFB deployment into the building
 3 was the Paddington crew at 1.56 in extended duration
 4 breathing apparatus. They were deployed to the roof of
 5 the building. This was for firefighting and not rescue
 6 purposes. They saved Fadumo Ahmed, but only one of
 7 their number reached the exit door of floor 22.

8 Third, other crews were deployed after 02.08 and
 9 then at 02.24, 02.51 and 03.03, but none of them reached
 10 the top floor .

11 Fourth, the lift was not technically suitable to
 12 enable assisted evacuation for people with mobility or
 13 other impairment on the night. What assistance
 14 a different kind of lift might reasonably have provided
 15 if it was properly maintained and integrated into LFB
 16 planning and training is a matter that has been the
 17 subject of submissions in other modules.

18 As you will hear further , right from the first call
 19 Gloria Trevisan made at 01.34 to her mother, she
 20 reported that she could not leave due to the lobby being
 21 filled with smoke.

22 Gloria Trevisan made a video at 02.13, during which
 23 she described smoke coming into the flat through the
 24 living room windows and having difficulty breathing. In
 25 this video, Marco Gottardi can be heard speaking to

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another man, which would likely have been Ernie Vital. The extent of the smoke in the lobby apparently caused them to believe that escape was not possible.

Gloria made a final call to her parents at 02.45, which lasted for 22 minutes, ending at 03.08. In terms of the conditions in the flat, she said it was full of smoke and she could see fire outside the window. At some point she told her mother that the fire had come through the window and ended the call.

Marco Gottardi spoke to his father at approximately 02.45 to say that he had filled the bath with water and could not evacuate as there was too much smoke. He then left a text message with his parents at 03.08 and had a last brief telephone exchange with them at 03.15 in which he was hardly able to speak.

The archeology evidence establishes that Majorie and Ernie Vital died in the bathroom of flat 202 near to one another. Their remains were found positioned in the same direction. Ernie was in the bathtub, with Majorie in close proximity nearby on the floor.

In his Phase 2 report, Professor Purser attributes the likely deterioration in the conditions of the flat to the external fire spread and, particularly, the spread across the south face of the tower. He explains that the bathroom and hallway would have been the last

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areas of flat 202 that were not affected.

From 02.45, the smoke and asphyxiant gas concentration would have increased rapidly. Based on the evidence of the phone calls, Professor Purser estimates the time of death as between 03.15 and 03.30.

The cause of death of Majorie and Ernie Vital was therefore the inhalation of the toxic fumes from the fire, which caused unconsciousness and then death. This is confirmed by a toxicology sample taken from Gloria Trevisan in excess of 78% COHb, which Professor Purser explained can be safely assumed to reflect the position of the other occupants who died nearby to them.

Taking (1) Gloria's comparator toxicology together with (2) the telephone calls that describe the conditions and (3) the bathroom positions that Majorie and Ernie went to in the flat, the evidence establishes that the medical cause of death can be given as "inhalation of toxic fumes" or a similar formulation, rather than the generic conclusion of "Consistent with the effects of fire", as found in the post-mortem reports undertaken before this other evidence was known and analysed.

Our final reflection is that this mother and son stayed together. While it is feasible that Ernie could

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have escaped without assistance, Majorie could not. In his video commemoration, the surviving son and brother told you that there is no way that Ernie would have left his mother. As such, he was as trapped as she was.

We want to pay tribute to the surviving son, his wife and Majorie's siblings, who have attended this Inquiry, sometimes bringing the younger generation of the family with them to find out what happened to their loved ones.

The mother and son died in terrible circumstances, but had the final gift of being together. They were also given shelter in the home of Gloria and Marco, who did not know them, but showed them kindness until the end. That is a theme that runs through the tragic events of floor 23.

Thank you, sir.

May I ask for a 30-minute break?

SIR MARTIN MOORE-BICK: Yes. Thank you very much, Mr Friedman. We'll stay 2.45, then, shall we?

