

Grenfell Tower – fire safety investigation:
The fire protection measures in place on the night of the fire, and conclusions as to:
the extent to which they failed to control the spread of fire and smoke;
the extent to which they contributed to the speed at which the fire spread.

Phase 1 Report – Appendix N

Collated evidence relevant to conditions in the stairs and lobbies

REPORT OF

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Fire Safety Engineering

24th October 2018

Specialist Field	:	Fire Safety Engineering
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On behalf of	:	Grenfell Tower Inquiry
On instructions of	:	Cathy Kennedy, Solicitor, Grenfell Tower Inquiry
Subject Matter	:	To examine the circumstances surrounding the fire at Grenfell Tower on 14 th June 2017
Inspection Date(s)	:	6 th October, 1 st November, 7-9 th November 2017

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Appendix N – Collated evidence relevant to conditions in the stairs and lobbies

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N1 Introduction

- N1.1.1** This Appendix collates and records the evidence upon which I rely in Section 14 with respect to the conditions reported in the stairs and lobbies by fire fighter and resident witnesses.
- N1.1.2** This is based on:
- a) Fire fighter witness statements (the majority of the evidence at this time)
 - b) Transcripts of fire fighter oral evidence (25th June 2018 - 2nd October 2018)
 - c) Resident witness statements (limited at this time)
- N1.1.3** I will update this evidence when the Residents have completed their oral evidence to the Inquiry, as it is of considerable importance in understanding the condition of the lobby outside their own flat, and on their own journey down the stairs.
- N1.1.4** I have been assisted in this work by my colleague Dr Graeme Flint.
- N1.1.5** This evidence is presented in a series of tables set in chronological order of the events observed by witnesses on the 14th June 2017.
- N1.1.6** The fire fighter witness statements and transcripts of oral evidence do not provide specific times for each observed event described. I have therefore had to attribute a time to events observed by fire fighters above the bridgehead inside Grenfell Tower. I have used evidence from the fire fighter breathing apparatus telemetry record submitted by LFB (LFB00023326) in order to make these estimations.
- N1.1.7** The breathing apparatus telemetry record (LFB00023326) states the time at which each individual fire fighter is logged onto the Entry Control Board (ECB). This is the point at which the fire fighter leaves the bridgehead and enters the fire sector. At Grenfell Tower, this would have meant entered the stair. I have attributed this time to any events observed by the fire fighter, shortly after they describe leaving the bridgehead.
- N1.1.8** Where no time is logged for a fire fighter on the ECB, I have used the breathing apparatus 'tally out' time. This time is when a telemetry tag is removed from the breathing apparatus to be inserted on the ECB.
- N1.1.9** For any events described on a fire fighter's return to the bridgehead I have attributed the time recorded in the breathing apparatus telemetry record (LFB00023326) as the 'end of wear' time. Once a fire fighter returns to the Bridgehead they remove their breathing apparatus, therefore the end of wear time would correspond to the time at which they have returned to the bridgehead.

- N1.1.10** For observed events or activities described which were remote from the Bridgehead, for example in the stair, lobby or flats, I have attributed these a time of 5 mins after the ECB time for any events near Level 10 or 10 mins after the ECB time for any events near Level 20. This is an estimation only, for the purposes of my analysis.
- N1.1.11** Where fire fighters did not wear breathing apparatus, I have estimated a time of events based on the content of their individual witness statements and transcripts of cross examinations.
- N1.1.12** I am aware that the times I have given can only ever be Approximate. As I have explained in section 14, I have tried to focus on the most reliable sources of information, but inevitably it has been necessary to try to provide some Approximate timings, in order that I can make an assessment as to how the lobbies and stairs performed, from a design perspective.
- N1.1.13** If I am to make recommendations in Phase 2 as to potential changes to building design guidance, which is intended to protect fire fighters as well as building residents, it is important that I try and make an assessment of how the lobbies and stairs performed, by reference to the evidence, so that I can consider whether there are design changes which need to be considered.

N2 **Conditions in the stairs**

- N2.1.1** Table N.1 below records specific extracts I have made where a description is provided of the conditions within stair from resident witness statements and the examination transcripts from fire fighters.
- N2.1.2** The specific conditions I have extracted evidence on relate to visibility within the stair, presence of smoke and its colour, heat within the stair. This evidence is relevant to the performance of the fire safety features to prevent the spread of smoke and heat to the escape stair.
- N2.1.3** Table N.1 also includes the specific fire fighter witness statement evidence that I have relied upon in my preliminary phase 1 report as presented there in Section 14.4.25.
- N2.1.4** Evidence of each event or observation has been attributed an Approximate time (as described in Section N1) and a specific location). The collated evidence is presented chronologically – as the events occurred on the 14th June 2017.

Table N.1: Evidence of stair conditions

Reference Level affected at time	Content – Stair conditions
Alves (IWS00000538) Level 13 Approx. 01:00	almost unnoticeable, in the lobby area. When I was on the staircase walking up to the 13 th floor there was no fire alarm, no smoke and it was light.
Dorgu (MET00008603 7) Level 4 Approx. 01:03	<i>“there was no fire or smoke visible on approach to the tower.”</i> ... <i>“We would normally use dry riser on the floor below but as there was no signs of smoke or fire we went in on the forth. (sic)”</i>
Badillo, Transcript 29 June 2018, p79 Levels 2 and 4 Approx. 01:03	Q. What were the conditions like in the stair at the second floor where the bridgehead was set up when you first got there? A. Completely clear. Q. What about in the stairs on the way up to the fourth floor? A. Completely clear.
Alves (IWS00000538) Level 13 Approx. 01:08	13. As I was coming down the stairs I passed two fire fighters taking a hose up. I did not stop to look into the 4 th floor and did not want to get in their way and stood to one side. I cannot remember any smoke. I didn't see anybody coming down the stairs when I came down. When I reached the bottom of the stairs I went out via the main entrance and left the building. The CCTV camera picture provided by the police shows me leaving at 01:08.40. It shows Ines leaving slightly earlier at 01:04.25.
Zada (IWS00000989) Level 8 Approx. 01:11	9. As I was walking down the stairs it seemed to feel warmer, though it could have been in my head. I remember stopping as I was going down. I think I was on the 7 th floor going down to the 6 th floor. I realised the smell of smoke was getting stronger and wondered whether I was making the right decision to go down. I looked further down and I could see firefighters. 10. I decided that I should walk towards the firefighters and that if my life was in danger they would surely warn me, and I could go back the other way. I carried on down towards them until I was about a metre away. I think they were on the 4 th floor. The door to the 4 th floor was open and there were at least three of them; and I think they were unravelling hoses.

Reference Level affected at time	Content – Stair conditions
Dorgu, Transcript 9 July 2018, p110 Level 3 Approx. 01:15	<p>Q. Now, where were you standing, do you think, when that was happening?</p> <p>A. I would've been in the stairwell of around about the third floor.</p> <p>Q. Okay. And what sort of condition were these people in in terms of their physical condition?</p> <p>A. Not distressed. No sign of exposure of fire or smoke. They were fine.</p>
Hippel (MET00008330 0) Level 4 Approx. 01:18	Witness statement identifies that stairs to Level 4 are clear of smoke.
Stern, Transcript 19 July 2018, p138 Level 5 Approx. 01:18	<p>What about the conditions on the stairs up to the fifth floor, do you remember what they were like?</p> <p>A. Clear.</p>
Kassemajian (IWS00000951) From Level 17 Approx. 01:20	35. On the 17th floor there was no visible smoke. At around the 14th floor in the stairwell the smoke started. It was white, and it was getting stronger and thicker as we went further down. We were walking into it and I knew that it was going to get stronger and that it would continue getting worse the further we went. I was worried that I was taking the two of them to their death. I didn't know if there was a way out.
Chebiouni (IWS00000945) From Level 9 Approx. 01:21	31. I took the stairs down. I know that you must not use the lift during a fire so I did not consider using it. The door to the stairwell was closed. There was smoke in the stairwell. Again it was light, like exhaust smoke, pale grey in colour. The lights were on in the stairwell. I went slowly down the stairs. I couldn't see Hanan in front of me; she was gone already. The stairs weren't slippery and did not seem wet. I don't remember seeing hoses in the stairwell. I could smell that burning plastic smell. As I descended I could hear people speaking but couldn't tell where the voices were coming from.
Ahmed (IWS00000014) Level 4 Approx. 01:21	38. We did not stay there for long a matter of seconds there was thick black smoke coming from the hallway into the stairs. The smoke was very thick and had a strong taste like metal. The smoke was only on that floor and we past through it as we went down. We continued down to the third floor where we had to change stairs. The door out of the stairs on the third floor was closed but we just pushed it open. Then we went down the second stairs to the ground floor and out of the Tower. I have seen a still from the
Archer (MET00008001) Level 6 Approx. 01:21	Witness statement identifies that stairs to Level 6 are clear of smoke.

Reference Level affected at time	Content – Stair conditions
Abell, Transcript 2 July 2018, p59 Level 5 Approx. 01:21	<p>And the condition in the stairs as you went up to the fifth floor, what was that like to start with?</p> <p>A. That was clear.</p> <p>Q. And as you got up towards the fifth floor?</p> <p>A. Still clear.</p> <p>Q. It remained clear, did it?</p> <p>A. Yes.</p>
O’Beirne, Transcript 2 July 2018, p196 Level 7 to Level 8 Approx. 01:22	<p>Q. Can you describe the conditions that you found on the stairway on the way up?</p> <p>A. It was clear on the way up on the stairs.</p>
O’Beirne, Transcript 2 July 2018, p202 Level 9 Approx. 01:22	<p>What were the conditions in the stairs on your way up from level 8 to level 9 like?</p> <p>A. It was clear.</p>
Ali (IWS00000003) Clear From Level 15 Approx. 01:23	<p>52. I ran so fast with ^{my daughter} [REDACTED]. A guy with a little baby came running past me not looking just going fast. There was no smoke on stairs all the way down and the lights were on and I didn't see any fire when I was inside the Tower. The</p>
Dorgu, Transcript 9 July 2018, p115 Level 5 Approx. 01:25	<p>Q. Just pausing there, what were the conditions like at the fifth floor in the stairs, first of all?</p> <p>A. In the stairs, clear.</p>
Dorgu, Transcript 9 July 2018, p118 Level 6 Approx. 01:25	<p>Q. So you go up to the sixth, and what was the stairway like on the way up to the sixth?</p> <p>A. At that point, clear.</p>
Kassemajian (IWS00000951) From Level 8 Approx. 01:26	<p>36. Rita was going slowly, one step, two steps at a time. She was holding the rails on one side, and on to Fung on the other. On about the 8th floor Rita started coughing. As we progressed the smoke got thicker still. On the 4th floor the smoke was even thicker and greyer. Still it was not so thick that you couldn't see through it but it was a complete mist.</p> <p>...</p>

Reference Level affected at time	Content – Stair conditions
	<p>38. I think that at every stage I could still see the bottom of the stairs. It smelled like a bonfire. By the 8th floor we were engulfed but it was still possible to see. I remember once I was in Hyde Park and was surrounded by a thick grey mist, it was like that. I am sure I could have seen the ceiling had I looked up, or the hand rail.</p>
<p>Al-Arasi (IWS00000005) From Level 13 Stairs clear down to about Level 4 where smoke is coming into the stairs from the lobby door when opened. Approx. 01:26</p>	<p>knowledge that in the event of a fire that you should not use the lifts. We opened the doors to the stairs. It was lit and we had no problem seeing. I could not see any smoke when we opened the door to the stairs but could smell the burning smell which was stronger. Progress down the stairs was slow due to my friend walking with a stick and she was struggling to support herself and I was trying to help her. We stayed close to the bannister on the stairs.</p> <p>20. As we made our way down the burning smell became stronger and as we went down we started to see smoke. I have been shown a "smoke text descriptors" with some images and I think it was about C. When we reached I think the 7th floor we saw two fire fighters making their way up the stairs. They had something over their faces I am not sure what it was. They didn't say anything to us and we didn't speak to them.</p> <p>21. On I think the 4th or 5th floor there was thick black smoke on the stairs, it was coming from the lift lobby area where a lady was opening the door from that floor to the stairs. As the door was opened I looked into the lift lobby area of that floor but could not see anything it was totally black. I am not sure if this was because there were no lights or because of the smoke.</p> <p>22. It was very scary, it was very black on the stairs and we went down through the smoke breathing it in. As we went down the stairs to the bottom the smoke diminished and there was no smoke at all on the ground floor. I have been</p>
<p>Khalloud (IWS00000473) From Level 11 Approx. 01:27</p>	<p>45. The stairs were clear; I do not remember seeing any blockages of people and they were quite clean. There was not much smoke in the stair well; there was only a thin layer of smoke on the ceiling of the stairs, as the door to the hallway had been opened. You could smell this. However I was able to start breathing properly in stairs.</p>
<p>Badillo, Transcript 29 June 2018, p122 Level 15 Approx. 01:27</p>	<p>Q. What were the conditions like in the stairwell when you got into the stairwell at the 15th floor level?</p> <p>A. I believe it was just some light, wispy smoke. It was smokey, but not like it was in the lobby.</p> <p>Q. Was it breathable air?</p> <p>A. Yes.</p>
<p>Ho (IWS00000925) From Level 10 Approx. 01:27</p>	<p>26. There is a door from the landing to the stairs which you push, and which automatically closes behind you. I pushed it open and began to run down the stairs. I was scared of dying so I ran fast. I did not see any other people on the stairs. There was no smoke on the stairs. I am not sure how long it took me to run down the stairs; however, it would normally take me about 3 or 4 minutes to walk down the stairs, so it would have been less time than that.</p>

Reference Level affected at time	Content – Stair conditions
Hippel, Transcript 19 July 2018, p42 Level 6, Approx. 01:30	<p>Q. What were the conditions on the stairs like?</p> <p>A. Clear, clear.</p> <p>Q. Temperature?</p> <p>A. Clear -- normal.</p> <p>Q. Visibility clear?</p> <p>A. Yes.</p> <p>Q. No signs of smoke?</p> <p>A. Not that I could see.</p>
Hippel, Transcript 19 July 2018, p65 Between Level 6 and Level 16 Approx. 01:30	<p>Q. Did any of them show any signs of smoke inhalation?</p> <p>A. None that I saw.</p> <p>Q. Were none of them spluttering or coughing?</p> <p style="text-align: center;">Page 65</p> <hr/> <p>A. No, not at all.</p>
Stern, Transcript 19 July 2018, p152 Level 6 Approx. 01:30	<p>Q. When you came back out, what were the conditions like in the stairwell at that point?</p> <p>A. Still clear.</p> <p>Q. So no change?</p> <p>A. In the stairwell, no change.</p>
Stern, Transcript 19 July 2018, p164 Between Level 6 and Level 16 Approx. 01:30	<p>Q. Did you see whether or not they were suffering any signs of smoke inhalation?</p> <p>A. Not that I noticed, no.</p> <p>Q. On your way up, what was the air in the staircase like?</p> <p>A. Clear.</p> <p>Q. Was it clear all the way up?</p> <p>A. Yes.</p>
Ahmed (IWS00000388) From Level 18 Approx. 01:31	<p>same weight. It's completely wooden and you push from the lobby to open it. There was light smoke in the stair well. We went down the stairs and we saw our neighbour from</p>

Reference Level affected at time	Content – Stair conditions
Fletcher (IWS00000913) From Level 16 Approx. 01:31	<p>46. As we went out onto the stairwell through the fire exit door from our landing the smoke was not as thick. Once we were on the stairwell I could see smoke coming from above as people opened fire doors above on the higher levels.</p> <p>...</p> <p>As we proceeded down the stairs, people were opening the fire exits on their floors which meant more smoke was coming into where we were on the stairwell. The fire doors on the</p> <p>...</p> <p>54. When we were on the 6th floor there was smoke below us and I thought this was where we</p>
Mekonnen (IWS00000912) Between Level 19 and Level 5 Approx. 01:32	<p>18. I got to the top of the stairs on my floor. I did not want to go back into my flat, so I decided to ignore the advice that had been shouted in the stairwell, to go back up, and I headed back down the stairs with my daughters. There was no one on the stairwell at this point. As we were walking down the stairs, the smoke was becoming thicker and thicker. It was dense and dark grey but I could see through it. I was able to breathe without any difficulty.</p>
Hippel, Transcript 19 July 2018, p98 Level 16 Approx. 01:35	<p>Q. What were the conditions back out in the stairwell when you left the 16th floor?</p> <p>A. Still pretty – still clear.</p>
Dorgu, Transcript 9 July 2018, p183 Smoke logged from Level 8 to Level 20 at 01:35 From Level 20 to Level 3 at 02:00	<p>Q. -- from 1.35 to 1.59, just before 2 o'clock, so 25 minutes. During any of that period of time, when you've been up and then down again, would you say that it was possible to evacuate anybody from any floor down that protected staircase successfully and safely?</p> <p>A. I don't think so. Not from that time. Even from the eighth floor was smoke-logged, so it would've been very difficult. It may have been feasible, but they would've been unconscious, they would need to be rescued by BA</p>

