

Statement of Witness

Statement of	Barry Martin McAuliffe
Age of witness	Over 18
Occupation of witness	Service engineer employed by Allied Protection Limited (Allied)

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- 1 I, Barry Martin McAuliffe, of 6 Jubilee Road, Burgess Hill, West Sussex RH15 9TL will say as follows:
 - 2 I am employed as an service engineer at Allied and I provide this, my third witness statement, in response to a request, pursuant to Rule 9 of the Inquiry Rules 2006, from the Solicitor to the Grenfell Tower Inquiry (the **Inquiry**) dated 26 May 2021 ("**BM01**": _____) (the **Request**). I refer to the questions set out on pages 1 to 5 of the Request ("**BM01**": _____) using the numbering therein.
 - 3 This statement is supplemental to my first statement given on 26 June 2017 ("**BM02**": LAK00000486) and my second statement dated 26 June 2020 ("**BM03**": LAK00000522).
 - 4 **Question 1(a) of the Request ("**BM01**": _____):** *In your statement to your then manager, Andy Vernall, dated 26 June 2017 {LAK00000486}, you said that during your inspection of the smoke control system at Grenfell Tower on 15 May 2017 "[you] proceeded to activate the smoke detector in the lift lobby of each floor, listed [sic] for the vents to open, you can both see and hear this activity". In a witness statement to the Inquiry dated 16 June 2020 {LAK00000522}, you said in relation to that 15 May 2017 inspection that you had carried out testing "one floor at a time". You then said that: "[you] set off each smoke detector head using my own artificial smoke (until the red light turned on) and checked that the smoke extract system in the lift lobbies started. [You] then proceeded to the AOV control panel in the reception lobby and reset the system. [You] repeated this for each floor, using the emergency stairs for access." How did you check that the system in the lift lobbies had 'started'?*
 - 5 I was asked to carry out a fire alarm service but upon my arrival, I identified that Grenfell Tower had a complex AOV system. I rang my manager, Chris Catty and asked him if I

could decline the job as I had only had experience in more basic AOV systems. Mr Catty told me that I needed to complete the job and so I proceeded based on the knowledge I had at the time. In order to carry out a check of the AOV system, my method was to check the smoke detector head for a red light, which would be activated by artificial smoke in the ceiling of each lift lobby, to check whether it then activated the smoke extraction systems in the walls on each floor. This would be confirmed by the loud noise coming from the vents and a noticeable change in air pressure in the lobbies, which indicated to me that had there been smoke it would have been extracted. I started on the top floor where, after activating the smoke detector in the lift lobby and checking that the system had started, I returned to the ground floor using the stairs to reset the control panel. I then returned to the same floor to check that the system had normalised and then moved to the floor below to repeat the process.

- 6 **Question 1(b) of the Request ("BM01": _____):** *In relation to your recollection of seeing and hearing the vents opening, please set out how (and from where) you made those observations? What exactly did you see/hear?*
- 7 If the smoke detector was working, I would expect to (and did in the case of Grenfell Tower) hear a loud noise coming from the vents, which were approximately 1 to 2 metres away from where I was standing underneath the smoke detector located in the ceiling of each lift lobby. The vents were embedded in the walls and the smoke detectors were situated in the ceilings on each floor. I started on the top floor of the building and worked my way down on testing of each lift lobby. I recall that every lift lobby had a smoke detector and wall vent on each of the 23 floors of the Grenfell Tower.
- 8 **Question 1(c) of the Request ("BM01": _____):** *Did you open the grilles to check that the dampers on each floor had activated?*
- 9 No, I did not open the grilles on each floor as I did not have the necessary equipment or training.
- 10 **Question 1(d) of the Request ("BM01": _____):** *Did you inspect the fans in each lift lobby?*
- 11 No, I did not know that this was required at the time.