Thank you very much. We'll rise now and resume at 2.45. Thank you.

(2.19 pm)

(A short break)

(2.46 pm)

SIR MARTIN MOORE-BICK: Yes, Mr Millett.

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MR MILLETT: Yes, thank you, Mr Chairman.

I now call on Michael Mansfield Queen's Counsel to come to the podium, please, to make the presentation on behalf of the families of Gloria Trevisan and Marco Gottardi, who lived in flat 202 on floor 23.

As before, I make the trigger warning that, during this presentation, those listening to it may find its content distressing and may wish either to leave the room here or to look away from the live stream.

Thank you very much.

Mr Mansfield.

SIR MARTIN MOORE-BICK: Thank you very much.

Yes, Mr Mansfield.

Presentation relating to GLORIA TREVISAN and MARCO GOTTARDI by MR MANSFIELD

MR MANSFIELD: Sir, good afternoon, Thouria Istephan and Ali Akbor.

As has just been announced, I am presenting for two families, Gloria Trevisan and Marco Gottardi, but I'm going to do it together as a joint presentation because of facts that will become very clear and probably are already as to why I would do that.

I also indicate that I don't intend to show anything that's distressing. There will be no photographs or anything like that. Although reference will be made to

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1 them, they're not to be shown.
 2 The only part, so people can be warned, that may be
 3 distressing to hear is I do want to cite an excerpt from
 4 one of the telephone calls that Gloria made to her
 5 mother, because although I was going to say it a little
 6 later, may I say it now: this is an unusual situation,
 7 and perhaps it's a reflection on the way life is lived
 8 now. These two families — certainly one of them,
 9 Gloria's — were actually watching the fire on
 10 television in Italy. So, again, one needs to put
 11 oneself in their shoes. And at the same time as
 12 watching what was happening on television globally, no
 13 doubt, they're actually seeing and speaking to both of
 14 these two in flat 202 as it happens.
 15 I think a moment's reflection indicates just how
 16 grave the situation was, how anguish-making and how,
 17 with the instantaneous communication to which we're all
 18 subject now, this was a matter that was in everybody's
 19 minds and living rooms, especially this family.
 20 They can't be here today for obvious reasons.
 21 May I also say that there will be an element of
 22 overlap with the previous presentation because, of
 23 course, there were four people in that flat. I don't
 24 apologise for repeating some of the material because it
 25 is necessary for these families also that some of this

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1 material is repeated from time to time.
 2 So, having said that, and bearing those observations
 3 in mind, may I indicate how they came to be where they
 4 were, that is Gloria and Marco.
 5 They moved into Grenfell Tower, this particular
 6 flat, 202 on floor 23, together on 1 April 2017, just
 7 over two months only before the fire. They had both
 8 arrived from Italy together on 4 March, just under
 9 a month before. So they had been for a very short time
 10 in England.
 11 Both were talented, aspiring young architects, who
 12 had met whilst university students in Venice two years
 13 before. The university was the University Institute of
 14 Architecture of Venice.
 15 Following graduation in 2016 — different times, but
 16 in that year — they wished to obtain a broader
 17 experience and to learn English, so together they
 18 enlisted on a language course, which at the same time
 19 arranged for accommodation in London.
 20 By the time — and this is an indication of their
 21 enthusiasm and their talent — of the fire, they had
 22 both successfully secured positions in well-known
 23 architectural practices in London, Marco at the Creative
 24 Ideas & Architecture firm, Gloria was thrilled as hers
 25 specialised in the restoration of old buildings, which