Reference Level affected at time	Content – Stair conditions
<p>Secrett, Transcript 5 July 2018, p79 Witness is unclear on whether Level 6 or Level 8. Dorgu is clear its 8 Approx. 01:35</p>	<p>Q. And you come into the stairwell, and what are the conditions like in the stairwell?</p> <p>A. Smoky.</p> <p>Q. Smoky. How similar to the smokiness in the lobby?</p> <p>A. Not as bad as the lobby. I remember it was a little bit clearer but not a lot clearer.</p> <p>Q. How about illumination? Could you see any light?</p> <p>A. Yeah, there was a bulkhead on the wall. I just remember seeing it on each floor just glowing. It wasn't -- I wouldn't say it was giving me any useful light, it was just glowing. So I wouldn't call it lighting.</p>
<p>O'Beirne, Transcript 3 July 2018, p23 (2nd day) Level 10 Approx. 01:35 (based on Hippel BA telemetry)</p>	<p>"The crew walked past me and as they were going down I said to the two guys 'we have to go down, it's too smoky.'"</p> <p style="text-align: center;">Page 23</p> <hr/> <p>You explain why that was an excuse. You then say:</p> <p>"The guy asked me 'What about my father?' I said we will have to get another crew up there."</p> <p>Having told him that, did you radio down to make sure that another crew was going to come up to the 16th floor to carry out the rescue, if it was possible?</p> <p>A. No. Obviously the conditions in there were getting smoky because of the -- I've said that the guy put his hood over his face. So, as I said, my main concern was to get these two people out and then speak to someone downstairs to tell them that there was someone up on the 16th floor.</p>

Reference Level affected at time	Content – Stair conditions
O’Beirne, Transcript 3 July 2018, p22 (2 nd day) Level 10 Approx. 01:35 (based on Hippel BA telemetry)	<p>Then at the bottom of the page you say:</p> <p>"CM STERN and FF HIPPEL came back within 5 minutes and spoke to me in the half landing where I was still standing."</p> <p>Can you just confirm for me which that was. Is that still the half landing between the 9th and the 10th floors?</p> <p>A. That's right, yes.</p> <p>Q. What were the air conditions like at that point, do you remember?</p> <p>A. Yeah, I thought they were clear.</p>
O’Beirne, Transcript 3 July 2018, p20 (2 nd day) Smoke starting to get bad between Level 5 and Level 9 between Approx. 01:30 and 01:38	<p>A. It must have started to get -- as I said, when I -- on the ninth floor, it was starting to get smoky, which I noticed when the guy put his top over his face. I think -- I'd have to only guess, really, but it must have been around the fifth floor that it started to get heavy. So it was just before -- it was a bit before where the hose went into the doors.</p>
O’Beirne, Transcript 3 July 2018, p27 (2 nd day) Level 4 Approx. 01:38 (based on Hippel BA telemetry)	<p>How seriously compromised with smoke was propping the fourth-floor lobby door open making it?</p> <p>A. What, at that time?</p> <p>Q. Yes.</p> <p>A. Do you mean like then the conditions? You want to know the conditions?</p> <p>Q. Sorry, my question wasn't articulate. Let me try again.</p> <p>When you saw the smoke coming out from the fourth-floor lobby into the stairwell through the door, was that smoke making the conditions in the stairwell</p> <p style="text-align: center;">Page 27</p> <hr/> <p>noticeably worse?</p> <p>A. Yes.</p>
Archer (MET00008001) From Level 6 to Level 2 Approx. 01:40	<p><i>"Myself and Tom then forced it open and wedged our bodies into the entrance so it wouldn't close back again. The windows must have been open to have made this happen. As soon as we wedged the door open</i></p>

Reference Level affected at time	Content – Stair conditions
	<p><i>thick black smoke came out, and filled the lobby area, the visibility was bad, I couldn't see the stairwell door.</i></p> <p><i>The hose on the 6th floor came from the outlet on the fifth floor, not the sixth. This was a problem because the stairwell filled with smoke from the sixth floor because the hose prevented the door to the stairwell closing</i></p> <p>...</p> <p><i>"I don't think we got that far into the flat really because we expended a lot of energy.</i></p> <p>...</p> <p><i>Me and Tom made our way back down the stairwell. I don't know how long I was in there for, the BA board would probably tell you that information, but I don't know myself. At this point residents were coming down the stairwell, and at this time the stairwell was filling up with smoke."</i></p>
<p>Doulova (IWS00000834) From Level 20 Approx. 01:41</p>	<p>70. We just went for it running as quickly as we could down the stairs. The visibility in the stairwell was poor, but I could make out the steps, handrail and my feet as I was looking down watching where I was putting my feet. At difference stages my husband kept calling back to me to make sure I was still behind him. After checking I was alright, we continued down the stairs as fast as we could.</p> <p>71. As we descended further, we did not see any other residents so though that we were the last ones out. The smoke scared me. It took two attempts for me to leave our flat and I can understand why others would not have wanted to leave their homes.</p> <p>72. We eventually came across firefighters coming up the stairwell with breathing apparatus, but we kept running past them.</p> <p>73. The further down we went, the thicker the smoke became. It filled the entire stairwell.</p> <p>74. Between the sixth to fourth floors the smoke was really thick. I saw around 6-10 firefighters, who had opened the door to one of the floors and their hoses were running into the landing. I did not engage with these firefighters.</p> <p>75. After we passed the fourth floor and down onto the walkway landing the smoke had subsided and things became clear and we began to walk.</p>

Reference Level affected at time	Content – Stair conditions
<p>Bettinson, Transcript 19 July 2018, p212 Level 6 01:41</p>	<p>Q. Can you describe what conditions were like in the stairwell as you went up between the third, fourth and fifth floors?</p> <p>A. From what I remember -- I think I said we started searching from the third, but I can't remember where we actually started searching, but I know it was about the sixth floor, because you could make out the number in the lobby, that's when it started getting smokier and darker, and then when we got up to the seventh, it was really smoky, and you could sort of make out objects and then --</p> <p>Q. I'll come on to above the sixth floor in due course, but --</p> <p>A. That's where it started getting smokier and harder to see.</p>
<p>Bettinson, Transcript 19 July 2018, p216 Levels 7 to 10 Approx. 01:41</p>	<p>Q. You say the smoke was black; can you describe for us the density of that smoke as you went up between the seventh and 10th floors?</p> <p>A. In the stairwell, it wasn't as bad, like you could still sort of make it out, but when you opened the ninth floor, you couldn't really see anything. You could probably see about maybe a foot in front of you.</p> <p>Q. On each of the floors as you went up, starting on the seventh floor --</p> <p>A. It got progressively worse.</p>

Reference Level affected at time	Content – Stair conditions
Merrion, Transcript 6 September 2018, p7 NA	<p>Q. Seeing residents coming down, were they coming down without the assistance of a BA set, can you remember?</p> <p>A. Very few were. Maybe one or two I think I remember seeing.</p> <p>Q. Can you remember the physical condition of the residents who were evacuating at that time?</p> <p>A. They weren't in a good state, to be honest.</p> <p>SIR MARTIN MOORE-BICK: Can you explain that a bit more?</p> <p style="text-align: center;">Page 7</p> <hr/> <p>A. They were struggling to breathe as they were coming out, coughing. Yeah, things like that.</p>
Badillo, Transcript 29 June 2018, p151 Level 20 Approx. 01:45	<p>A. From what I remember, it was getting thicker the further we went up the tower.</p> <p>Q. What, the smoke was?</p> <p>A. Yes.</p> <p>Q. What about the visibility, was that getting more difficult?</p> <p>A. On the stairwell I can remember visibility was okay up to the 20th, because when I got up to the 20th, I looked into the lobby, which was no visibility at all. So it was -- it was different.</p>
Dorgu, Transcript 9 July 2018, p156 Between Level 11 and Level 20 Approx. 01:45	<p>When you say it got darker, what got darker?</p> <p>A. The stairwell.</p> <p>Q. Was it the light that was fading? Why was it getting darker?</p> <p>A. Difficult to. Say it could've been that the smoke was obscuring the ambient lighting in the stairwell, it could be that the lighting had failed, it could be that it was just so smoky in the area where I was, there's a pocket of smoke here that I couldn't see. And also, you get carbonaceous build-up on your face mask. So often in a job you will think you can't see, but if you wipe your face mask, although you're smearing stuff around, sometimes you can get a clear slither of view.</p>

Reference Level affected at time	Content – Stair conditions
<p>Gallagher, Transcript 10 September 2018, p15 Level 9 Approx. 01:50</p>	<p>First of all, could you describe for us the smoke conditions and the visibility you encountered between the 6th and the 9th floors?</p> <p>A. It was all pretty clear, to be honest, until we got to the 9th floor, where we found the two -- the lady and</p> <p style="text-align: center;">Page 15</p> <hr/> <p>her daughter, and then I remember standing in the lobby door to the stairwell, and I looked -- I was sort of flitting in and out, and I looked out and it seemed to get some white smoke, quite hazy, and I remember saying, "There's smoke coming up the stairs". And then I looked again and then it was pretty much pitch black coming up the stairs.</p> <p>Q. So the white had turned to black?</p> <p>A. Yes.</p> <p>Q. Quite quickly, from the sounds of it.</p> <p>A. Yeah, it was literally a case of came in, I said what I said, I went and looked again and the conditions were like that straight away.</p> <p>Q. Had it become denser? You mentioned the white smoke was hazy; was the black smoke denser?</p> <p>A. In terms of visibility, yes.</p>
<p>Dorgu, Transcript 9 July 2018, p170 Level 20 Approx. 01:50</p>	<p>So we decided to leave. I picked up my hose. I remember walking out from the lobby into the stairwell and looking down into the stairwell, and it was totally pitch black, which it shouldn't be; it should be clear. It should be a protected stairwell.</p>

Reference Level affected at time	Content – Stair conditions
<p>Dorgu, Transcript 9 July 2018, p171 Level 20 Approx. 01:50</p>	<p>Q. Heat in the stairwell?</p> <p>A. Heat in the stairwell, heat in the lobby, heat in the</p> <p style="text-align: center;">Page 171</p> <hr/> <p>flat. It shouldn't have been -- it came up through you. It's like being heated from the inside out. It's quite unpleasant. It wasn't normal. Even though we'd run a long way in breathing apparatus, it still was extremely hot and makes you a little bit -- a little bit stressed.</p> <p>Q. Had the conditions in the stairwell changed when you went out into it from when you had first left it to go into the 20th-floor lobby?</p> <p>A. They'd worsened, yeah, on the way down.</p> <p>...</p> <p>into the stairwell. We were at the top of the stairwell and we couldn't see anything, really.</p> <p>You had pockets of air on the way down, maybe, pockets -- at times you could see things, you could make things out, but for the most time it was fairly pitch black.</p>
<p>Secrett, Transcript 5 July 2018, p87 Level 20 Approx. 01:50</p>	<p>Before you come out into the lobby area, could you describe for us the air conditions in the stairwell at that level, level 20?</p> <p>A. Yeah, it was smoked out to the point where -- I remember Dave Badillo, when we got to the top of the stairs -- like I say, I'd lost sort of the situational awareness of what floor we were on, I just kept climbing, and I remember Dave shouting like, "It's here", and he was kind of holding the door. But I wasn't -- I could hear him, but I had to get to the door and almost physically grab hold of him to see him, so that's how smoky it was. It's not like I could look up the stairs and see him; I had to get right on top of him before I could see him. So it was fairly smoky, yeah.</p>

Reference Level affected at time	Content – Stair conditions
Murphy, Transcript 6 September 2018, p38 Smoke starting from Level 4 Approx. 01:51	<p>A. No, at the bridgehead, there was no smoke, it was clear, and as we made our way up the building, from about the 5th floor it became light smoke, and then – 4th floor light smoke, 5th floor became very, very thick acrid smoke. Visibility was reduced to nothing.</p>
Merrion, Transcript 6 September 2018, p9 From Level 3 to Level 14 Approx. 01:52	<p>"There was smoke on the stairs from the 2nd floor all the way up to the 14th floor so if we had tried to get people out from the 14th floor they wouldn't have made it down. "</p> <p>Now, just dealing with that short paragraph, is that a view you had on the night or is it a view you formed later on after your experiences within the tower?</p> <p>A. No, that was at the time.</p> <p>... (from p10)</p> <p>Q. You refer here to saying that conditions deteriorated from the 2nd floor onwards. The bridgehead I think at that stage was on the 2nd floor.</p> <p>A. Yes.</p> <p>Q. Are you sure that the smoke conditions were as you describe from the 2nd floor onwards and not, say, higher up, the 5th floor, for example?</p> <p>A. It may have been higher. 3rd or 4th floor, I think it was.</p> <p>Q. So slightly higher up from the bridgehead?</p>

Reference Level affected at time	Content – Stair conditions
<p>Lawson, Transcript 10 September 2018, p137 Air breathable From Level 3 to about Level 5. Fully smoke logged from 5 to 18 Approx. 01:53</p>	<p>Q. Can you remember how many floors you went up where you weren't under air, as it were?</p> <p>A. It wasn't very far. I think we made it up maybe two or three flights of stairs before the atmosphere became irrespirable for us. At that point we donned our BA masks.</p> <p>...</p> <p>A. I've no idea. The reality is we had complete sensory deprivation from the moment of putting our masks on. You could hear muffled voices. We had no visibility. We got up the stairs by feeling up the banisters. It could've been 5 minutes, could've been 10 minutes, I really don't know.</p> <p>... (p138)</p> <p>Q. Can you remember whether the lighting in the stairwell was working as you went up?</p> <p>A. The lighting was on; it had no effect on the staircase.</p> <p>Q. Can you remember, was it illuminated from the bridgehead all the way up to the 18th floor?</p> <p>A. I can't. The smoke was so dense for us going up the staircase, until we went to each landing and approached the landing walls, we couldn't see the lights at all.</p>
<p>Secrett, Transcript 5 July 2018, p106 Level 20, Approx. 01:55</p>	<p>Q. You then say:</p> <p>"The smoke was thick in the stairwell and I could not see my hand in front of my face."</p> <p>How was that in comparison with the conditions in the stairwell when you left the stairwell to go --</p> <p>A. They were definitely worse.</p>
<p>Secrett, Transcript 5 July 2018, p107 Between Level 20 and Level 3 Approx. 01:55</p>	<p>Q. Did the conditions in the stairwell change as you made your way down?</p> <p>A. No, they were smoky the whole way down.</p> <p>Q. What about when you neared the bridgehead, was it still as bad?</p> <p>A. I think once we got to the bridgehead, they must have cleared up because I knew we was getting out.</p>

Reference Level affected at time	Content – Stair conditions
<p>Secrett, Transcript 5 July 2018, p109 Between Levels 20 and 8 Approx. 01:55</p>	<p>Q. Roughly at what level did the air conditions in the stairway start to clear before you got to the bridgehead?</p> <p>A. It certainly wasn't before we met Firefighter Murphy, so somewhere between the eighth and the second.</p> <p>Q. Right.</p> <p>A. I'd say fairly close to the second, maybe a floor or two above it, it started to clear. I just remember when we got to the bridgehead, I knew we was nearly out and --</p> <p>...</p> <p>Q. We have you tallying in at 01.57.15. So you say by that time, essentially, do you, that the stairway was unusable without breathing apparatus?</p> <p>A. Yeah, definitely.</p>
<p>Badillo (MET00010080) From Level 20 to Level 15 Approx. 01:55</p>	<p><i>"I managed to lead us back to the stairwell and as we got a few flights down, I suggested that we leave the hoses in situ as carrying them was slowing us down. We left them by the wall, so as to not block the stairs, I think on the 18th floor. The heat was much more intense and the stairwell was completely smoke filled so visibility was really poor. I couldn't see a thing. When we reached the 15th floor, I spoke to Chris SECRETT and he did a gauge check. The smoke was getting thicker and thicker, hotter and hotter."</i></p>