- 12 **Question 1(e) of the Request** (“BM01”: _____): *Did you check the fan speed of the lift lobby fans on activation? If so, how?*
- 13 No, as mentioned at paragraph 11 above, I did not know that this was required at the time.
- 14 **Question 1(f) of the Request** (“BM01”: _____): *What sound could you hear on activation of the system on each floor tested? Was this the sound of the fans and/or of the dampers and/or of the vents?*
- 15 I was not aware at the time of what sound specific components usually made. Upon activation of the system on each lift lobby floor, I heard a loud noise coming from the vents and felt a noticeable change in air pressure (as mentioned above). I cannot be more specific about which of the elements were making the loud noise, but the noise (together with the change in air pressure) indicated to me that the vents on each floor were working properly.
- 16 **Question 1(g) of the Request** (“BM01”: _____): *Did you check the HMI panel (beyond resetting the system)? If so, how and what did it show?*
- 17 Beyond resetting the system following activation of the smoke detector on each floor, I did not have the chance to check the HMI panel as I was called away by my manager to an emergency call out around 3pm. My start time had also been delayed by two hours due to the late arrival of the caretaker (as referred to in “BM03”: LAK00000522).
- 18 **Question 1(h) of the Request** (“BM01”: _____): *Were you aware that the panel does not provide feedback as to the actual state of the damper on the floor of activation (the HMI panel would only say whether or not the signal had been sent – it would not say whether the damper was open/closed)?*
- 19 I cannot recall the full details of the control panel. To the best of my recollection, the control panel gave out basic location information upon activation.
- 20 **Question 2(a) of the Request** (“BM01”: _____): *At paragraph 40 of your witness statement dated 16 June 2020, in relation to the Inspection Certificate’s reference to the vents being left in the ‘closed’ position, you say that: “This relates to the*

smoke extraction system in each lift lobby that automatically starts once the smoke detector heads are activated. The smoke extraction system stops once the AOV system is reset at the control panel in the ground floor reception lobby. I noted that the extraction system was closed down on reset.” What do you mean by ‘the extraction system was closed down on reset’?

- 21 I meant that it had gone quiet so I couldn't hear the noise coming from the vents any more. There was also a noticeable change in air pressure. Together, this indicated to me that the extraction system had closed down as it should have done.
- 22 **Question 2(b) of the Request ("BM01": _____):** *How did you check that this had occurred? Was it by reference to the system's fans turning off, or by reading the control panel, or by some other method?*
- 23 I returned to each floor after resetting at the control panel and checked that noise was no longer coming from the vents, that the air pressure had normalised and that the red light on the smoke detector had gone off.
- 24 **Question 3(a) of the Request ("BM01": _____):** *At paragraph 42 of your witness statement of 16 June 2020, you say that: "The vents opened when the smoke extraction system was activated by the testing. The smoke extraction system turned off and the vents closed down upon reset of the AOV system." Did you watch/check each one of the four dampers on Floors 3 to 18?*
- 25 No I did not. I was not aware of what dampers were at the time and so I did not check them.
- 26 **Question 3(b) of the Request ("BM01": _____):** *How did you know that the vents had closed when the system activated?*
- 27 I went back to each floor and checked that the noise had stopped and the air pressure had normalised.