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1 was her forte. She began working at Peregrine Bryant in
 2 Fulham palace on 5 June — one sees how close this is.
 3 Within a remarkably short period, both of them had
 4 impressed their respective employers and were already
 5 held in very high regard and esteem as practitioners
 6 displaying considerable promise for the future, both of
 7 them. The excitement was tangible.
 8 As Gloria's father, Loris, recalled in his Phase 1
 9 witness statement to you, Gloria was so happy to have
 10 found this job. She was born to draw and did the most
 11 beautiful drawings and portraits.
 12 I pause for a moment, because those designs and
 13 drawings were shown to you in a short film compiled for
 14 the commemoration. The principal at Peregrine Bryant
 15 described her work as exceptional. I think, again like
 16 other matters, it repays looking again at that
 17 particular film.
 18 Her mother, Emanuela, remembered {IWS00000543/3}:
 19 "When she learned that she had secured her dream
 20 job, she rang me and said: 'Mum, I'm happy that they
 21 want me'. She had achieved her main aim. It could have
 22 taken years but she managed to find it in a few weeks.
 23 Gloria loved where she worked and sent me photographs of
 24 the beautiful surroundings around her office on her
 25 first day [that's Fulham Palace]. On the morning she

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1 arrived (on 5th June 2017), she told me 'look mum where
 2 I'm working, it's in a wonderful park'. It was
 3 stupendous work, exactly what she wanted and the wage
 4 matched her capacities. She felt that she had been
 5 justified. She was finally doing the work that she had
 6 dreamed of doing, helping to restore old buildings to
 7 their former glory."
 8 Besides these interests in common, they were also
 9 close in age. They both were born in Italy, Gloria at
 10 Camposampiero on 2 December, the same birth date as her
 11 mother — which was, as her mother thought, a matter of
 12 fate for both of them — but her birth date was in 1990,
 13 so she's 26; Marco, who was marginally older, was born
 14 on 26 June 1989, and he was 27. He had been born in
 15 Motta di Livenza.
 16 They were planning to return to Italy shortly after
 17 this fire, on 21 June, to celebrate the birthday I've
 18 just mentioned of Marco, and, as it happened, the
 19 wedding anniversary of Gloria's parents, Emanuela Disaró
 20 and Loris Trevisan, which coincided with the fateful
 21 day, 14 June. So, again, a date that will be etched on
 22 their memories.
 23 The two families were close-knit and were highly
 24 supportive of the ambitions of their children. It was
 25 the first time Gloria had lived away from home. She was

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1 very close to her family and would speak to them every
2 day or two. She had a very affectionate relationship
3 with her brother, Giulio, who was seven years older than
4 her. He was very protective of her. She was also very
5 close to her cousin, Giorgia, for whom she left
6 a message on the night of the fire.

7 Grenfell Tower, I turn to.

8 Once the language course was completed, they moved
9 into a spare bedroom in the flat already mentioned, 202
10 on the 23rd floor. Gloria's parents hadn't yet visited
11 the flat, but her mother remembers {IWS00000543/4}:

12 "Gloria would tell me about the incredible views she
13 could see over London from the flat. It was very nice
14 because of the height — they'd never seen such
15 a panorama, such a view. Gloria sent me photos of
16 rainbows at dawn. She was happy — they had found work,
17 a flat, they loved each other. They were beginning to
18 build a life for themselves in London."

19 I mention now the flat itself, because it's
20 important for an understanding, which you already have,
21 of the spread of fire.

22 The flat itself is on the southeast corner of the
23 tower, with two bedrooms on the south side, south face,
24 the living room spanning the corner, part south, part
25 east. The kitchen is on the east face. There has been

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1 scant reference to this flat on floor 23. You've heard
2 a lot about other flats — 205 and 201 and so on —
3 mainly because there do not appear to be any calls to
4 the emergency service by either Gloria or Marco or, for
5 that matter, from the Vitals either, who you have heard
6 about this afternoon.

7 I want to turn to the movements, as they can be
8 reconstructed.

9 On the evening of Tuesday, the 13th, they are both
10 seen on the CCTV footage, as are many others, at about
11 a 7.45 in the evening. Marco is on his mobile and
12 Gloria is with him, about to go up to flat 202, no doubt
13 at the end of a day's work. It was a Tuesday.