Reference Level affected at time	Content – Stair conditions
Badillo, Transcript 29 June 2018, p162 Level 20 Approx. 01:55	<p>Just unpacking that a little bit, when you got out from the lobby on the 20th floor into the stairwell on the 20th floor, what were the air conditions like in the stairwell?</p> <p>A. When we first got out of the 20th floor, I remember being able to see more than in the actual lobby area, but as soon as we started going down, conditions got worse, started getting much, much hotter and we couldn't see a thing.</p> <p>...</p> <p>Q. Had the conditions in the stair at level 20 changed from when you left the stair to go into level 20 lift lobby –</p> <p>A. Yes.</p> <p>Q. -- and when you came back out? How had they changed?</p> <p>A. They had worsened, much hotter and much less visibility. They had changed quite a lot.</p>

Reference Level affected at time	Content – Stair conditions
<p>Murphy, Transcript 6 September 2018, p39 Level 7 Approx. 01:55</p>	<p>A. My only recollection of passing anyone on the stairs was on the 7th floor we passed a crew from North Kensington on their way down. Smoke conditions were very, very bad there. The only reason I recognised one of the firefighters, which was Firefighter Badillo, is he's the same height as me with a similar sort of stance. So we were having difficulty locating what floor we were on because of the smoke conditions, and it didn't appear that every floor had numbers on the wall. So Dave Badillo showed me that underneath the emergency lighting, if you put your hand over the lighting and put your torch on, there was small numbers underneath. That was the 7th floor, so from there upwards we were able to gauge our position.</p> <p>... (and from p46)</p> <p>My thoughts were on the way up: we can't get anyone down this staircase. It's too smoke-logged. It wasn't safe. I didn't know if there was another staircase, so as we were searching around the landing, we were looking in case there was a second staircase at the other side of the building. There wasn't. So I had to try and make a quick decision on what was best for everybody,</p>
<p>Gillman, Transcript 23 July 2018, p63 Light smoke from Level 3 Approx. 01:56</p>	<p>To be clear, are you saying that immediately on leaving the bridgehead on the mezzanine conditions had become smoky and hot?</p> <p>A. No. Sorry, that's a bit confusing.</p> <p>It was like wispy smoke. Not at the bridgehead, like immediately when you went up to the next floor, maybe the third and the fourth, you'd get to the grey wispy smoke again.</p>

Reference Level affected at time	Content – Stair conditions
Dorgu (MET00008603 7) From Level 20 down	<i>“Due to the dark I couldn’t see if any doors were open and floor numbers were not written on well (wall) if (at) all. The escape route was hot and filled with smoke. I’ve been in much hotter buildings but we were on the twentieth floor with no air and pitch black. None of it made sense. Smoke going up the stairwell is just (due to) people holding doors open to get out but I was surprised (it was) so thick, dark and high. The smoke never normally goes two floors plus above the (level of the) bridgehead. ... I set off down the stairs but the smoke was so thick. Where there was no glass from the lobby I couldn’t see my hand in front of my face or even see my torch. As we went down it was getting hotter and hotter as, although we didn’t know it at the time, we were getting closer and closer to the fire.”</i>
Dorgu, Transcript 9 July 2018, p181 Stairs smoke logged from Level 20 down to Level 3 Approx. 01:57	<p>Q. That’s very clear.</p> <p>So you get down to the bridgehead, and how far before you reach the second floor did that dense, thick smoke reach?</p> <p>A. I can't remember. I can't remember.</p> <p>Q. Was it many floors above the bridgehead or was it just --</p> <p>A. Maybe the fourth. I would say around about the fourth, the third. I remember coming into light. But, to be honest, we were pretty exhausted. I couldn't really stand up, I was just -- there was nothing I could say really, I couldn't speak.</p>
Roberts, Transcript 23 July 2018, p121 Level 10, 01:57	<p>Q. Now, in that same paragraph, you say visibility was good. At that time, were the stairwells lit, can you remember?</p> <p>A. Yeah, it was pretty clear, pretty light. You could see the person in front of you as you were walking up, all the way up to possibly around floor 10, I think it was.</p> <p>Q. So just to be clear, your recollection is that the stairwell was lit up until the floor 10 level?</p> <p>A. Yeah, I think so.</p> <p>Q. Can you describe the smoke conditions you encountered on floor 10?</p> <p>A. Again, it wasn't any difference to downstairs, really. Visibility was pretty good. There was a slight temperature increase, but nothing that sort of threw it out of the ordinary.</p>

Reference Level affected at time	Content – Stair conditions
Roberts, Transcript 23 July 2018, p118 Level 4, 01:57	<p>First of all, on what floor after you'd left the bridgehead did you first encounter smoke?</p> <p>A. I think it was just between floors 3 and floor 4.</p> <p>Q. Can you describe the smoke when you first encountered it?</p> <p>A. It was pretty clear. Light, wispy, white, grey smoke. Nothing too spectacular, really.</p> <p>Q. That's what you meant when you say visibly it didn't look too much?</p> <p>A. You could see perfectly fine.</p> <p>Q. You returned to the bridgehead, and what did you do there?</p> <p>A. That's where we started up and went under air and put our EDBA sets.</p>
Watson, Transcript 24 July 2018, p118 9 th floor, 01:58	<p>A. So this was quite a pertinent moment for me. I now know this to be 01.58 from the operational response from what the Brigade's printed. So my own firefighter came down. He said, "I need two sets". I said to the next two people, "Get started up" and he said, "No, no, I need two BA sets". So I said, "What do you need them for?" He said, "The stairwell's too smoke-logged to get people down". And it was quite a sort of telling moment, really, that the escape route we're using is now smoke-logged.</p> <p>So I gave him the two sets, and I now know that a crew from Paddington was up in the flat with these people on the ninth floor and we successfully brought them down.</p> <p>Q. Was this after Firefighter Felton had come down to the bridgehead from a deployment?</p> <p>A. Yes. He'd already been deployed and I believe the crew radioed them to come down and collect two sets.</p>

Reference Level affected at time	Content – Stair conditions
Merrion, Transcript 6 September 2018, p14 Level 14 Approx. 02:00	<p>Q. You say in your statement that they were anxious to leave the flat but you advised otherwise.</p> <p>Why did you advise for them to stay in the flat?</p> <p>A. Because the stairwell was so smoke-logged that I didn't think it was a good idea for them to come through that.</p> <p>Q. If they had elected to leave their flat and gone down in any event, given the conditions in the lobby and the stairwell, what do you think would've happened?</p> <p>A. I don't think they would've been able to make it to the bottom.</p>
Dorgu, Transcript 9 July 2018, p182 Approx. 02:00	<p>A. Yes, around about 2 o'clock, yes. I remember looking outside at my watch and it was 2.05 and the entire building was on fire.</p> <p>Q. So by that time, just before 2 am on the 14th, would you say it was possible to evacuate anybody down the protected staircase --</p> <p>A. No.</p>
Gillman, Transcript 23 July 2018, p66 Getting worse from 4 up to 11 Approx. 02:00	<p>"So we got to about the eleventh (11th) and twelfth (12th) floor ..."</p> <p>Stopping there, can you describe smoke conditions as you went from the fourth up into the 11th floors?</p> <p>A. They got worse. I'd say visibility was reduced but partially because partly because there wasn't much lighting. You could make out the outlines of your crew. You couldn't really see them that well. But I remember making out Firefighters Mills and Campbell because we know them.</p> <p>Q. Can you remember what colour the smoke was as you ascended up the tower?</p> <p>A. Grey.</p>

Reference Level affected at time	Content – Stair conditions
Gillman, Transcript 23 July 2018, p67 No lights from 4 th 11 th floor Approx. 02:00	<p>Q. You mentioned lighting in the stairwell; as you went from the fourth to the 11th floor, can you remember whether the stairwell was lit all the way up or partially?</p> <p>A. It wasn't lit. I'd say after about the the fourth floor there was no lighting.</p>
Roberts, Transcript 23 July 2018, p122 Smoke easing after Level 11 at Approx. 02:00	<p>Q. In his evidence, Crew Manager Wigley noted the smoke levels eased as you went up the building. Does that accord with your recollection?</p> <p>A. Sorry, can you say that again?</p> <p>Q. Yes. Crew Manager Wigley noted in his statement that smoke levels in fact eased as you went up the tower.</p> <p>A. Yeah, sort of as you got past I think it was about floor 10 or 11, it sort of slightly -- the going was pretty straightforward, quite simple. We just walked up there. There was nothing again that stood out and said there was a major fire going on outside.</p>
Fernandes (MET00008329 2) From Level 2 to Level 20 Approx. 02:01	<p><i>“As I climbed up the stairs the smoke became thicker and in between floors two and five the lights went out. As the smoke became thicker visibility was reduced to almost zero. Firefighter WILLIAMS and I had to stay in physical contact with each other as we climbed the stairs. I struggled to see any reference to what floor we were on. There were lights on the floor numbers, however I could not see the number displayed.</i></p> <p>...</p> <p><i>I lost track of how many floors we had climbed, I shouted to Firefighter WILLIAMS to enter the next floor area to find out what floor we were on. We went through the next door to the right. The smoke was thick and visibility was almost zero. Looking extremely closely at the walls I found a sign that displayed “14”. I realised we were six floors short of where we needed to be.</i></p> <p>...</p> <p><i>We started to climb the stairs. As we ascended the smoke intensified and the temperature started to rise. We did not pass anyone on the staircase. Despite wearing breathing apparatus I could taste the smoke.”</i></p>

Reference Level affected at time	Content – Stair conditions
Fernandes, Transcript 10 September 2018, p175 Corroborating witness statement Approx. 02:01	<p>Q. Can you remember whether the stairwell was illuminated as you went up, and if so, how far?</p> <p>A. Initially, yes. Conditions began to fade after what I believed to be floor 5, so it was only two or three floors up from the bridgehead. They quite quickly got very, very poor. So there was illumination, I know there was bulkhead lighting, but the thickness and the colour of the smoke made that lighting useless.</p>
Eden (MET00008019) From Level 3 to Level 20 Approx. 02:02	<p>I asked Tom if he could see any numbers as it felt like we had been walking in the dark, blind and not knowing where we were and he said that he couldn't see anything. We continued up and I heard the EDDBA team in front say, "We're going to 12 - this is us". We waited for about 30 seconds for them clear out of the way and continued up with the other EDDBA team who were going to the 14th floor. The smoke had thinned out a little bit by now and coming up, I had seen that doors were being held open by bits of hose or were being wedged opened. I kept kicking things under foot, maybe bits of clothing and it started</p> <p>...</p> <p>than us, were only going to the 12th and 14th floors, but we continued on up. No one was in front of us and we were able to speed up a little bit. It went really quiet and I couldn't hear anything coming from above us. I could hear shouting coming from below but that is all. I saw the numbers 15 and 17 on the walls, but they were hard to make out and it was hard to figure out where we were. By the time we got to the 20th floor, it was much smokier again and we really struggled to see the number 20 on the wall and had to wipe it down, as there was a lot of soot. The concept of time is difficult to judge but I think it took between 8-10 minutes to get up to the 20th floor. I don't recall there being any obstructions on the stairwell and there must have been some lighting as it wasn't pitch black. It almost felt claustrophobic as I could barely see and had to rely on my training and other senses to negotiate my way up the stairs. I had to concentrate really hard to figure out where we were.</p>
Gallagher, Transcript 10 September 2018, p23 Level 9 Approx. 02:10	<p>Q. Can you describe for us the conditions on the stairwell as you went back up to the 9th floor?</p> <p>A. It was heavily smoke-logged. The light on the stairwell was helping us, but it was heavily smoke-logged.</p>
Nelson (MET00007785) From Level 4 to Level 7 Approx. 02:13	<p>The staircase was busy with other Firefighters as we progressed to floor nine (9). I recall it being hot but believe this was more due to my kit than the heat of the building, however it was smoky and the visibility was poor especially between floors four (4) and seven (7). I cannot recall hearing alarms just lots of shouting going on around me. I do not remember if there were hoses on the stairs but remember people being helped or carried by Firefighters. I was holding onto the stair rail as I progressed up the stairs. The smoke was covering the floor signs and the lighting was poor. I recall having to waft smoke away to discover what floor we had reached. There was no illuminated numbers on the walls. I did not recall seeing any 'Fire Exit' signs on the stairways.</p>

Reference Level affected at time	Content – Stair conditions
Yeoman (MET00007862) From Level 7 to Level 9 Approx. 02:13	We made our way up the staircase and got to the 7th floor. I remember it was the 7th because there was a bright light on the wall that was shining through the thick dense smoke. The light did not help conditions and I could not see anything, but when I got close to the wall there was a sign saying it was the 7th floor. From here I got my bearings and knew that it was only four flights of stairs to the 9th floor. There was no real heat, just very thick smoke, which is not meant to happen. The staircases are meant to have clean air to assist fire crews with search and rescues. There was a lot of external noise with people shouting to one another and a lot of radio traffic, which made it very difficult to hear one another. I just wanted to keep everyone steady to conserve our energy and save air within our BA sets. Saving air meant our BA sets would last longer in these conditions.
Flanagan (MET00007765) From Level 4 to Level 15 Approx. 02:13	<p>When we reached the fourth (4th) floor on the stair case we suddenly came into very thick black smoke. It was like there was a duvet over your head and I could not see anything, even my hand in front of my face. It was impossible to see exactly where you were going. The staircase was the same the whole way up so I was able to make my way up it knowing the layout of it from the first few flights which were not smoke logged and using the walls and bannister as a guide when I needed it. I bumped into a few things on the way up, some of which I think were people but I could not see anyone or exactly what it was that I bumped into. The stairwell was very noisy, I could hear bangs and pops of what I think might have been doors opening and closing. I could also hear people screaming and shouting.</p> <p>I lost track of exactly what floor we were on as we were going up but when we got to about the fifteenth (15th) floor the smoke suddenly cleared. It was like a light had just been switched on. I could see clearly again and there was no smoke at all. I thought we must be climbing up the stairs faster than the smoke was rising. I could now see the floor numbers again so me and Luke decided to run the last few flights of stairs up to the twentieth (20th) floor. We did not see anyone on the stairs above the fifteenth (15th) floor</p>
Bell, Transcript 11 September 2018, p48 About Level 12. Stair door is opened onto unknown floor filling stair with hot smoke Approx. 02:13	<p>Q. At that stage, why did you decide not to carry on up the tower to the 23rd floor?</p> <p>A. Because obviously there was no fire lift, there's only one staircase, and that's our egress, that's our only way up and down the stairs, so I just wanted to tie in with that crew and see what they were doing. Because, like, you know, being where we were, we were just getting battered by hot, black smoke.</p>
Roberts, Transcript 23 July 2018, p127 Stair clear at Level 22 at Approx. 02:15	<p>Q. If I can stop you there, was there any difference in the conditions between the 21st and the 22nd floor in the stairwell?</p> <p>A. No, the stairwell didn't really change at all.</p>

Reference Level affected at time	Content – Stair conditions
Roberts, Transcript 23 July 2018, p128 Hot and dark from Level 11, Approx. 02:15	<p>A. Not that I'm aware of. Again, it was sort of you were so involved with bringing the casualty down, how much air you had, you were just trying to get out, basically. As you got lower and lower, the conditions were getting worse and worse, it was getting hotter and darker from around floor 10, 11, and then around --</p>
Bettinson, Transcript 19 July 2018, p223 Levels 9 down to 3 rd heavily smoke logged Approx. 02:15	<p>Now, arising out of that, were the conditions you encountered on the stairwell on each of the floors as you descended down the tower?</p> <p>A. Yeah, so it never -- like, it was black, thick smoke until about maybe the third or fourth floor. That was it. That was what it was. It had gone the -- the whole thing had gone. It was thick black smoke.</p> <p>Q. Are you able to describe the temperature as you descended from the ninth floor down to the bridgehead?</p> <p>A. It was just hot and it felt like it was getting hotter as you went down.</p>
Batcheldor (MET00007511) Level 4 Approx. 02:18	<p>from the Bridge Head on the 2nd floor. There was just one set of stairs. I was struck up on how narrow the stairs were. From the 4th floor upwards it was smoky. I think I remember seeing lighting in the stairwell, but I cannot be certain. Most of the doors leading on to the stairwell were closed otherwise it would have been much more smoky.</p>
Murphy, Transcript 6 September 2018, p51 From Level 14 down Approx. 02:19	<p>Q. Had smoke conditions in the stairwell deteriorated since you'd gone up?</p> <p>A. No, it was still thick, acrid smoke. We couldn't see our hands in front of our face.</p>