- 28 **Question 3(c) of the Request ("BM01": _____):** *Did you visually check each one of the four dampers on each floor to confirm that they had closed after every activation and reset?*
- 29 No. I checked by listening to the vents to ensure the noise had ceased and the air pressure had normalised.
- 30 **Question 3(d) of the Request ("BM01": _____):** *Did you open the grilles to check that the dampers on each floor had opened or closed? If not, what was your visibility of the damper with the grille in place?*
- 31 No I did not open them and as far as I can recall there was little to see behind the grilles. Any mechanism was not visible.
- 32 **Question 3(e) of the Request ("BM01": _____):** *In the course of all your observations (visual and auditory), did you notice any component of the smoke control system not working as expected?*
- 33 No I did not notice any component of the smoke control system not working as I would expect.
- 34 **Question 4(a) of the Request ("BM01": _____):** *In Section 11 of her Phase 2 Report of the Smoke Control System, at paragraphs 11.6.95 to 11.6.97, and in Table 11-7, Dr Lane states that BS EN 12101-6:2005, BS 5839-1:2013 and BS 9999:2008 required you to undertake the following tests as a minimum. "a) Activate the system using a smoke detector; b) Inspect the position of the dampers in the lobbies on all floors; c) Inspect the position of the by-pass dampers at Level 2; d) Inspect the operation of the smoke extract fan at roof level; e) Inspect the operation of the smoke extract fan at Level 2; f) Inspect the HMI panel, to check that it correctly indicates the system operation, floor activation and status of all dampers; g) Reset the HMI panel at the Ground Floor once all inspections of dampers and fans have been completed. [11.6.96] Therefore, the engineer was required to activate the system 24 times (i.e. once for each lobby), and for each activation of the system, carry out the relevant checks on the other 23 floors. [11.6.97] The engineer was also required to carry out checks on the Boxing Gym corridor AOV at Level 2 and Community Room lobby AOV at ground level." Further, at*

paragraphs 11.6.109 to 11.6.116, Dr Lane states that you were required to consider: (1) the primary and secondary power supply switchover at ground and roof level for the fans (2) the back-up batteries (3) the wiring (4) the control equipment in manual mode (5) the environmental function, (6) the interfacing of the smoke control system and BMS. However, she could not find evidence of the same. Were you aware of the above testing requirements at the date of your visit to Grenfell Tower?

- 35 No I was not aware of all the listed testing requirements cited by Dr Lane.
- 36 **Question 4(b) of the Request ("BM01": _____):** *Did you carry out the above steps during your inspection of the smoke control system at Grenfell Tower on 15th May 2017? If so, how? If not, why not?*
- 37 Taking each of the steps listed in the question at paragraph 34 above, I reply as follows:
a) I did activate the system using a smoke tester; b) I did not inspect the position of the dampers in the lobbies; c) I did not inspect the position of the by-pass dampers at Level 2; d) I cannot recall whether I inspected the operation of the smoke extract fan at roof level; e) it is likely that I did inspect the operation of the smoke extract fan at Level 2 as part of the testing I carried out on each floor but I cannot be certain; f) I did check that the HMI panel correctly indicated the system operation and floor activation; g) I did reset the HMI panel at the Ground Floor once all inspections of fans had been completed.
- 38 I confirm that I did activate the system and carry out the relevant checks for each lift lobby on every residential floor. I was not made aware that there was a boxing gym or community room lobby in the building. I did walk around the outside perimeter of the building just to familiarise myself with its layout. During my walk around, I noticed a nursery on the ground floor. I mentioned the nursery to the caretaker but he told me that the system of the main building was not linked in any way to the nursery.
- 39 Regarding the requirements set out at paragraphs 11.6.109 to 11.6.116 of Dr Lane's report: (1) I was not made aware of the primary and secondary power supply switchover at ground and roof level for the fans; (2) I asked the caretaker about the back-up batteries but received no reply; (3) I checked that the wiring was in place and that there was nothing untoward; (4) I tested the control equipment in automatic mode, not in manual mode; (5)

I did not know what the environmental function was at the time; and (6) I did not see the interface of the smoke control system with the BMS and in any case I had no knowledge of BMS systems.

40 **Question 4(c) of the Request (“BM01”:** _____); *Do you agree with Dr. Lane’s view that you should have done this? If not, why not?*

41 I carried out the testing that I have already described in this statement. I did not carry out all the tests that Dr Lane lists and cannot comment on their applicability.