14 I then move.

15 They go to bed. It's not clear exactly when.
16 However, at 00.54, a time you're very familiar with, the
17 fire is reported in the kitchen in flat 16 on the
18 4th floor and then, shortly after 1 o'clock, it breaks
19 out into the cladding.

20 However, there is another matter before these two
21 young people are awoken, having gone to bed.

22 Farhad Neda of flat 205 on floor 23 rings the
23 emergency TMO number and reports the air vents near the
24 lift landing outside flat 205 are making a loud noise.

25 I pause because that may be of relevance in terms of

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1 why the smoke was so bad in the lobby area of that
2 floor. It plays a crucial, critical part in why these
3 two remained in the flat.

4 He, Farhad, reports an electrical burning smell and
5 that one of the lifts has stopped working. Again,
6 I don't elaborate the lifts point, which has been made
7 many times.

8 Some time before 1.30, Farhad Neda notices black
9 smoke entering the lobby from the smoke extractor
10 system.

11 By 1.26 — I just interpose it, because this is
12 a time you have heard on many occasions, I mentioned it
13 myself the other day — the fire had reached one of the
14 6s, 156, that's the flat belonging to Shah Ahmed and his
15 wife. The reason that's important is because he makes
16 a 999 call shortly after, the one I described the other
17 day.

18 Some time around this, about 1.30, possibly 1.34, as
19 you've heard, Majorie and Ernie Vital left their flat,
20 which was one floor above the one I've just mentioned
21 with Shah Ahmed, which was floor 18. They left their
22 flat, 162, ascended the staircase — for reasons, as
23 we've said, or at least Mr Friedman said earlier, it's
24 impossible to tell why, but they did — to floor 23, and
25 knocked loudly on the door of flat 202. They're part of

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1 a group that's migrated upwards.

2 This is confirmed or supported, that that's what's
3 happening at flat 202, by the evidence of Fadumo Ahmed,
4 who saw Ernie on floor 23 shortly before 1.34, and by
5 the second of two calls from Gloria to her parents in
6 Italy.

7 Now, I'm not going to read out all the calls, but
8 there are a sequence of six telephone calls between
9 Gloria and her mother. There are others towards the end
10 between Marco and his father, but these provide, besides
11 what's happening on television, an internal, as it were,
12 almost microscopic view of how they were dealing with
13 a situation well beyond their control.

14 In this call at 1.34, Gloria told her mother that
15 they'd been awoken by banging on her door, that is 202,
16 and a woman shouting outside. When Gloria opened the
17 door, there were two people, the Vitals, only she didn't
18 know them and she believed they lived on the same floor,
19 which is understandable.

20 At the same time as she opened the door — and she
21 recounts all of this to her mother — she was confronted
22 by the thick, black, dense smoke that I've already
23 mentioned that had been spotted coming from the
24 extraction system. These smoke conditions are
25 graphically depicted in a live stream Facebook video

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1 begun a few minutes later at 1.38 by Rania Ibrahim from
2 the front door of a neighbouring flat. This time it's
3 203, so they're all in proximity. This was referenced
4 in your Phase 1 report, sir, volume 2. I don't go
5 through all the references and the paragraphs. But you
6 may recall that, in that Phase 1 report, there's a still
7 photographic clip from this video taken at 1.38 or
8 shortly thereafter, and it shows what can be seen in the
9 lobby or, rather, not seen. The photograph that you
10 have in that report: black. You can't see anything,
11 except at the top there is a dim light at ceiling
12 height.

13 Gloria told her mother that they both ran to the
14 window and became aware that there was a fire below and
15 the presence of firefighters. She was, quite naturally,
16 extremely frightened.