Reference Level affected at time	Content – Stair conditions
<p>Roberts, Transcript 23 July 2018, p130 Light smoke Levels 10 to 20 Approx. 02:20</p>	<p>Can you describe, first of all, coming down from the 20th to the 15th floor, what the smoke conditions were like on those five floors?</p> <p>A. It was pretty clear. There wasn't really much of a change. Visibility was good down them floors. You could see your crew in front of you. I was carrying the casualty at the head end, so I had her arms, Firefighter Gillam had the legs and I could see Firefighter Gillam and whoever was in front of him quite clearly.</p> <p>Q. And what was the position between the 15th and 10th floors in terms of smoke?</p> <p>A. Again, exactly the same.</p>
<p>O'Donoghue, Transcript 23 July 2018, p21 Levels 3 upward to Level 11 Approx. 02:21</p>	<p>First of all, can you remember, what colour was the smoke you encountered at that stage?</p> <p>A. As we started up on, shall we say, the first floor, it was grey and wispy and progressively got darker.</p> <p>On some of the floors as we progressed up, the emergency lighting wasn't working, and that made the area even darker. But it was as if it was -- we had moments of -- not clarity, but grey smoke. That was on the lower floors. As we got up, it was more consistently dark black and thicker.</p> <p>Q. Looking at the smoke conditions you encountered as you went up from the bridgehead to the third floor --</p> <p>A. Yes.</p> <p style="text-align: center;">Page 21</p> <hr/> <p>Q. -- that part of your journey, was the smoke wispy grey and then darkening, how would you describe it?</p> <p>A. Wispy grey.</p>
<p>O'Donoghue, Transcript 23 July 2018, p25 Lights failed above Level 5/6 Approx. 02:21</p>	<p>Q. Can you remember whether any of the lighting in the stairwell above the sixth floor was working or not?</p> <p>A. To my recollection, it was not working above the sixth.</p> <p>Q. Can you remember on which floor the lighting stopped working?</p> <p>A. I'd say the fifth or sixth.</p>

Reference Level affected at time	Content – Stair conditions
Fernandes (MET00008329 2) From Level 20 to Level 3 Approx. 02:25	<p><i>“As we started to descend the staircase it was definitely hotter than when we had climbed up.</i></p> <p>...</p> <p><i>As we descended the child stopped screaming and was no longer throwing her arms and legs around, she became unresponsive in my arm. I was unable to give first aid to the child as I could not stop on the stairs due to the smoke, I was in BA gear and therefore unable to deliver any rescue breaths to the girl.</i></p> <p>...</p> <p><i>The lights started to come on at around the 3rd floor and visibility improved.</i></p> <p>...</p> <p><i>I could see that the child was unconscious and frothing at the mouth”</i></p>
Herrera, Transcript 6 September 2018, p106 From Level 2 to Level 14 Approx. 02:26	<p>14th floor itself.</p> <p>Was there a difference between the smoke conditions you encountered on the 14th floor itself compared to the stairwell?</p> <p>A. No, it was the same from the bridgehead to the 14th floor, complete black, thick smoke.</p>
Orchard, Transcript 10 September 2018, p51 Up to Level 14 Approx. 02:27	<p>Is it fair to say that as you went up from the bridgehead to the 14th floor, visibility was difficult?</p> <p>A. Yes, definitely.</p> <p>Q. What colour was the smoke?</p> <p>A. It was just dense smoke. I don't recall what colour.</p> <p>Q. You don't recall it being white, changing to black or anything like that as you went up?</p> <p>A. No.</p>
Foster, Transcript 10 September 2018, p116 Level 18 down to at least Level 12 Approx. 02:27	<p>Q. The conditions on the way down, I think you describe visibility as bad and that you were sweeping the floor and leaning on your back foot to avoid falling. Is that a fair summary?</p> <p>A. It is, yes.</p>
Lawson, Transcript 10 September 2018, p155 Stair air very smoky Approx. 02:27	<p>Q. Can you remember what condition the casualties were in? For example, were some being brought down unassisted?</p> <p>A. Not that I've seen. The ones that were coming down at that point were unconscious.</p>

Reference Level affected at time	Content – Stair conditions
O'Donoghue, Transcript 23 July 2018, p31 Level 11 Approx. 02:30	<p>Was it obviously hotter in or about the 11th floor than it had been below the 11th floor?</p> <p>A. Yes, sir.</p> <p>Q. Was the smoke denser or much the same?</p> <p>A. It was denser.</p> <p>Q. Again, what colour was the smoke?</p> <p style="text-align: center;">Page 31</p> <hr/> <p>A. Black.</p>
Juggins, Transcript 11 September 2018, p68 Heavy smoke from 7 th floor upward Approx. 02:31	<p>Q. You say when you got to the 7th floor you lost the light and visibility and you describe it as zero per cent. Is that a fair summary of what you encountered?</p> <p>A. Yes, complete pitch black.</p>
Smith (IWS00000771) From Level 12 Approx. 02:41	<p>67. They told us to move down the staircase as quick as we could. When we pushed the staircase door open it was roasting, it was so hot. You could not see anything on the stairs; you could hear crying and screaming. They also</p>
Neda (IWS00000886) From Level 23 Approx. 02:41	<p>55. I could not see anything in the stairwell. It was complete black and thick with choking smoke. My mum wanted to turn back and go to find my dad. I knew if we went back we ...</p> <p>61. We were making our way down the stairs as fast as we could and we got to a point where we just could not breathe anymore. As we got about halfway down the Tower, I remember walking past a floor where I had seen an open landing door. I do not know which floor this was on, but because we could not breathe where we had gotten to, on the stairwell, we went back up one staircase to try and find some air.</p> <p>62. As we went onto the landing/corridor of that floor, I saw a small air pocket and I started to try and get my breath back. I do not know how long we stayed there. The air was still full of smoke, but it was not as thick. In this pocket of better air, I was able to catch my breath</p> <p>63. As we were going down, I could hear the distinctive sound of venting from breathing masks. I could also hear the sound of breaths and oxygen being drawn into those masks. I could not see anything as it was still pitch black. I just held my hand out to try and feel and as soon as I felt something, I realised it was a fire fighter. I grabbed and pulled him towards me and told him that I was with my mum and that we had come down from the 23rd floor.</p>

Reference Level affected at time	Content – Stair conditions
Upton (MET00007524) From Level 4 to Level 21 Approx. 02:45	<p>By the fourth floor we couldn't see anything. I think there was emergency lighting at this point and we also had our torches on, but the density of the smoke was causing visibility loss. You couldn't see a thing. The smoke was lighter on the third floor, but got denser and darker as we went up. It was coming from everywhere - there wasn't a single corner that was clear and there was no obvious source, such as an open doorway.</p> <p>I was leading the way to start with and Tom was behind me. It became clear very soon that we didn't have any floor numbers to work from. It was a big problem. We didn't have a clue how far up the building we were, not least because I didn't know what floor we had started from on account of the design of the building and the lobby areas. Also, there were doorways off the landings but it wasn't clear where they went to.</p>
Upton, Transcript 6 September 2018, p154 From Level 4 Approx. 02:45	<p>A. Yeah, so firstly, visibility past the 4th floor was nonexistent. And then, yeah, I think what a lot of</p>
Hoare (MET00008027) From Level 3 to Level 12 Approx. 02:56	<p><i>"I remember the condition from the third to the four and fifth staircases being the same as we had encountered on the lower floor, very little or no smoke. There was more debris now on the stairs, casualties being aided down by firefighters so we had to make way for them to pass.</i></p> <p>...</p> <p><i>As we approached floor 6th the smoke was now obvious and reducing my visibility. I could see my hands if pulled towards my face, make out the railings, and see maybe 3 steps ahead, but the general visibility was now impeded with the smoke albeit not thick smoke.</i></p> <p>...</p> <p><i>The higher we got the visibility deteriorated and by the 7th floor the conditions changed dramatically. It was thick heavy smoke log and I could not see much at all. At this point my adrenalin was going up, it was hotter and I could not readily tell what floor I was on, it was pitch black with smoke. Not only was the smoke density increasing but so was the heat. I remember the 5th floor being clear but by floor 7 we could see very little or nothing at all. I had to clean out my visor to make out the floor number.</i></p> <p>...</p> <p><i>By floor 9, I had to wipe soot off of the walls to see what number of floor we were on.</i></p> <p>...</p> <p><i>All through my way from the Bridge Head to the 9th floor I was not paying attention to the doors because I was just heading from one staircase to the next and not going into the lobby area so I could not tell if the lobby doors were closed or opened. For this reason, I cannot say why the drastic change in smoke density on the upper floors compared to the first six flights of staircase. I began not to count what</i></p>

Reference Level affected at time	Content – Stair conditions
	<p><i>floor we were on I just wanted to get to the 12th.</i></p> <p>...</p> <p><i>The staircases are enclosed with no windows for natural light which is why I believed the electricity was on as the lower floors were lit. Due to the thick smoke it was not evident if the electricity was still on above the 7th floor up as the smoke was so thick even if the light was on it did not make any difference.</i></p> <p>...</p> <p><i>The conditions on the 9th,10th and 11th floors were the same, no visibility, increased heat, thick smoke, again whether the lights were on or off it would not have made any difference.”</i></p> <p>...</p> <p><i>“At this point it was boiling hot, the staircase was getting hotter because people were coming through from the lobby doors letting the heat onto the staircase. The visibility was very low and you could not see the people coming down, you just hear them.</i></p> <p>...</p> <p><i>Each floor was the same but cooled down slightly”</i></p>
<p>Hoare, Transcript 10 September 2018, p196 Smoke starting at Level 5/6. Matches witness statement Approx. 02:56</p>	<p>A. I think it was fine up to about floor 5 or 6 and then it just started deteriorating.</p> <p>Q. Can you remember whether the stairwell is illuminated by a light?</p> <p>A. I don't remember, but it must have been otherwise we wouldn't have been able to see anything.</p>
<p>Wharnsby, p191, Transcript 6 September 2018, Heavy Smoke starts at Level 6 Approx. 03:04</p>	<p>I remember going onto the stairwell, reasonably clean air until possibly the 6th floor, maybe -- almost definitely the 6th floor because at that point I was counting quite intently. There was lots of hose, a few lines of charged hose but some empty hose rolled up, and lots of crews coming down.</p>

Reference Level affected at time	Content – Stair conditions
<p>Codd, Transcript 10 September 2018, p82 Smoke from Level 6 to Level 12 Intense heat reported Approx. 03:05</p>	<p>Q. Okay.</p> <p>Now, in terms of your deployment to the 22nd floor itself, dealing first with conditions and the situation on the stairwell, you say in your statement there was smoke from the 6th floor onwards; is that right?</p> <p>A. Yes, that's correct.</p> <p>Q. How would you describe that smoke?</p> <p>A. Very thick, black smoke.</p> <p>Q. You lost visibility and you didn't realise for some time that Mr Joseph wasn't with you; is that right?</p> <p>A. I lost him on one of the floors. We saw a firefighter coming down with casualties, and I swear I do believe that I lost him.</p> <p>... (p86)</p> <p>"It was freaky. I didn't take my set off, it was like, when you go deep diving and it goes really quiet. That's what the building was like, a sort of silence, I could hear crackling every now and then and the heat was so intense. I could hear banging on the doors. It</p>
<p>Yahya (IWS0000498) From Level 18 down Approx. 03:18</p>	<p>i. Conditions in the stairwell were even worse than in the lobby. There was intense heat that seemed to increase as we descended, and the smoke was so thick that we couldn't see. I wasn't running as I was pregnant and carrying [REDACTED] but we were going as fast as we could.</p>
<p>Li (IWS0000515) From Level 22 down Approx. 03:21</p>	<p>93 The stair well door was undamaged and shut behind us by itself</p> <p>94. In the staircase, once I grabbed the handrail I made sure she grabbed it and was on track</p> <p>95 In the stairwell the smoke was about the same, you could just see the light whenever you turned a corner, each floor had a light at the same place You couldn't see anything at all We could only grab the rail and follow the rail to go down The rail was normal temperature I don't remember feeling any heat at all throughout the night</p> <p>...</p> <p>102 As soon as I got to the 2nd or 3rd floor I could start to breath lightly. There was a sudden change and the smoke was the same consistently through the stair well before then My whole body just felt relief Before this point I was taking short gasps from the wet towel The water helped release the pain, it felt like I was breathing in the water from the fabric, not breathing air Without the wet towel you wouldn't be able to breath at all It was incredibly painful to breathe</p>

Reference Level affected at time	Content – Stair conditions
Macit (IWS00000904) From Level 16 Approx. 03:47	<p>77. The smoke on the stairwell was hot and thick. I felt like I couldn't breathe. I am not able to describe how the smoke tasted but all I can say is that it was difficult to breathe because of how thick the smoke was. I held onto the railings of the stairwell. Sener was walking in front of me. I don't remember anyone else walking down the stairs when we were but you couldn't see anything so it is possible there were people also walking down.</p> <p>78. It was difficult to walk down the stairs because you couldn't see the steps. I was counting the number of steps so I knew when we got to each floor. Sener kept on telling me to come on and told me to keep following him.</p>
Wood, Transcript 12 September 2018, p8 Stairs up to 4th from Ground floor bridgehead Approx. 03:47	<p>Q. Can you describe for us the conditions you encountered as you left the bridgehead and started to make your way up to the 4th floor?</p> <p>A. Yeah, it was smoky.</p> <p>Q. Can you describe for us the density? How thick was the smoke?</p> <p>A. It got thicker as we went through onto the floor.</p> <p>Q. What colour was it?</p> <p>A. Like black.</p>
Gomes (IWS00000622) Level 21 down to Level 7 Approx. 03:55	<p>120. The stairwell was quiet, there was no noise and it was very hot. I would describe it as like the heat that comes out of an oven and blasts you in the face. It was a dry and intense heat and the hand rail was hot to the touch, but not hot enough to burn me. The smoke was thick, and I could not see where I was going or where I was stepping until I got to the 6th or 7th floor, only on these floors was I able to see again. Prior to this it was pure darkness, as the stairwell was completely filled with smoke. I recall that on the journey down from our floor that I was shouting and encouraging the girls, pushing them to keep going down. I felt that if we stopped then we would not get out alive.</p>

Reference Level affected at time	Content – Stair conditions
Cook, Transcript 24 July 2018, p230 Level 5 at 04:04	<p>Q. Now, in your statement -- or rather in your exhibit, I should say -- at page 18, if I can just go back to that with you, you describe going up to the fifth floor in the second paragraph.</p> <p>A. Mm.</p> <p>Q. And you say:</p> <p>"Conditions were hot and fire seemed apparent all around. We saw another crew I believe and it was clear that this floor had been cleared."</p> <p>...</p> <p>A. Mm.</p> <p>Q. What were the conditions in the stairwell like, do you remember?</p> <p>...</p> <p>Conditions were poor. They'd really, really degenerated. Really degenerated. And very, very quickly.</p> <p>On the stairwell, it's hard to tell, because once you're wearing BA or respiratory protective equipment, you have got some protection. Would it have been respirable? I'm not sure. I'm genuinely not sure.</p>
Goulbourne (MET00010759) Stair too hot at Level 13 to permit passage beyond c.f. to Cook and Gallagher entry Approx. 04:04	<p><i>"The SDBA crews were covering floors 5-9 and the EDBA crews were pushing on up to floors 9,10 and 11. At some point we managed to get hoses attached to the risers on floor 9 and so the EDBA crews were firefighting on those floors. In addition, we had managed to get a further two hoses into the building and up the stairwell via a lightweight pump at the front and a pump at the back. The fire on floor 11 was fierce, horrific.</i></p> <p>...</p> <p><i>We received FSG's stating that there were 10 people in one flat on the 16th and 11 people in one flat on the 18th floors. I wanted to get up there to get them out so I asked a trusted officer to go up as far as he could and report back. The 7th and 8th floors, all flats were on fire. The 9th and 10th floor lobbies were on fire. The whole of eh(sic) 11th floor was on fire. He felt we could get as far as the 12/13th floor but</i></p>

Reference Level affected at time	Content – Stair conditions
	<p><i>after that you could go up but you wouldn't be coming back. I had to accept this was the case.</i></p> <p><i>During this time, I was informed there was still one FSG on the 11th floor and one FSG on the 10th floor. Oriental man on the 11th, blind man on the 10th, who managed to get them out and I believe they were the last two to be rescued."</i></p>
Codd, Transcript 10 September 2018, p89 Level 12 Approx. 05:30	<p>Q. Okay.</p> <p>If I could ask you to turn to page 9 of your witness statement, and it's 12 lines down. You say this:</p> <p>"On the 22nd floor there was a family of five that I never got to. I didn't know until about a week later, the BBC put Grenfell Tower up and put faces to the floors, I spoke with Lou about it. I don't think I could have got up there, the visor on my helmet is all blistered and I didn't even have it down so it shows the heat in there."</p>
Gillman, Transcript 23 July 2018, p88 Smokey in the stair from Ground up to Level 12 Approx. 06:00 (based on statement. No clear telemetry)	<p>Q. As you went up from the bridgehead, up the tower can you describe conditions in the stairwell as you went from the third floor up?</p> <p>A. I'd say smoky the entire way.</p> <p>Q. And how thick was that smoke?</p> <p>A. I can't really remember that.</p> <p>Q. Can you remember its colour?</p> <p>A. I can remember the smoke when we opened the doors to the hallways, but not so much in the -- you could see the crews, the other crews, the outlines of the other crews.</p>

N3 Conditions in the lobbies

N3.1.1 Table N.2 below records specific extracts from resident witness statements and the examination transcripts from fire fighters. The table also includes the specific fire fighter witness statement evidence that I have relied upon in my preliminary phase 1 report. Each item of evidence has been assigned an Approximate time, a specific location and placed in chronological order.