17 Emanuela asked to speak with Marco. She knew him as
18 a calming voice of reason. He confirmed these details.
19 It was his belief that everything seemed under control.
20 Gloria added that they'd been told to stay inside. This
21 is part of the phone call.

22 I pause again because it's not clear where they had
23 gleaned that information. There was plainly — if I can
24 put it, you talk about ambient sound — ambient
25 conversation in the upper floors that it was a matter of

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1 staying put. It may have been conveyed by the Vitals,
2 we're not able to say, but also — and may I interpose
3 this — it would appear at some point, from what she
4 says on the phone call, that what they tried to do,
5 either Gloria or Marco, together or separately, is to go
6 up to the roof, where they obviously thought there may
7 be safer conditions or possibly rescue. However, they
8 had discovered that the gate that leads to the roof,
9 which, if you've been to the tower, is still there, was
10 locked. If they did that, they might have come
11 across — and I can't put it higher — others who had
12 migrated upwards, who had also been able to say the
13 general feeling was to stay put.

14 Emanuela suggested that they place a wet towel
15 around their mouths to get downstairs, but they said
16 there was too much smoke. Alternatively, her mother
17 said, go to the roof, but this wasn't possible, as I've
18 just said; the gate was locked.

19 Gloria was terrified. Marco was trying to remain
20 calm and placed a wet towel at the flat door, which he
21 noticed was very hot, to stop the smoke from the lobby.

22 During this recording, the one I've mentioned by
23 Rania, at around 1.39, Rania steps outside flat 203,
24 where she's been taking the film, and calls out, "Hello,
25 hello", and then "Come here". A response can be

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1 heard: "No, we are here, we are inside my apartment".
2 That's the voice of Marco, identified by Emanuela.

3 By 1.42 — again, it's all happening in fast
4 movement, matters of minutes — the external fire has
5 spread across the east elevation and across flat 201 by
6 1.57.

7 2.10 is an important time, because the horizontal
8 spread by that time has reached their flat, and it's
9 a significant moment that's reflected in the calls that
10 they are making.

11 Gloria made two calls either side of this time. The
12 third one, the third call in order, at 2.08 —
13 two minutes before the 2.10 spread — a distressing and
14 brief WhatsApp message was left by her to her group of
15 friends, saying goodbye.

16 The next call, again short, the fourth one, at 2.12,
17 after that 2.10 spread, a short call, 34 seconds, in
18 which Emanuela could hear Gloria and Marco discussing
19 what they should do.

20 Again, a few minutes after this, there's a fifth
21 call. This one lasts from 2.13 — so it's a minute or
22 so later — until [2.20]. It was in fact split into two
23 parts. It's a video call, so this is why I say watching
24 on television in Italy and also over a video call.
25 While this call is continuing, her parents can hear

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1 an alarm in the background.

2 Gloria continued to be extremely fearful. They were
3 waiting to see what they should do. Emanuela thought
4 they might breathe fresh air out of a window, but they
5 weren't keen to do that.

6 These are some verbatim remarks from Gloria. She
7 says this to her mother, "It's not a small fire, it's
8 a very large — look, look", and what she does is she
9 puts the mobile phone out of the window so her mother
10 can actually see what she's already seeing on
11 television, she can see it from inside the flat, as it
12 were. She put the phone out of the window to show the
13 fire and the fire engines. "They're never going to put
14 out the fire, it's too big, it's impossible. Smoke is
15 coming in through the living room windows" — thick,
16 black smoke of the kind that was in the lobby outside —
17 "I can't understand how this fire is so big. We're
18 trying to understand what we can do and where we can
19 go."

20 Gloria's mother kept recommending that she kept the
21 wet towel over her mouth. By now, the smoke was coming
22 in from everywhere and Gloria was coughing continuously.
23 She can be heard shouting on this phone call for help
24 out of the window, and wanted to know whether the London
25 Fire Brigade extending ladders would reach them.

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1 Emanuela didn't know what to say or how to respond.
 2 Gloria says, "I don't know what to do, mum. I'll call
 3 you later".
 4 Again, just for a moment, to reflect, the
 5 unimaginable anguish of all of them, possibly
 6 unprecedented, captured on screens large and small
 7 around the world, contemporaneous, instantaneous, within
 8 reach but out of reach.
 9 2.42, Gloria recorded a WhatsApp message to her
 10 mother and her cousin, Giorgia, that I've mentioned
 11 before.
 12 2.45, Emanuela called Marco's family and Marco's
 13 father. Giannino immediately contacted Marco, who
 14 described how they were unable to leave because of the
 15 smoke. They'd been told to stay put, the same as
 16 before, still unclear where from, and he'd taken the
 17 precautions of filling the bath in the flat.
 18 There were ten further calls between Marco and his
 19 father up till the time of 3.15, the last call, although
 20 only four of the ten calls actually connected.
 21 I turn now to the last part of the call at 2.45,
 22 which lasted for 22 minutes. We've called it call 6, in
 23 fact.
 24 The phone was on loud speaker, and it was recorded
 25 by her father, Loris. Again, one can't imagine what

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1 they must have been going through in order to see what
 2 was happening. The escalating events all around.
 3 Gloria says this, as no doubt others thought and
 4 some did, "I'm throwing myself out of the window,
 5 I swear to you the fire is here, it's in the sitting
 6 room, the fire is everywhere, we're just waiting. The
 7 fire is outside my window. Pieces of glass are coming
 8 in through the window, which we've closed. We need
 9 a miracle. I'm sorry I came here and left you. It
 10 seems impossible that everything is over for both of us.
 11 I can't get out. I don't believe it's ending like this,
 12 I don't want to believe it. I can't see anything
 13 outside. My eyes are burning. I can't breathe."
 14 She asked her mother, finally, to take care of her
 15 cousin, Giorgia, and at the end of her last call, after
 16 thanking her parents, she said, "I just want to stay
 17 with Marco now". And in that moment, you see an element
 18 of respect, of generosity, for her parents, the kind of
 19 generosity that Mr Friedman indicated being exercised in
 20 relation to the two who had come up from the floor two
 21 floors below.
 22 There is much, much more on this recording from
 23 a young couple facing an inevitable demise with
 24 incomparable strength and resilience, and a generosity
 25 of spirit which conveyed a loving gratitude to their

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1 parents and reflected, really, the community in the
 2 tower as well.
 3 They cut the call short — this is the one to
 4 Emanuela — at 3.08, for reasons that are obvious, and
 5 Marco spoke finally to his father at 3.15, hardly able
 6 to speak.
 7 The calls also reveal that there came a point after
 8 3 o'clock when they thought that firefighters were no
 9 longer on their way and there was no rescue helicopter.
 10 They were right.
 11 Again, these times are now familiar, but may I just
 12 say in their case: between 1.33 and 1.57 — so I just
 13 flash back for a moment — the London Fire Brigade were
 14 made aware of smoke and fire penetrating flats on
 15 floor 23. The overall position concerning search and
 16 rescue has been outlined many times, so a short summary
 17 will suffice: no deployments were made to this floor for
 18 those purposes — that's search and rescue — until
 19 after 2.08, and that one didn't reach that floor. There
 20 were others at 2.24, 2.51, 3.03; none of them reached
 21 floor 23. The Paddington crew were going up to the roof
 22 to try and extinguish the external fire, but they didn't
 23 even get to do that.
 24 So, therefore, their observation that basically it
 25 was over was entirely correct.