N3.1.2 I have identified a discrepancy in timing between the witness statement of Smith (IWS00000771), who states that the Level 12 lobby was clear before Approximately 01:26, and the transcript of Fire Fighter O'Beirne, who

identified smoke logging of the Level 12 lobby by Approximately 01:23. This is not a significant discrepancy in terms of timing.

N3.1.3 I will update this evidence when the Residents have completed their oral evidence to the Inquiry.

Table N.2: Evidence of lobby conditions

Transcript reference	Content – Lobby conditions
Badillo, Transcript 29 June 2018, p81 Level 4 lobby Approx. 01:05	were the conditions like in the lobby, the air conditions? A. They were clear. There was a slight smell of a fire.
Alves (IWS00000538) Level 13 lobby Approx. 01:08	12. Tiago and [REDACTED] had gone ahead of me and after waking people up in the other flats I started walking down the stairs. As I walked down I didn't hear any fire alarm or see any smoke. The lobby area was clear from smoke. The only thing I heard was the extraction fan. It is not unusual to hear it making a noise and it worked as a ventilation system. At the time, it was making a noise. I don't know if it was working properly but there was noise. As before it was light, there was no smoke and no smell.
O'Hanlon, Transcript 3 July 2018, p89 Level 4 lobby Approx. 01:11	Q. "We opened the door in the lobby and it was smoky." What was the smoke like? How smoky was it? A. I don't believe it was particularly smoky but there was smoke present. ... (additional info from p94) A. I couldn't tell you why, but I don't remember the lobby being heavily smoke-logged.
Zada (IWS00000989) Level 8 lobby Approx. 01:11	Leaving the flat 8. I went out in to the landing and there was no smoke. I went towards the stairs, and as soon as I opened the door to the stairs I could smell smoke and I could feel warmth, but this could be just because it was summer. I could definitely smell smoke.
Hippel, Transcript 19 July 2018, p25 Level 4 lobby starting to fill with smoke from flat 16 Approx. 01:17	You I think recall some smoke coming from the door to flat 16 into the lobby. Can you describe the smoke Page 25 for us? A. It wasn't a lot, just a little bit of black smoke. Nothing to concern us to be in the lobby.

Transcript reference	Content – Lobby conditions
<p>Stern, Transcript 19 July 2018, p133 Level 4 lobby Approx. 01:18</p>	<p>When you got to the fourth-floor lobby, what were the conditions like there?</p> <p>A. There was some smoke visible.</p> <p>Q. Do you remember seeing where the smoke was coming from?</p> <p>A. From the fire flat on the fourth floor.</p> <p>Q. Do you remember where the first two BA crews were at that stage?</p> <p>A. They were in the fire flat.</p> <p>Q. Was the door open or closed?</p> <p>A. It was ajar, yeah. It was open because of the hoses.</p> <p>Q. Can you describe the smoke in the lobby at that stage?</p> <p>A. It was black smoke at ceiling level.</p> <p>Q. At ceiling level?</p>
<p>O’Beirne, Transcript 2 July 2018, p163 Level 5 lobby Approx. 01:18</p>	<p>Q. Was there any smoke in the fifth-floor lobby once you left the stairwell?</p> <p>A. No.</p>
<p>Chebiouni (IWS00000945) Level 9 lobby starting to experience smoke Approx. 01:18</p>	<p>30. I walked slowly as I left the flat. I didn’t think the fire was that serious. I thought everything would be okay. I remember seeing light grey smoke on the 9th floor landing, like cigarette smoke. Apart from that, everything looked normal. The front doors of our neighbours were all closed. I did not see anyone else leaving their flat. I can’t recall the landing being unusually hot.</p>
<p>Stern, Transcript 19 July 2018, p138 5th floor lobby Approx. 01:20</p>	<p>Q. Then you say in the second line in that paragraph:</p> <p>“... slight smoke coming from the door we made our way straight to the door in relation to above the fire flat on the 4th floor ...”</p> <p>So that would be flat 26, if the flat below was 16.</p> <p>A. If that’s the number, yes.</p> <p>Q. Can you describe the smoke that was coming out?</p> <p>A. It was thick black smoke just slowly coming out the door.</p> <p>Q. Black smoke?</p> <p>A. Yeah -- well, yeah it was staining the door.</p>

Transcript reference	Content – Lobby conditions
<p>Hippel, Transcript 19 July 2018, p32 Level 5 lobby starting to fill with smoke from flat 26 Approx. 01:20</p>	<p>Q. Right. Okay.</p> <p>When you get to the fifth floor, you say there was some smoke. Could you describe that smoke for us?</p> <p>A. At the fifth? Again, it was quite white and it was coming out from around -- the door was shut and it was coming out from around the door frames. There wasn't a lot of smoke. It was -- yeah, quite grey. But you could see it seeping out.</p> <p>Q. Did you notice when you arrived at the fifth floor any particular change in temperature?</p> <p>A. No.</p> <p>Q. What about visibility in the fifth-floor lobby?</p> <p>A. Visibility was fine.</p>
<p>Stern, Transcript 19 July 2018, p144 6th floor Approx. 01:20</p>	<p>Q. Right. Then you go into, you say, the sixth-floor lobby, this is three lines up from the end of the second paragraph on page 9:</p> <p>"The 6th floor lobby was quite heavy smoke logged. It was low, it was enough for me to make a safe approach to the flat, the smoke layer was probably just above [redacted] 5'7" so I could see it was quite thick smoke."</p> <p>Did that concern you?</p> <p>A. Yes.</p>
<p>O'Beirne, Transcript 2 July 2018, p173 Level 6 Approx. 01:20 by cross reference to Hippel transcript</p>	<p>But just in terms of the conditions in the sixth-floor lobby, Mr O'Beirne, you say it was a little bit smoky; could you describe that smoke for us, first of all?</p> <p>A. You could see across the lobby. It was darkish, I guess, in colour, not very light white smoke, so it would've been a darker grey, I guess. But visibility was okay.</p>
<p>Chebiouni (IWS00000945) Level 6 lobby fully smoke logged Approx. 01:20</p>	<p>32. Around the 6th of 7th floor, I saw a black guy with his daughter, I think he is from Somalia or Sudan. He is a small guy, and was wearing glasses. He was carrying his daughter, who I would say was around 3 years old. He asked me what had happened. He looked confused rather than scared. As we spoke, I opened the door onto what I believe was the 6th floor landing. When I opened the door, I saw thick, black smoke. It was impossible to see through it. I closed back the door and I was confused.</p>

Transcript reference	Content – Lobby conditions
Li (IWS00000515) Level 22 lobby Approx. 01:20	42 At that time, in the hallway, I would describe the smoke as hazy, very light We could still see everyone ok
Khalloud (IWS00000473) Level 11 Approx. 01:20	40. I closed the front door immediately after opening it. Smoke had already come into the flat from when I opened the front door, which set off the smoke alarm in the corridor of my flat. I think it only set off the one smoke alarm in the corridor but I am not sure.
Al-Arasi (IWS00000005) Level 13 Approx. 01:20	18. When we opened the front door to exit we could smell burning again but I could not see any smoke. The lighting in the lobby area was fine. I knocked on my neighbour's door at Flat 101 to alert them that something may be wrong but got no response. I closed and locked my front door.
Kassemdjian (IWS00000951) Level 17 Approx. 01:20	29. When I first opened the door to the flat I couldn't see any smoke but I could smell it. We could hear the vents making a noise. I think that they were smoke vents and they were on, making a lot of noise. Rita still remembers that noise especially.
Ho (IWS00000925) Level 10 lobby Approx. 01:20	25. When I opened the front door I did not see any smoke on the landing, there was only smoke behind me. I did not see any fire. I saw firemen on the landing. I cannot be sure, but I think were two or three of them. I think they were male, but I cannot be sure as I could not see them properly due to their protective equipment which covered their head. I did not see any other people. As we went out of the flat I did not shut the front door, instead leaving it for the firemen to deal with. I believe at least one of the firemen spoke to us, a male, but I could not understand what he was saying. One of the firemen pushed me towards the stairs, together with my wife.
Patel (IWS00000855) Level 8 lobby clear Approx. 01:20	14. On the landing I could tell that smoke was only coming from our flat. Once we had managed to close the front door, there was no smoke any more; it was no longer a problem.
Abell, Transcript 11 September 2018, p59 Level 5 lobby Approx. 01:21	Q. When you opened the door from the stair into the fifth-floor lobby, what were the conditions like in the fifth-floor lobby when you did that? A. I remember it being clear in there.
Abell, Transcript 11 September 2018, p64 Level 5 – entry to Flat 26 Approx. 01:21	A. Well, at first, he opened the door and the door closed on us by accident straight away, so we had to open the door again. I ended up sort of booting the door open because I couldn't get the halligan bar – I couldn't open it again with the halligan bar. The visibility was zero; there was thick black smoke coming straight out from the moment we kicked the door open.

Transcript reference	Content – Lobby conditions
O’Beirne, Transcript 2 July 2018, p187 Level 7 lobby Approx. 01:21 Referring to CCTV footage GF reviewed with PW (woman with cloth over mouth, etc)	<p>Q. To be fair to you, it's not perhaps the most perfect picture, but you thought it was a bit smokier than this picture shows us; is that what you're saying?</p> <p style="text-align: center;">Page 187</p> <p>A. Yes, it looks quite clear to me there and I'm sure it was a bit smokier than that.</p>
O’Beirne, Transcript 2 July 2018, p196 Level 8 Approx. 01:22	<p>Q. In the third paragraph there on that page, you say that the eighth-floor lobby was heavily smoke-logged, do you see? You say:</p> <p style="padding-left: 40px;">"By this stage there was quite heavy smoke in the lift lobby of that floor so I came straight out and went up to the next floor."</p> <p style="padding-left: 40px;">Do you see that?</p> <p>A. Yes.</p>
O’Beirne, Transcript 2 July 2018, p203 Level 9 Approx. 01:22	<p>Q. You say, as you do, that there was absolutely no smoke in the lift lobby on level 9. Did you look to see whether there was any smoke or fire in flat 66; in other words, the flat on level 9 immediately above all the flats you'd seen below which were alight?</p> <p>A. I didn't approach the door, no.</p>
Mekonnen (IWS00000912) Light smoke on Level 19 landing Approx. 01:22	<p>16. I came out on to my landing with my daughters and I could see light smoke on the landing. My neighbour, Amal, was also on the landing with her relative. We both spoke at the same time and said, 'There is a fire!' I told Amal that I knew about the fire and that, 'We needed to get out.' Amal ran back into her flat. She has a daughter and I presume she went back for her.</p>
O’Beirne, Transcript 2 July 2018, p205 Levels 10 and 11 Approx. 01:23	<p>Could you describe the smoke that you saw in the lobby on the 10th floor?</p> <p>A. It's obviously difficult to remember, but all I remember is each door I opened, the smoke was very heavy. So that would've been including floors 10 and 11.</p>

Transcript reference	Content – Lobby conditions
O’Beirne, Transcript 3 July 2018, p7 (2 nd day) Level 12 Approx. 01:23	<p>Q. Then you say in the next paragraph:</p> <p>"I quickly looked into the lobby of the floor that she had come from and I could see that there was thick black smoke from floor to ceiling."</p> <p>Can you remember what visibility through that smoke was like?</p> <p>A. Absolutely zero.</p>
Dorgu, Transcript 9 July 2018, p115 Level 5 lobby largely clear, just smoke coming out of Flat 26 Approx. 01:25	<p>Q. In the lobby?</p> <p>A. Clear, pretty clear. There was a little bit of smoke coming out the gentleman's flat, maybe, maybe smoke in the area or maybe his flat, but enough for them to want</p>
Dorgu, Transcript 9 July 2018, p118 Level 6 lobby Approx. 01:25	<p>Q. Clear. And did you go into the lobby on the sixth?</p> <p>A. Yes.</p> <p>Q. What were the conditions like there, do you remember?</p> <p>A. Clear. Nothing – not extraordinarily smoky, but people started coming out. I think it was from the flat area directly above the kitchen of the fourth, the fifth and the sixth. I think they came out.</p>
Dorgu, Transcript 9 July 2018, p122 Level 6 lobby Approx. 01:25	<p>Q. Can you describe for us what physical condition they were in?</p> <p>A. Not distressed. No one suffering the effects of smoke inhalation.</p> <p>...</p> <p>Q. And the conditions in the lobby on the sixth floor as you left?</p> <p>A. Clear.</p> <p>Q. Still clear?</p> <p>A. Clear.</p>

Transcript reference	Content – Lobby conditions
Dorgu (MET000086037) Level 6 lobby Approx. 01:25	<p><i>“I think it was Justin that said to me that a woman was complaining of fire on the seventh floor. I said to him smoke or fire as smoke can travel and said definitely fire.</i></p> <p>...</p> <p><i>The pram got left behind but I don’t think anybody died on the sixth floor but that’s because they got out early. I had a feeling that things were getting bad. I knew it wasn’t good. It was smoky in the flat but just wisps in the lobby. Not too dark and no BA at this point. I was going up and down. It seemed like everyone was getting out the four or five flats so I went downstairs.”</i></p>
Fletcher (IWS00000913) Level 16 lobby Approx. 01:25	<p>20. My wife ran to the front door with me behind her and she opened the front door. As she opened the front door thick black smoke rushed in from the hallway/landing outside of the flat. The smoke in the landing area covered the whole area from the floor to the ceiling. It was thick black smoke and you could not see anything. Even if you held up your hand in front of your face you couldn’t see it as it was so black and thick. I am 6 ft tall and the thick black smoke was above my head. I could not see any lights in the hallway; they must have been out or at best prevented from giving out light by the thickness of the smoke. Hime slammed the door shut.</p>
Yahya (IWS00000498) Level 18 lobby clear Approx. 01:25 (Shahid Ahmed exits at 01:31)	<p>20. A short time later my neighbour in Flat 156, Shah, chair of leaseholder association, knocked on our door, and told me that he and his wife were leaving and that I should</p> <p>take the children and get out too. At this point the lights on the 18th floor landing were still on and I couldn’t see any smoke in lobby. There still wasn’t any smoke in my flat.</p>
Archer (MET00008001) Level 6 lobby Approx. 01:25	<p><i>“Myself and Tom then forced it open and wedged our bodies into the entrance so it wouldn’t close back again. The windows must have been open to have made this happen. As soon as we wedged the door open thick black smoke came out, and filled the lobby area, the visibility was bad, I couldn’t see the stairwell door.</i></p> <p><i>The hose on the 6th floor came from the outlet on the fifth floor, not the sixth. This was a problem because the stairwell filled with smoke from the sixth floor because the hose prevented the door to the stairwell closing</i></p> <p>...</p> <p><i>Me and Tom made our way back down the stairwell. I don’t know how long I was in there for, the BA board would probably tell you that information, but I don’t know myself. At this point residents were coming down the stairwell, and at this time the stairwell was filling up with smoke.”</i></p>

Transcript reference	Content – Lobby conditions
Jafari (IWS00000683) Level 11 lobby Approx. 01:27	19. I quickly left the flat after I did this and I ran into the lift area and my father was there before me. There was no smoke there. Our neighbour Natasha who lived in flat 82 was standing in the lobby. I told her there was a fire in our flat, and she came into our corridor and saw the flames. She went back into her flat for some reason. Natasha
Smith (IWS00000771) Level 12 lobby clear Before 01:23/01:26	This statement indicates that the Level 12 lobby is clear of smoke before 01:26. However, it has not been possible to attribute a specific , time to this observation. O’Beirne reports Level 12 lobby to be smoke logged by 01:23. Therefore, by reference to O’Beirne’s evidence it is possible this observation was made prior to 01:23.
Badillo, Transcript 29 June 2018, p120 Level 15 Approx. 01:27	Q. Yes. You say in your statement that the lift, you having got into it, stopped at the 15th floor. Is that right? A. That's correct. Q. What happened next, after it stopped? A. The doors opened and a big rush of black smoke filled the lift.
Gomes (IWS00000622) Level 21 lobby starting to fill Approx. 01:30	82. When Helen, I [REDACTED] and Simba came into our flat through our front door, I could see smoke on our landing. It was black smoke and it was quite close to the ceiling at that point you could see through it. This was around about 1:25/1:30 am. Some of the smoke from the landing came into our flat whilst our front door was open to allow Helen and I [REDACTED]
Hippel, Transcript 19 July 2018, p43 Level 6 lobby full of black smoke Approx. 01:30	A. Purely at that point the colour and the density of the smoke on the sixth floor.
Hippel, Transcript 19 July 2018, p71 Smoke exiting Level 16 lobby Approx. 01:30	A. Pretty much. When I got up to the 16th floor, I may well have been the first up there, because I don't remember Jamal being up there. So when I got up to there, there was a teenager, maybe 15, 17, crouched in the doorway, propping the door open. There was smoke coming out. I don't remember now him telling me that there was someone in there, but he may well have told me there was someone in there.