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1 Gloria and Marco were both fit and healthy. Despite
 2 conditions in the floor 23 lobby, according to
 3 Professor Purser, it would have been possible to escape
 4 at the latest by 2.45 or thereabouts. Stay put, you
 5 will recall, wasn't revoked until 2.47. Any later than
 6 that and the toxic pre-load — in other words, what
 7 they'd been breathing in the flat already and from the
 8 lobby — would probably have prevented negotiating the
 9 stairs. The most favourable time, however, was earlier,
 10 between 1.29 and 1.50, when the smoke conditions on the
 11 stairs were lighter, remembering that the front doors of
 12 the 2s were closest to the stairs. 202 was closest to
 13 the stairs.
 14 For Gloria and Marco, however, and others on
 15 floor 23, it was the appearance of the black smoke in
 16 the lobby which, quite naturally, was forbidding. They
 17 saw the thick smoke in the lobby and most likely thought
 18 the conditions beyond that were the same or worse.
 19 This predicament — and in each of these
 20 presentations, there's a point at which one steps back
 21 and reflects for the future — highlights the need for
 22 a system which enables the communication of
 23 authoritative and authenticated information and advice
 24 at the time of the emergency by internal and external
 25 broadcast services. It's worth exploring whether such

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messages could be flashed on to the screens of mobile phones, a public service announcement, in line with clear and practised fire safety strategy and procedures which we've proposed in future for high-rise residential blocks. We say that because, of course, mobile phones are being used by many generations now, almost on a daily and hourly basis, and if they manage to get a message that in fact the conditions on the stairs were different, in obviously a different set of circumstances, they might have managed to get away at a much earlier time, with the Vitals, for that matter.

This is also why it's important for the control officers to share real-time information with each other as it is received during large-scale incidents, and to update residents who call — although they didn't — so that accurate, up-to-date information is passed on to residents and that this is disseminated to others.

If Gloria and Marco knew or had known that the stairs were less smoky than the lobby, they may have risked crossing the smoky corridor to make their escape. They just needed to know that the stairs were not as bad as the lobby.

The last moments, finale.

Gloria and Marco died as they had lived: together, next to each other, in the corridor south of the flat

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entrance door and north of the south-facing bedrooms. According to Professor Purser's evidence, and a report which I cite in here, these are classic exemplifications of the effects of smoke and smoke inhalation of the toxic combustible products of fire.

Following the final call at 3.15 by Marco, Professor Purser gives a very rough — I think he uses the word "crude" — estimate that between 3.15 and 3.30, so very soon after, they would have first become incapacitated and then comatose, reaching the lethal dose threshold soon after that.

Marco suffered from a single vessel coronary atheroma, which increased his vulnerability. Neither of them would have been aware of exactly what they were inhaling. Neither of them would have been conscious at the point of their joint deaths.

The configuration of flat 202 played a singular role in how matters had unfolded during these final moments. Professor Purser pointed out that the flat 2s were especially dangerous because of the fire spread and concomitant smoke intrusion starting its progress across the east-facing kitchen and living room corner, and then around that corner to the south-facing part of the living room towards the bedrooms outside of which they were found, and finally the bedrooms between 2.51 and

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2.55, so shortly before the final call at 3.15.

The path of progress meant that the kitchen and the hallway became quite smoke-logged first, there having been slow infiltration from the lobby since 1.30, and then the living room, and created a considerable period of roughly 75 minutes between its initial arrival and the final telephone call at 3.15.

I turn to the final stage of recovery.

Initially, in the aftermath, her brother, Giulio, and his wife—to-be at the time, Giulia, immediately travelled to London in the firm belief that Gloria might have survived. They visited the tower whilst it was still smouldering and scoured every hospital, every location, without success, an increasingly distressing mission, and they returned to Italy with nothing. No Gloria, no information. She was reported missing by the family.

Meanwhile, the painstaking, rigorous and meticulous task of recovery and identification had begun, and some of that, of course, you've heard — well, quite a lot of it — this morning in terms of the archeology. The care and attention to every detail employed in the general process were also explained, besides this morning, with admirable clarity before you by Gaille MacKinnon, forensic anthropologist and team leader. It involved

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the interplay of several other disciplines besides her own, archeology this morning, odontology and DNA.