Transcript reference	Content – Lobby conditions
<p>Hippel, Transcript 19 July 2018, p84 Level 16 lobby conditions Approx. 01:30</p>	<p>What about temperature in the lobby, do you remember?</p> <p>A. In the lobby, the temperature was fine.</p> <p>Q. Did you see any fire?</p> <p>A. No.</p> <p>Q. What colour was the smoke?</p> <p>A. Black.</p> <p>Q. And did you see a neutral plane?</p> <p>A. No, as far as I was aware it was down to the floor.</p>
<p>Hippel, Transcript 19 July 2018, p94 Level 16 evidence of no door closer Approx. 01:30</p>	<p>A. There was a gap open. I can't -- there was definitely a gap there. Whether it was fully open or half open, I can't remember. It wasn't pulled to, so there was a small gap. It was pretty much open.</p> <p>Q. Right. Did you have any thoughts about what that meant in terms of whether the door closer was working properly or not?</p> <p>A. Well, yeah, it was open, yeah, so there was no door closer on it, yeah.</p>
<p>Stern, Transcript 19 July 2018, p165 Between Level 6 and Level 15 Approx. 01:30</p>	<p>Q. Okay.</p> <p>Did you open the door to the lobbies on your way up to check the conditions in the lobbies?</p> <p>A. I remember I had to try and -- because it was quite hard to work out what floor we were on as there was no clear indication on the stairwell, so I would periodically check the lobbies just to see if I could see the floor number near where the lifts were.</p> <p>Q. Now --</p> <p>A. Where I did check, none of the lobbies were smoke-logged.</p>

Transcript reference	Content – Lobby conditions
<p>Stern, Transcript 19 July 2018, p171 Level 16 lobby smoke filled but not hot Approx. 01:30</p>	<p>Q. Okay.</p> <p>Having seen the smoke floor to ceiling, I think you say, did that prompt any thoughts in your mind about fire spread, about what had happened with the fire?</p> <p>A. It shocked me. We're 12 floors above the fire floor, with the lobby being smoke-logged at that density, at</p> <p style="text-align: center;">Page 171</p> <hr/> <p>that speed, I couldn't rationalise it. It made no sense to me. You would expect those kind of conditions to be -- the thick black smoke to kind of present something we call backdraft conditions, where the compartment is oxygen deprived so the smoke gets really thick. And it should be really hot; it wasn't hot, it was just extremely thick smoke. So, yes, it did concern me.</p>
<p>Liao (IWS00000505) Level 22 lobby Approx. 01:30</p>	<p>26. There was no smoke inside the landing area at that time. There was no smoke in the stairwell at that time.</p>
<p>O'Hanlon, Transcript 3 July 2018, p119 4th floor lobby Approx. 01:35</p>	<p>Q. On your way down from the fourth floor to the second floor, where the bridgehead was, do you remember what the conditions were like, the air conditions?</p> <p>A. No. I don't think the lobby on the fourth floor was</p> <p style="text-align: center;">Page 119</p> <hr/> <p>that smoke-logged. I don't believe it being heavily smoke-logged.</p>
<p>Doulova (IWS00000834) Level 20 lobby Approx. 01:35</p>	<p>65. I put the wet towel over my mouth and nose and went to the front door to open it. I very quickly closed it again as the landing was full of thick, black smoke. I could not see anything. I could not quite comprehend what was happening at first.</p>
<p>Dorgu, Transcript 9 July 2018, p152 Level 8 lobby (accessed by lift) Approx. 01:37 (lift timestamp)</p>	<p>Q. Right. So eighth floor, the doors open, they don't close again. What were the conditions like on the eighth floor in the lobby?</p> <p>A. Smoky. Because we had to leave the lift because it was obviously filling with smoke.</p>

Transcript reference	Content – Lobby conditions
<p>Badillo, Transcript 29 June 2018, p147 Level 8 Approx. 01:37 (lift timestamp)</p>	<p>Q. Okay.</p> <p>On your way up from the bridgehead to the 20th floor, you describe how the lift opened at the eighth</p> <p style="text-align: center;">Page 147</p> <hr/> <p>floor. Do you remember that?</p> <p>A. Yes.</p> <p>Q. Can you describe for us what happened?</p> <p>A. Sort of the same thing that happened on the 15th. The lift filled with smoke. I don't know whether it was</p> <p>...</p> <p>A. From what I remember, it was full of smoke but there was still some visibility. I didn't have to search around to get out of that lobby.</p> <p>Q. What colour was the smoke, do you remember? No? Did you -- sorry.</p> <p>A. I'm not sure, I can't remember. But it wasn't as dark as when I went up on the 15th.</p>
<p>Smith (IWS00000771) Level 12 lobby smoke logged Approx. 01:38</p>	<p>42. I had a feeling that the fire fighters would not get to us and that we would have to leave. I went to check that there wasn't fire on our floor. I went to the front door and I looked out and I saw the whole landing was full of smoke. I looked through the spy hole but it was too dark and I couldn't see anything. So I opened the door. The smoke was thick and much darker.</p>

Transcript reference	Content – Lobby conditions
<p>Abell, Transcript 11 September 2018, p78 Level 5 – Exit from Flat 26 Approx. 01:40 based on Broderick BA telemetry</p>	<p>Q. So you come out into the lobby and you say that it had deteriorated. Was there any sign of Firefighter Archer there?</p> <p>A. When I got into the lobby, again, as bad as -- visibility-wise was as bad as in the flat.</p> <p>Q. Right.</p> <p>A. At this point, I was basically dragging myself along the floor, trying to drag all the hose back out with me that I'd taken in. That's not easy. I followed the wall. I could hear some commotion, some shouting, sort of muffled shouting from what I imagine would be the stairway, and I think I made out someone shouting, "I can't find my BA partner". So that obviously is going to be referring to me.</p>
<p>Gallagher, Transcript 10 September 2018, p13 Level 5 Approx. 01:41 (conflicts with Abell)</p>	<p>Q. What were smoke conditions like on the 4th and 5th floors during that process?</p> <p>A. At the time -- I don't know about the 4th, I don't believe we entered the 4th, it was quite -- it was difficult to tell what floors you was on because there wasn't any signage.</p> <p>Q. Can you remember -- sorry, I interrupted you.</p> <p>A. Yeah, but there wasn't smoke-logging at this stage, no.</p>
<p>Bettinson, Transcript 19 July 2018, p217 Level 10 Approx. 01:42</p>	<p>A. The conditions in the lobby. You couldn't see in there. It just -- when you opened the door, it shot out over his head and we just both looked at each other and thought we're not going in there at the moment; we had nothing with us.</p>

Transcript reference	Content – Lobby conditions
<p>Badillo, Transcript 29 June 2018, p151 Level 20 Approx. 01:50</p>	<p>A. From what I remember, it was getting thicker the further we went up the tower.</p> <p>Q. What, the smoke was?</p> <p>A. Yes.</p> <p>Q. What about the visibility, was that getting more difficult?</p> <p>A. On the stairwell I can remember visibility was okay up to the 20th, because when I got up to the 20th, I looked into the lobby, which was no visibility at all. So it was -- it was different.</p>
<p>Dorgu (MET000086037) Level 20 lobby Approx. 01:50</p>	<p><i>“It took maybe fifteen minutes to get up there. It got darker as we got higher, it was never ending, I’m pretty sure the lights weren’t on but the twentieth was bright light. Chris was in the doorway holding it open for me and he was knackered. They went in and searched any anyway I stayed outside on the radio. I was trying and trying and trying to get on the radio. Chris went into the lobby and it was totally clear of smoke.</i></p> <p>...</p> <p><i>The smoke in the flat didn’t seem to bad but when you’re in BA in the dark it’s hard to tell. “</i></p>
<p>Dorgu, Transcript 9 July 2018, p167 Level 20 Approx. 01:50 No sounds of smoke alarms, even though at least one flat was full of smoke.</p>	<p>A. No one came out. There was no indication at all from anyone that anyone else was in distress. There was no smoke alarm going off, obviously there was no fire alarm because they took it out, but there was no one shouting,</p>
<p>Dorgu, Transcript 9 July 2018, p168 Level 20 Approx. 01:50</p>	<p>Q. Can you give us an impression of how unsafe that would've been?</p> <p>A. I know from firefighters who were in there later who tried to rescue people, people they brought out were unconscious within one flight or stairs, two flights of stairs. So we were -- like, we were after a 12-year-old</p>

Transcript reference	Content – Lobby conditions
Secrett, Transcript 5 July 2018, p89 Level 20 Approx. 01:50	<p>Q. And when you got into the lobby, what were the air conditions like in there?</p> <p>A. Again, it was smoky. I remember -- I've got a distinct memory of putting down the length of hose that I was carrying, and when I put them down, as I stood back up, I couldn't see them again. So the visibility was less</p> <p style="text-align: center;">Page 89</p> <hr/> <p>than from my face to the floor.</p> <p>Q. Right. How tall are you?</p> <p>A. Just under 6 foot.</p> <p>Q. Right. And was that smokier or the same smokiness as out in the stairwell at that stage?</p> <p>A. It was about the same.</p>

Transcript reference	Content – Lobby conditions
Secrett, Transcript 5 July 2018, p88 Level 20 Approx. 01:50	<p>Q. In terms of heat in the lobby area, can you just describe that for us?</p> <p>A. Yeah, I remember it being hot, but not to the point of concern. But also we were very hot because our fire gear or our PPE is not breathable, and like I say, we had just sort of come up the best part of 20 floors with all our equipment. We was really sweating, breathing hard, breathing heavy.</p> <p>And I remember feeling: right, I'm hot now. How much of that was the atmosphere and how much of that was my own heat that I'm producing, I don't know. But at that point I remember thinking: it's a bit warm. But it wasn't a concern; fires are hot. It wasn't anything that rang alarm bells at that point.</p> <p>Q. In terms of making a comparison between the radiated heat you were feeling there on the 20th floor and the radiated heat you would have felt on the sixth or eighth floor where you exited the lift, can you make a comparison of how much hotter it was on the 20th?</p> <p>A. Yeah, it was definitely hotter. The temperature sort of continued to rise the whole time we was at the 20th floor. When we first got there, I remember thinking: okay, it's a bit warm -- or hot, I should say. But like I say, it was nothing of concern. As we'll probably get to in a minute, as time went on, the temperature was gradually increasing the whole time we was up there.</p>

Transcript reference	Content – Lobby conditions
<p>Dorgu, Transcript 9 July 2018, p161 Level 20 lobby Approx. 01:50</p> <p>Lobby already had smoke in it, which increased rapidly as the stair door was opened to allow access</p>	<p>Q. Okay. So are you saying that in the lobby there was smoke, but it was clustered on the ceiling in a band?</p> <p>A. Yes, further down, but yes.</p> <p>Q. How far down did it come?</p> <p>A. At least halfway down, but that soon changed. That changed quite quickly because Chris was holding the door open, so the smoke -- essentially, the firefighting shaft basically has become a chimney, so it's taking smoke from downstairs, heating it and bringing it straight up towards us. So as he opened the lift lobby door, basically the lobby would've filled with smoke,</p> <p style="text-align: center;">Page 161</p> <hr/> <p>which it did.</p>
<p>Dorgu, Transcript 9 July 2018, p162 Level 20 lobby Approx. 01:50</p>	<p>Q. So you all three went into that flat?</p> <p>A. They went in first. My first thought was we need to have hose. Obviously we brought hose with us. But the lobby became pitch black -- like pitch black, so ...</p>
<p>Bettinson, Transcript 19 July 2018, p217 Level 9 Describes when conditions deteriorated significantly Approx. 01:50 (time changed from 01:42 - to be coordinated with Gallagher)</p>	<p>Q. You went down to the ninth floor, and what did you find there?</p> <p>A. I located the dry riser and also -- so there's a little bit of, like, time that's left out of the statement</p> <p style="text-align: center;">Page 217</p> <hr/> <p>where I located the dry riser. Crew Manager Gallagher was now back up and I turned to him to grab some hose, he handed me some hose, and then when I turned around again, the dry riser had gone. It had gone within a matter of seconds.</p> <p>Q. So it had been obscured by the smoke, is what you're saying?</p> <p>A. Yeah. So you could just about make it out, and then within 5 seconds of grabbing some hose and turning back round, it was gone.</p>

Transcript reference	Content – Lobby conditions
Gallagher, Transcript 10 September 2018, p17 Level 9 lobby clear at this time Approx. 01:50	<p>First of all, you've helped us with conditions on the stairwell. You reached the 9th floor, and did you go into the lobby of the 9th floor?</p> <p>A. Yes.</p> <p>Q. Can you describe the smoke conditions as you found them then?</p> <p>A. Well, that was when the conditions got worse in the stairs, the lobby – I think the lights of the lobby weren't working, and to my recollection there didn't seem to be any smoke damage or any smoke in the lobby at that time.</p>
Secrett, Transcript 5 July 2018, p104 Approx. 01:55 Describing sudden increase in temperature in Flat 176 and in the 20 th floor lobby after his BA alarm sounded	<p>Q. Hotter than before?</p> <p>A. Yes.</p> <p>Q. In the lobby?</p> <p>A. Yes, the whole temperature of that floor spiked quite quickly.</p>

Transcript reference	Content – Lobby conditions
<p>Dorgu, Transcript 9 July 2018, p175 Levels 17 down to Level 15. Each lobby smoke logged Approx. 01:55</p>	<p>maybe around the 18th floor, 17th, 16th, that the lobby areas were heavily smoke-logged, so I was checking the doors, pushing the doors open and shouting inside if anyone was there, because if they were, there's no way they would be able to walk out onto the stairwell and they'd probably collapse in the lobby. So even if you've known a lobby for 20 years you've lived there, as soon as it's pitch black -- and I mean completely pitch black -- it's irrespirable, so you're coughing, choking, it's pretty horrific, as soon as you're not touching a wall or a door, you don't know where you are. So then you are lost and you won't find your way out of the stairwell.</p> <p>That's why a lot of people got lost and were found in lobbies and stairwells. And even if you do make it to the stairwell, the stairwell, which should be protected, is now entirely choked with smoke. It's irrespirable. So I was concerned people would die a few metres from their front door. So I checked on the levels down to maybe the 15th. That's when Chris</p> <p>...</p> <p>Q. When you checked into the lobbies on the way down to the</p> <hr/> <p>Page 175</p> <hr/> <p>15th or so, what did you see?</p> <p>A. They were smoky. If you could see, it would be low down, so I had to crouch down. You could see in the bottom of the smoke layer. I shouted, but obviously in</p> <p>...</p> <p>was very quiet. Really quiet. So no one moving, no one speaking, no one -- no smoke alarms going off. So the</p>