The conditions with which the experts had to contend in flat 202 after the fire can be viewed in a video which was part of the commemoration for Majorie and Ernie — I have the reference, it can be seen, it was shown at the commemoration — and it doesn't take much to envisage what they faced.

This process in relation to Gloria commenced with the initial discoveries on 19 June 2017 and continued until further confirmatory anthropological reports in December 2018(sic). However, it had been possible to make a reliable identification for Gloria through odontology and anthropology on 23 June, so much sooner, June 2017, by the identification commission, attended by the senior coroner for Inner West London, Dr Fiona Wilcox.

The gold heart pendent Gloria was wearing and her jewelled naval stud were recovered from the scene and returned to her family.

The preliminary post-mortem report recorded provisional primary cause of death as consistent — as you've heard with many other or nearly all the other cases — with the effects of fire, with the evidence of soot inhalation. That was recorded on 21 June. There

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was a second one on 25 September which recorded "inhalation of products of combustion".

However, it had been possible in her case to examine a blood sample. Carboxyhaemoglobin was detected at a very high level, 78%. The saturation level associated with death, as you know, from carbon monoxide poisoning is lower than that, 40 to 50%. Professor Purser provided this summary in evidence about this result {Day297/27:8–14}:

"So that is the result for a person who has been overcome by carbon monoxide and toxic smoke and then become comatose, and continued to inhale smoke while comatose containing carbon monoxide for some time until they eventually — their systems pack up and they die. So it's a very strong signal to me that we're dealing here with smoke cases."

In Marco's case, the process was also commenced on the same day as it was for Gloria, 19 June, his remains being alongside Gloria. By 21 June, significant items were found amongst his personal effects, namely a mobile phone and a wallet containing photographic identification. By 30 June, a DNA database comparison had been made and could be asserted to be Marco. The cause of death and its description is the same as Gloria: fire effects and the inhalation of combustion

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products, namely toxic carbon monoxide fumes, save for the additional feature of the atheroma which I've already mentioned. A blood sample was obtained in his case, but merely revealed the presence of carboxyhaemoglobin, but it couldn't be measured.

May I close with this, may I call it, epitaph for the two families.

The narrative itself that I've just been through is a tribute to the indefatigable and enduring human spirit of those in Grenfell Tower who died — others, of course, beyond these two — as well as those who lived, and continue to live, with searing memories and unending love.

When Gloria's mother came to give evidence before you, towards the end of what she said, she had mentioned respect for all — again, a theme, like generosity, of all the people who you've heard from — and she also wanted to emphasise the need for responsibility and accountability. Then she looked up to see everyone who was at that venue for that commemoration, and she said words to this effect: that she'd listened to their stories that day and realised, in hearing those stories, that it was Gloria and Marco's story as well. The pain they felt was the pain she felt. It was in everyone's faces and, in that sense, the community was brought

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together, and she felt that unity and she felt that strength.

Marco's parents have sent, in a sense, just a message which — because they didn't come before you at that time, but they have since wanted to say this to you about Marco and Gloria.

Giannino Gottardi and Daniela Burigotto have created something called the Grenfelllove Marco and Gloria Foundation. Its objects: to remember the two young people, as well as the other 70 victims of the tragedy; to raise awareness of the safety of buildings and the protection of the environment and habitats; to provide educational tools to schools to help young people by providing scholarships to the most deserving, because we believe that knowledge will be able to make our society better.

Thank you.

SIR MARTIN MOORE—BICK: Thank you very much, Mr Mansfield.

Well, that brings us to the close of today's proceedings. We shall rise at that point, but we shall resume tomorrow at 10 o'clock, when we shall hear further presentations relating to those who died in the fire.

Thank you all very much. 10 o'clock tomorrow, please.

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(3.30 pm)

(The hearing adjourned until
Tuesday, 12 July 2022 at 10.00 am)

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