Transcript reference	Content – Lobby conditions
<p>Murphy, Transcript 6 September 2018, p41 Level 14 Approx. 02:00</p>	<p>"We walked to floor 14, our destination floor. In the lobby of floor 14, it was smoky so we shut the door to the stairwell to protect the 14th floor lobby and minimise smoke entering it. As we did not know the</p> <p style="text-align: center;">Page 41</p> <hr/> <p>layout of the floor and visibility was poor, I suggested to FF CORNELIUS that we do a 'left hand search', a</p> <p>...</p> <p>Q. From that perspective, how would you assess, first of all, the density of the smoke?</p> <p>A. It wasn't a safe atmosphere to stay in. There didn't appear to be any heat in there. It didn't appear as if there was a fire on that floor. Normally if you're</p> <p style="text-align: center;">Page 43</p> <hr/> <p>close to the fire, you can feel the radiated heat.</p> <p>Obviously we'd just climbed 14 floors carrying lots of equipment so we were quite hot ourselves, but it didn't appear that there was a fire there, just that it was very smoke-logged.</p> <p>Q. What was the colour of the smoke, can you remember?</p> <p>A. Black. Very dark grey and black.</p>
<p>Cornelius, Transcript 6 September 2018, p78 Level 14 Approx. 02:00</p>	<p>Mr Cornelius, I'd now like to turn to when you get to floor 14 itself.</p> <p>Was the lobby area clearer than the stairwell?</p> <p>A. It was, yeah. The lobby area to the flats was a lot clearer than the stairs, yes.</p>
<p>Dorgu, Transcript 9 July 2018, p165 Level 20 Approx. 02:00</p>	<p>the way. Like, I think that flat on the 20th floor flashed over minutes after we were in it, so the temperature was rising all the time.</p>

Transcript reference	Content – Lobby conditions
Merrion, Transcript 6 September 2018, p19 Level 14 lobby relatively clear Approx. 02:00	<p>Q. What were the smoke conditions in the lobby on floor 14, can you remember?</p> <p>A. The lift lobby, there was a small amount of smoke.</p> <p>Q. Whilst you were on floor 14, did the smoke conditions deteriorate, remain stable or improve?</p> <p>A. In the lift lobby, I felt they stayed the same.</p>
Yahya (IWS00000498) Level 18 lobby Approx. 02:00	<p>21. At about 2 a.m. two fire fighters, one male and one female, knocked on our door. They were wearing breathing apparatus sets. They came inside as soon as I opened the door and told me to hurry up and shut the door quickly, as by this time there was dark, thick smoke in the 18th floor lobby. They took off their helmets and breathing</p>
Foster, Transcript 10 September 2018, p104 Level 18 Approx. 02:00	<p>Q. Okay.</p> <p>You got up to the 18th floor. What were the conditions like on the 18th-floor lobby, can you remember?</p> <p>A. You couldn't see your hand in front of your face, so thick, black smoke. In terms of the temperature, I can't really remember how hot it was.</p> <p>... (p125)</p> <p>Q. Flowing from that, whilst you were on the 18th-floor lobby, did the smoke conditions deteriorate, improve or remain constant?</p> <p>A. Remained constant.</p>
Lawson, Transcript 10 September 2018, p139 (paired with Foster) 18 th floor lobby smoke logged Approx. 02:00	<p>Q. Now, if we can turn now to the conditions you encountered when you got onto the lobby of the 18th floor.</p> <p>Can you describe how the conditions in the lobby compared to those you encountered in the stairwell?</p> <p>A. Exactly the same.</p>
Murphy (MET00010820) Level 14 lobby Approx. 02:05	<p>Statement identifies that smoke was present with poor visibility on Level 14 at this time</p>

Transcript reference	Content – Lobby conditions
<p>Lawson, Transcript 10 September 2018, p151 Identifying hotter and smokier conditions adjacent to Flat 156 – Door locked close. Approx. 02:10</p>	<p>A. Yes, flat 2 and 3 were much cooler and in clean air compared to the other side of the building, yes.</p> <p>Q. Did you open the door into flat 6?</p> <p>A. No.</p>
<p>Eden (MET00008019) Level 20 lobby Approx. 02:10</p>	<p>There was no noise - it was completely silent and very eerie. It felt like we were alone and it was abnormal to not hear any noise, especially from the radios. I didn't realise that the radios weren't working at this time even though I would normally expect there to be a fair amount of radio traffic. The smoke was blacker, thicker and denser and I literally couldn't see an inch in front of my face. Black smoke tends to mean that materials such as plastic and textiles are burning. We stopped and we were deciding what to do</p> <p>...</p> <p><i>"(Resident of Floor 20) said that it was horrible and he couldn't breathe."</i></p>
<p>Fernandes, Transcript 10 September 2018, p176 Level 20 lobby Approx. 02:10</p>	<p>Q. Could you describe for us the conditions that you met as you went into the lobby on the 20th floor?</p> <p>A. The lobby and the higher parts of the building were of the same conditions: it was thick, black smoke, which lighting wouldn't penetrate or illuminate. Just a clearer black you could see with the lights or with someone's torch. We went through the door, into the lobby, stuck to the left-hand wall. You navigated by touch, and the only way to recognise flat numbers or door numbers was to be on your knees, with your face as close to the door as it could be. The numbers, from my recollection, were to the right-hand side of the letter boxes, approximately waist height or head height once you're on your knees. And when I say your face right up there, there's obviously a small distance for your BA mask and the visor on your helmet, and they would literally be – they were in contact with the door in order to see the flat numbers.</p> <p>Q. Would you agree with Firefighter Williams's description that conditions on the 20th floor were floor to ceiling smoke? It sounds as if you would.</p> <p>A. Yes.</p>

Transcript reference	Content – Lobby conditions
O'Hanlon, Transcript 3 July 2018, p128 3 rd floor lobby Approx. 02:13	<p>MR MILLETT: When you got to the third floor, do you remember what the conditions were like there?</p> <p>A. I don't remember being – it wasn't smoky, I don't think, no.</p>
Roberts, Transcript 23 July 2018, p126 Level 21 lobby Approx. 02:15	<p>A. I basically opened the door into the lobby area.</p> <p>Q. If I could stop you there, what were the conditions on the 21st lobby?</p> <p>A. Visibility was zero, I had my torch on. There was no light. I would literally have to put my hand in front of my face to see anything in there.</p> <p>Q. Did you go in --</p> <p>A. I took a couple of steps in, then as I turned around, I could see the door closing, so I was quite concerned if I did get disorientated and the door did close and Firefighter Gillam wasn't to come up, I could potentially have got lost on that 21st floor.</p>
Roberts, Transcript 23 July 2018, p127 Level 22 lobby Approx. 02:15	<p>Q. As you opened the door into the 22nd-floor lobby, what did you encounter?</p> <p>A. Again, exactly the same as the 21st floor: pitch black, eerily quiet. You couldn't see literally your hand in</p> <p style="text-align: center;">Page 127</p> <hr/> <p>front of your face.</p>
Gillman, Transcript 23 July 2018, p72 Level 20 lobby Approx. 02:15	<p>Q. What were the conditions like, first of all, on the stairwell at floor 20?</p> <p>A. Smoky. And when Andy opened that door, it let a lot of darker smoke into that stairwell.</p>
O'Donoghue (MET00008059 1) Lobbies between 6 and 10 Approx. 02:25	<p><i>"The conditions in the stairwell were very hot and it got hotter as we ascended. On every floor we would open the door into the lobby area to see if there were any casualties, and the lobby areas were hotter than the stairs. Some of the doors had been blocked open by discarded equipment which was letting smoke in."</i></p>

Transcript reference	Content – Lobby conditions
<p>O'Donoghue, Transcript 23 July 2018, p26 Checking 3 unknown lobbies between Level 6 and Level 11 Approx. 02:25</p>	<p>Q. When you were going up each stairwell, did you open the door between the stairwell and each lobby on each floor?</p> <p>A. I don't think it was on each floor. I think we did it three times just in case because the smoke was so thick, maybe casualties, residents, had tried to come out, and if they'd fallen because of breathing in it, if they were just there, we could effect a rescue, even though we knew our planned route was to go to the 12th.</p> <p>Q. When you opened the door and looked into each lobby, can you talk us through what you did on each and every occasion?</p> <p>A. Just opened the door, looked in, felt the blast of hot air, shouted with no response. That's as far as we took it.</p>
<p>Smith (IWS00000771) Level 12 lobby smoke logged Approx. 02:25</p>	<p>56. Again I went to look out of our front door and the smoke was really very very thick and dark, you couldn't see through it. I told the emergency operator and again he told me that the fire was on the fourth floor and that we were safe. He told us to stay in the flat.</p>
<p>Neda (IWS00000886) Level 23 Lobby Approx. 02:30</p>	<p>52. I grabbed my mum and walked out of our flat and on to the landing outside. It was pitch black and thick with smoke. I could not see a thing. The heat was greater in the lobby than in the flat. I did not know what time it was but I think it must have been around 2.30 am as I have seen the cctv still image taken in the lobby of me leaving the Tower at 02.42.16 hrs. I had to feel my way out on the landing to the stairwell door. I could not breathe as the air was thick and toxic. I took a deep breath and was holding my breath for as long as I could and I started walking down the stairs.</p>
<p>Gomes (IWS00000622) Level 21 lobby Approx. 02:32</p>	<p>91. At 2:32 a.m. I opened the door onto the landing hallway and took a video on my mobile telephone of what I encountered. I saw and videoed a wall of dense, pitch black smoke. It surged into the flat through the open door when I opened the door to inspect the state of the landing. There were no fire alarms going off on the landing and no vents sounding. I could not hear anyone coming up from lower in the building. There was no shouting.</p>

Transcript reference	Content – Lobby conditions
Herrera, Transcript 6 September 2018, p106 Level 14 Approx. 02:36	<p>14th floor itself.</p> <p>Was there a difference between the smoke conditions you encountered on the 14th floor itself compared to the stairwell?</p> <p>A. No, it was the same from the bridgehead to the 14th floor, complete black, thick smoke.</p> <p>... (p108)</p> <p>A. There was no need to get on the floor because the smoke was ceiling to floor. It was pointless to do that.</p>
Orchard, Transcript 10 September 2018, p53 Level 14 lobby Approx. 02:36	<p>Q. Looking now at conditions on the 14th floor, what was the difference between the conditions you encountered on the stairwell and in the lobby on the 14th floor?</p> <p>A. I think they were pretty similar, actually.</p> <p>Q. When you were in the 14th floor lobby, what was your visibility like? How far forward could you see into the lobby in terms of metres?</p> <p>A. Couldn't really see any distance. We were having to crouch down and get right to the door to see the numbers on the door, so --</p> <p>Q. How close up to the doors did you have to go in order --</p> <p>A. Inches.</p>

Transcript reference	Content – Lobby conditions
<p>Juggins, Transcript 11 September 2018, p69 Level 14 lobby Approx. 02:36</p>	<p>A. I believe at the time, it was very thinly smoke-logged, but it wasn't as pitch black as the stairs. The stairs was completely invisible, you couldn't see a thing, but when we got on to the floor, I think the fire door that protected the stairwell to the lobby had protected it enough that it wasn't too completely smoke-logged. I could see my hand in front of my face. It wasn't completely pitch black.</p> <p>Q. In the lobby itself, you could see your hand in front of your face?</p> <p>A. Yes.</p> <p>Q. How much further could you see?</p> <p>A. I could see my crew manager in front of me, the team leader, and then within a couple of metres I'd say I would be able to see. I couldn't see across the floor of the lobby to the other flats. I could see -- where we was going to 111, I could see the door.</p> <p>Q. How far ahead of you was Crew Manager McAlonen?</p> <p>A. Within touching distance. So a metre or so.</p> <p>... (p70)</p> <p>Q. When you were searching the flat, is that the point at which the lobby area begins to get increasingly smoke-logged?</p> <p>A. Yes, so as I completed the search of the flat, I noticed as I was coming back out towards the lobby that the lobby had now become a lot darker, a lot more -- like the visibility had gone straight down almost to zero, so I noticed there was smoke-logging coming through the floors.</p>
<p>Smith (IWS00000771) Level 12 lobby smoke logged Approx. 02:40</p>	<p>65. I went to the front door and opened it. Thick black smoke came into the flat. Then I saw what I thought were two firemen through the smoke in front of me. I saw a red light, I believe that this was by the fire door to the stairs. I could hear laboured breathing, this must have been the fireman or firemen breathing through a mask. I said to Kasia "They're here."</p>

Transcript reference	Content – Lobby conditions
Li (IWS00000515) Level 22 Approx. 02:40	67 When they tried to leave the flat, they opened the front door and a lot of smoke came in at that time Before they opened up the door it was still clear air in the flat, you didn't feel much about the smoke at all, you didn't need towels or anything You could not tell there was a fire when inside flat 193 at that point
McAlonen, Transcript 6 September 2018, p168 Level 14 lobby Approx. 02:40	<p>A. The conditions were very poor. The smoke level was right down to the floor. The smoke was very thick, very black in colour. Made visibility nigh on zero. It was difficult to see your hand in front of your face.</p> <p>The actual smoke itself, although it's not unusual, it seemed particularly sticky. I kept having to try and clear my face mask, basically, to be able to see my gauge checks and stuff like that.</p> <p>Q. Did you encounter another crew on the 14th floor?</p> <p>A. When we first made entrance to the 14th floor, I believe I heard another crew and saw a torchlight on the actual floor, which is normally -- they're quite distinctive, light from the torch within the smoke. I tried to make contact with that crew but I had no joy, and I thought rather than waste time trying to do that, we carried on with our brief, basically.</p> <p>Q. How far away were you from the other crew? Could you estimate the distance?</p> <p>A. It was difficult to say. I couldn't see across the lobby because the smoke was so thick, so I had -- knowing how -- the distance we're talking about.</p>
Upton (MET00007524) Level 19 lobby Approx. 02:55	<i>"same as the stair. I couldn't see any actual flames but there was thick, heavy, dense smoke and it was really hot"</i>

Transcript reference	Content – Lobby conditions
<p>Hoare (MET00008027) Level 12 lobby Approx. 03:00</p>	<p><i>“At head height, it was pitch black no visibility on the (12th floor) lobby, completely pitch black and the temperature within the lobby was very hot but there was no flame, just smoke and heat. I did not see any flame inside the building at all. As I opened the door “the heat hit me, it was so hot, and there was no visibility until we got on our hands and knees where at least we could see in front of us. I could make out where the lift was and the door to the lift was closed. There was an enforcer just by the entrance into the lobby door which I picked up as I entered the lobby area and we went down on our hands and knees.</i></p> <p>...</p> <p><i>On the 10th floor, the door to the lobby which I opened was a fire door, self- closing and was closed on arrival.</i></p> <p>...</p> <p><i>I pulled the door towards me to open it and the heat was incredible. It was nothing like the 12th floor because it was much worse.</i></p> <p>...</p> <p><i>When the heat hit us and it felt just like opening an oven door.</i></p> <p>...</p> <p><i>whilst I kept the door opened wedge open, Matt came round me to crawl forward into the landing.</i></p> <p>...</p> <p><i>Although it was smoky in the staircase it was not as smoky as it was in the lobby.”</i></p>
<p>Hoare, Transcript 10 September 2018, p197 Level 12 lobby Approx. 03:00</p>	<p>Q. Now, you got to the 12th floor. Can you give us an idea, first of all, how the conditions on the stairwell compared to the conditions you experienced on the lobby of floor 12?</p> <p>A. Lobby was smoke-filled. It just got continually -- gradually worse as we got -- the higher we went.</p>

Transcript reference	Content – Lobby conditions
<p>Hoare, Transcript 10 September 2018, p198 Level 10 lobby Approx. 03:00</p>	<p>Q. How would you describe the conditions between the stairwell and the lobby of floor 10?</p> <p>A. The stairwell was thick with smoke, but the actual lobby itself, once we opened the door, was boiling hot.</p> <p>Q. I think in your statement at page 15 you describe it as being like an oven; is that a fair description?</p> <p>A. Yes.</p> <p>Q. Was the heat such that you were effectively forced to the ground?</p> <p>A. Straight to the floor, yeah.</p> <p>Q. How high off the floor was the smoke, can you remember? Was it floor to ceiling or was there some --</p> <p>A. No, there was a gap. When you was down low, you could probably see -- it might have been 2 foot or something from the floor.</p>
<p>Yahya (IWS00000498) Level 18 Approx. 03:10</p>	<p>telephoned 999 continuously, but they kept telling me to stay put. At about 3 a.m. we all left Flat 153 together. Again, as soon as we left the flat it was pitch black on the landing area; it was so full of smoke you just couldn't see anything. I remember holding onto my kids but I don't remember seeing or hearing the neighbours at all after we all left the flat. [REDACTED] and [REDACTED] walked, and I carried [REDACTED] I could hear a very faint fire alarm as we walked. The door to the stairwell was closed when we got to it.</p>
<p>Moore (MET00010081) Level 11 lobby Approx. 03:10</p>	<p>In the statement by Moore (MET00010081), conditions on Levels 11 were reported to be untenable due to smoke and heat such that the team had to retreat immediately from the lobby. A second approach was reported to have been made shortly afterwards that also resulted in an immediate retreat from the lobby due to heat.</p>
<p>Li (IWS00000515) Level 22 Approx. 03:15</p>	<p>90 When we got out of the flat, the smoke was as bad as before but there are bright white lights in the hallway so it was brighter. It was brighter but the smoke was so thick you couldn't even see your hand if you held it out in front of your face</p>
<p>Macit (IWS00000904) Level 16 Approx. 03:40</p>	<p>76. The corridor was full of thick hot smoke and I couldn't see in front of me. It was pitch black. Sener led the way to the doors of the stairwell. We walked slowly across to them holding out our hands. We got to the doors and Sener pushed the door open.</p>

Transcript reference	Content – Lobby conditions
Wood, Transcript 12 September 2018, p8 Level 4 Approx. 03:47	<p>Q. Can you describe for us the conditions you encountered as you left the bridgehead and started to make your way up to the 4th floor?</p> <p>A. Yeah, it was smoky.</p> <p>Q. Can you describe for us the density? How thick was the smoke?</p> <p>A. It got thicker as we went through onto the floor.</p> <p>Q. What colour was it?</p> <p>A. Like black.</p>
Gomes (IWS00000622) Level 21 lobby Approx. 03:50	<p>118. I was a few seconds behind the others, as a result of grabbing for my keys. When I came out on to our landing, it was pitch black. I could not see a thing. The smoke was awful. I was struggling to breathe. I kept gagging and felt like I needed to throw up every time I tried to breathe; it was suffocating. The smell of the smoke was unnatural and toxic, it smelt of burning chemicals. It was very hot, but I had a cold wet towel over my head and wrapped around my body and a tea towel covering my mouth. The tea towel helped initially but the soot, smog and tar was getting through the tea towel making it difficult to breathe through it.</p>
Wood, Transcript 12 September 2018, p11 5 th floor lobby Approx. 03:50	<p>Q. So you went up to the 5th floor. Can you describe for us what you encountered on the 5th floor?</p> <p>A. Yeah, it was really hot and smoky, and we went in a room, in a flat, the front door was burnt off, and just – it was all full of fire. Just checking if there was anyone in there. But it was so hot, like, I knew there would be no one in there. I checked it anyway just in case and there was no one in there.</p>
Gallagher, Transcript 10 September 2018, p29 Level 12 lobby Approx. 04:04	<p>"We made it to I think the 12th floor and there was no one else on that floor. In the lobby it was warm, there was a smoke layer which was a little bit low and pitch black. There was clearly no fire in the hallway.</p>

N4 Position of bridgehead

N4.1.1 The table below records specific extracts from resident witness statements and the examination transcripts from fire fighters relating to the position of the bridgehead. Where possible, each item of evidence has been assigned an Approximate time, a location and placed in chronological order.

N4.1.2 The position of the Bridgehead was presented in Section 14 of my preliminary Phase 1 report.

N4.1.3 As a result of new evidence, I have changed one time from the time given in my preliminary Phase 1 report. This evidence indicates that the move of the Bridgehead from Ground to Level 3 is more likely to have occurred between 0830 and 0930 and not 0730, as I originally recorded.

Table N.3: Position of the bridgehead

Transcript reference	Content – Bridgehead location
Gillman, Transcript 23 July 2018, p59 Approx. 01:56	<p>Now, at that stage, where was the bridgehead?</p> <p>A. On the mezzanine. On the mezzanine floor. You go into the tower, turn to your right, there's like a glass staircase and a mezzanine. On the mezzanine walkway, just at the entrance to that.</p>
Cook, Transcript 24 July 2018, p197 Bridgehead moved to 3 rd floor Approx. 02:17	<p>Q. Right.</p> <p>Does that mean you weren't involved with the actual move from the second to the third floor?</p> <p>A. Not that I can recall. I just recall vividly that we were on the third when I came back.</p> <p>Q. Now, can you help us with the timing of the move from the second to the third floor? How soon after your taking these photographs at 02.15, 02.17, did you come</p> <p style="text-align: center;">Page 197</p> <hr/> <p>back into the building and find that it had been moved to the third floor?</p> <p>A. It would've been straight away, so -- yeah.</p> <p>Q. Right, okay, that's helpful.</p>
Cook, Transcript 24 July 2018, p202 Bridgehead moved to Ground floor Approx. 03:08	<p>"As the Bridgehead was being evacuated I took pictures of the FSG calls that had been written on the wall. The time of this evacuation was 03:08 approximately."</p> <p>Now, you took this picture, did you?</p> <p>A. Yes.</p> <p>Q. I think you say you did. The time of it, as you say, is 03.08. We have the Microsoft screenshot for that.</p> <p>A. Yes.</p>
Gillman, Transcript 23 July 2018, p88 Approx. 06:00	<p>Can you remember, at the time you were deployed on that particular task, where was the location of the bridgehead?</p> <p>A. The bridgehead was on the ground floor at the bottom of the glass staircase.</p>

Transcript reference	Content – Bridgehead location
Goulbourne, Transcript 12 September 2018, p199 Approx. 08:00	<p>Q. Where were you at about 08.00 am?</p> <p>A. Still in the lobby.</p> <p>Q. At the bridgehead?</p> <p>A. Yes.</p>
Cook, Transcript 24 July 2018, p234 Bridgehead moved to Level 3 Approx. 08:30	<p>Q. Then finally, just a timing point, I think.</p> <p>If you go to page 18 of your statement, you say -- this is after fixing some hoses:</p> <p>"Once it was fixed again, we were in a position to move the Bridgehead up again to the 3 floor — where is was based initially."</p> <p>A. Yes.</p> <p>Q. "The water was restored and there was a new Bridgehead command team of Group Managers — John Graham, Julian Spooner and Dan Alie. By this point the time was roughly between 8.30am-9am."</p> <p>Do you remember who manned the bridgehead at that point?</p> <p>A. I couldn't remember who was crewing the bridgehead, no</p> <p>Q. Do you remember who made the decision to go up to the bridgehead at that point?</p> <p>A. No, sorry.</p>

N5 Evidence of stair doors being open or closed

N5.1.1 Table N.4 below records specific extracts from the fire fighter witness statements, fire fighter oral evidence and resident witness statements regarding evidence of the stair doors being either open or closed. Each item of evidence has been assigned an Approximate time, a specific location and placed in chronological order.

N5.1.2 I have used this evidence in my investigations of the conditions within the single escape and fire fighting stair of Grenfell Tower.

N5.1.3 I will update this evidence when the Residents have completed their oral evidence to the Inquiry.

Table N.4: Evidence of stair doors being open or closed

Transcript reference Location/ time	Evidence
Kassemdjian (IWS00000951) From Level 17 Approx. 01:26	33. When we came out and went to the stairs the fire doors were shut. But each of the fire doors were shut, except the 4th floor.
Archer (MET00008001) Floor 6 Approx. 01:30	<p>Tom and myself were left in the lobby on the 6th floor, we were the only Fire-fighters there at that point. The previous Fire-fighters handed Tom and me their hose, it was a 45 jet and already plugged in from the fifth floor. I didn't plug in any hoses at all on the shift. I tried to force the door with a halogen tool, the door opened but bounced straight back and closed again, I forced it again, and again it was forced back to closed position. Myself and Tom then forced it open and wedged our bodies into the <u>entrance</u> so it wouldn't close back again. The windows must have been <u>open</u> to have made this happen. As soon as we wedged the door open thick black smoke came out, and filled the lobby area, the visibility was bad, I couldn't see the stairwell door.</p> <p>The hose on the 6th floor came from the outlet on the fifth floor, not the sixth. This was a problem because the stairwell filled with smoke from the sixth floor because the hose prevented the door to the stairwell closing. When I was in the lobby I could see lighting on the stairwell and the lights on the lift buttons. We</p>
Mekonnen (IWS00000912) Unknown levels Approx. 01:32	20. As I was coming down the stairs, on the lower floors but I do not recall precisely which floors, I could see that the stairwell doors leading onto the landings, which lead to the flats on each floor, were wedged open by the fire hoses passing through them which were coming from the stairwell. I saw that the doors being partially open, due to fire hoses coming from the stairs into the landings on each level, allowed the smoke to enter the stairwell and it was spreading up the stairs higher into the Tower.

Transcript reference Location/ time	Evidence
Hippel, Transcript 19 July 2018, p71 Level 16 stair door being held open by a resident requiring assistance	A. Pretty much. When I got up to the 16th floor, I may well have been the first up there, because I don't remember Jamal being up there. So when I got up to there, there was a teenager, maybe 15, 17, crouched in the doorway, propping the door open. There was smoke coming out. I don't remember now him telling me that there was someone in there, but he may well have told me there was someone in there.
Broderick (MET00012658) Floor 5 Approx. 01:45	<p style="text-align: right;">Page 7 of 14</p> <p>TIC, FF ABLE and FF ARCHER made their way back down the staircase. FF BRODRICK led the way into the lobby carrying the branch while I was carrying the sledgehammer and CM SEPHTON followed up behind as the door way to the landing area closed as best as possible on the hose reducing the amount of smoke entering the stairwell.</p> <p>This can sometimes occur during an incident when a hose has been stretched out for a long distance. In this case the hose had come from within the staircase, across the lobby and into the flat and somewhere along the way it had snagged on something. I made my way back along the hose to the flat entrance and We had just reached the fifth floor landing area so took a few seconds to compose ourselves before entering the fifth floor lobby area. FF BRODRICK took the branch again, CM SEPHTON had the TIC and I followed up behind. The door was pulled open, the smoke billowed into the stairwell again, just as thick and black, still floor to ceiling, still zero visibility. We slowly made our way towards the flat we had</p>
Sephton (MET00010895) Floors 4 and 5 Approx. 01:45	<p>started on the fourth (4th) floor. I could see that the crew before us had taken the hose up. We walked up the stairwell and followed the hose from the fourth (4th) floor to the fifth (5th) floor. The stairwell door had been wedged open by the hose. The hose was attached to the dry riser on the fourth (4th) floor and it was charged with water. The three (3) of us followed the hose into the flat. It was flat twenty-six (26)</p>
Dorgu, Transcript 9 July 2018, p170 Level 20 stair door was closed while Dorgu's team in the lobby Approx. 01:50	<p>Q. During the time that you'd spent on the 20th floor, do you think the door from the lobby to the stairwell had remained closed?</p> <p>...</p> <p>A. Yes, it had, because I had to open it to leave.</p> <p>Q. Yet you found the stairwell full of smoke? You said it was pitch black.</p> <p>A. Yes, it had basically built up against the door because the lobby – as we opened the door, the lobby filled with smoke, and when we closed the door, the stairwell filled with smoke.</p> <p>Q. Did the smoke in the stairwell come from the 20th floor lobby or do you think it was coming from elsewhere?</p> <p>A. Coming from downstairs, I think.</p>

Transcript reference Location/ time	Evidence
Mills (MET00008058 4) Ascending from bridgehead to 15 th floor Approx. 01:52	of calls also. Some fire doors were closed, it just depended if there was a hose going through the door. If I opened any doors I made sure they were closed behind me. All the doors I did open did close properly with self-closing mechanisms. The spread of smoke may have been due to the hoses going through the doors keeping the doors open a little. The hose is connected to the dry riser hose on the floor below and there should be another crew backing you up, so you have to breach the fire door. One flat door was actually open when I reached it but I don't know which floor or flat it was. The dry riser was definitely charged as the hose was solid. We reached the 15th floor, the dry riser was charged with water but we
Roberts, Transcript 23 July 2018, p122 Recording conditions up to Level 10, shortly after 01:57	Q. As you'd gone up the stairwell, had you noticed whether the doors to the lobbies were open or closed? A. I didn't notice any doors open on any of the floors all the way up.
Gillman, Transcript 23 July 2018, p68 Recording conditions up to Level 15 shortly after 01:57	Q. Can you remember whether any of the doors from the stairwell to individual lobbies were open or not? A. I don't recall seeing any open at that time, at that height, anyway.
O'Donoghue, Transcript 23 July 2018, p22 Level 9 open Approx. 02:00	Q. Can you remember whether the door between the stairwell and the third-floor lobby was open or closed at the time? A. On my journey inside the tower, I only remember, I think -- and I'm not sure what floor it was on, but it may be the ninth -- that one of the doors was wedged open with a halligan bar. To my knowledge, even though sometimes I couldn't see, I assumed the doors were closed.
Gillman, Transcript 23 July 2018, p71 Level 20 Approx. 02:05	Now, did you see Andy Harris open the door and go into the hallway of floor 20? A. Yes. Q. How far into the lobby did he go? A. He just opened the door and took one pace inside. The door was still ajar. Q. Did he shout anything and, if so, what did he shout? A. Yeah, there was a few of us shouting. I think he just shouted, "Fire Brigade", something along them lines. Q. What were the conditions like, first of all, on the stairwell at floor 20? A. Smoky. And when Andy opened that door, it let a lot of darker smoke into that stairwell.

Transcript reference Location/ time	Evidence
Desforges (MET00008013) A floor between 10-13 Approx. 02:10	<p>conditions were too bad on that floor and that it had not been searched. I think it may have been the thirteenth or fourteenth floor, but after speaking to another crew since the incident believe it was probably between the tenth and fourteenth floors. FF MITCHELL who was at this time in a crouched position attempted to open the lobby fire door but due to the heat and conditions fell to the floor. I can honestly say I've never seen conditions like this in my time in the brigade. The fire door on this lobby had worked very well as the condition in the stairwell although very hot and smoky was much better than in the lobby after we opened that door where the smoke was much thicker and the pressure and heat was something I had never experienced in my entire career.</p> <p>We decided we needed to search the floor so whilst FF MITCHELL held the fire door open I crawled on my belly into the lobby area and immediately found what I thought was a small human at first but then realised it was in fact a dog or a cat. I passed it to FF MITCHELL who in turn passed it to another crew going down the stairwell. The smoke in this area was thick black rolling smoke and visibility was near to nothing still.</p> <p>I followed the left-hand wall conducting a search leaving FF MITCHELL at the door. Although this is not policy as fire fighters are meant to stay together I decided I did not want the door to close behind me and be unable to get out so thought this was a safer option in the circumstances. I moved at speed as the heat was very intense and whilst doing so I found a casualty who was unconscious although I do not know as</p>
Eden (MET00008019) P12 On the way to Floor 20 Approx. 02:10	<p>knowing where we <u>were</u> and he said that he couldn't see anything. We continued up and I heard the EDDB team in front say, "We're going to 12 - this is us". We waited for about 30 seconds for them clear out of the way and continued up with the other EDDB team who were going to the 14th floor. The smoke had thinned out a little bit by now and coming up, I had seen that doors were being held open by bits of hose or were being wedged opened. I kept kicking things under foot, maybe bits of clothing and it started to feel like more of a fire situation as people were doing stuff and equipment could be seen. We followed</p>
Yahya (IWS00000498) Level 18 stair door Approx. 03:10	<p>after we all left the flat. [REDACTED] and [REDACTED] walked, and I carried [REDACTED] I could hear a very faint fire alarm as we walked. The door to the stairwell was closed when we got to it.</p>
Wharnsby, Transcript 6 September 2018, p199 4 th to 13 th floor After 03:18	<p>The conditions were changeable, so when we had crews come up, the stairwell would be clear to a point and then we'd have crews come up and make entry off of the stairwell onto the floors. Every time they done that, it filled the stairwell up with smoke completely, to the point where we would push BA crews into the door and ask them to shut the door behind them, and let it clear.</p> <p>There was a few times --</p> <p>Q. When the doors were closed, were they effective?</p> <p>A. When the doors were closed, they were effective. I sat without BA on for a period of time, and the doors were radiating heat but were keeping the smoke back.</p>

Transcript reference Location/ time	Evidence
Gomes (IWS00000515) Level 21 stair door Approx. 03:50	119. As I got to the stairwell door, the swing shut door was open and I walked through the door. I had presumed that the door was closed to begin with, but I did not know what the situation was as I was the last one in my group to walk through the door.
Gillman, Transcript 23 July 2018, p90 Levels 10, 11 and 12 closed Approx. 06:00	<p>Q. As you went up, can you remember whether the doors from the stairwells to the lobbies were open or closed?</p> <p>A. On the floors that I was on, 10, 11 and 12, they were closed.</p>