42 **Question 5(a) of the Request (“BM01”:** _____); *Dr Lane notes at paragraphs 11.6.103 to 11.6.105 that the Allied Protection Inspection Certificate for 15 May 2017 records that you left site before all checks on the system could be completed {LAK00000011}. Dr Lane has considered the evidence from Tunstall, which shows that the auto-dialler connected to the smoke control system received 20 ‘Smoke Detector’ signals on 15 May 2017 (par. 11.5.45 to 11.5.46). Dr Lane notes that there were 26 smoke detectors in the Grenfell Tower smoke control system and that there therefore would have been 26 ‘Smoke Detector’ signals if the system had been tested for all zones. In your witness statement dated 16 June 2020 {LAK00000522}, you state that you had omitted to test the ground floor detector due to being called away to complete a reactive repair. Is it correct that on 15 May 2017 you did not test all 26 smoke detectors, but only 20 detectors?*

43 I am certain that I tested the smoke detectors in the lift lobbies of all 23 floors of the building. It is possible that the first few tests I performed were not logged on the Tunstall system. This is because, when I first went into the office at around 10.30am, the system was put on ‘test’ so that the monitoring centre knew not to respond. By the time I started work some two hours later (due to the caretaker arriving late), it became apparent very quickly that the system was no longer on ‘test’ because the fire brigade turned up after I began testing. I visited the KCTMO office to inform them that the fire brigade had attended. They explained that the ‘test’ period had expired due to my delayed start so I asked them to put the system back on ‘test’. It is therefore possible that the Tunstall system did not log the first few tests which I performed. This is the only explanation I can

think of as I am absolutely certain that I tested every smoke detector on every residential floor lift lobby.

- 44 **Question 5(b) of the Request (“BM01”:** _____): *In addition to the ground floor detector, which other detectors/floors did you not to check? Why not? How did you choose which detectors not to check?*
- 45 Please see my answer at paragraph 43 above.
- 46 **Question 6 of the Request (“BM01”:** _____): *The Tunstall auto-dialler records (par. 11.6.103 of Dr. Lane’s report) for the 15th May 2017 visit show the auto-dialler being activated 20 times between 13:47:23 and 15:02:12 (a period of 1 hour and 15 minutes). Those times do not match the recorded visit time on the Inspection Certificate for 15th May 2017 (Arrival 12:15 and departure 14:15). Are you able to explain this discrepancy?*
- 47 The Inspection Certificate was not filled out on the day of the inspection as I was pulled away to an emergency. I was only prompted by Allied to complete the Certificate on the day of the fire, at which point I was trying to recall the details under considerable stress due to the events of the day. It is likely that this is the reason for the discrepancy on the Certificate as I am certain that I was at Grenfell Tower for longer than 1 hour 15 minutes. I initially arrived on site at the beginning of my working day around 8am. I then had to wait for the office at Grenfell Tower to open. At around 10am/10.30am the office opened, however there was then a period of two hours where I was delayed starting the job due to the caretaker not being present. I was then called away by my manager around 3pm. I would usually fill in the Certificate on the day of inspection; however, there was a backlog of jobs, some of which were emergencies, and this delayed me filling out the Certificate.
- 48 **Question 7(a) of the Request (“BM01”:** _____): *Dr Lane states at paragraphs 11.6.106 to 11.6.108 that ‘For the 1 hr 15 minute period the smoke detectors were recorded as activating this meant Mr McAuliffe had just under 4 minutes to carry out the 20 tests he purports to have carried out. For the reasons set out in Table 11-7, I do not consider this to have been viable. [11.6.107] Taking Level 18 as an example, Mr McAuliffe needed to go to Level 18, trigger the smoke detector, go back down to the Lobby*

to read the HMI Panel; it is not clear how he inspected the 4 dampers before or after he injected the smoke in the detector at Level 18 from his evidence. [11.6.108] Once down in the lobby he hit reset on the HMI panel, and then needed to travel back up to Level 18 to visually confirm the dampers had shut. He could not rely on the HMI Panel to do that as it did not record the physical state of the dampers, only the signal being sent to them.' What is the usual duration (overall and/or per floor) of your preventative maintenance visits for testing/maintaining the smoke control system in a high-rise building?

49 Based on my current knowledge of preventative maintenance visits for testing and maintaining smoke control systems in high-rise buildings, I would say the usual duration per floor would be 10 to 20 seconds to activate the system, then time to return using the stairs to reset the panel. This would activate the lifts and, although I cannot recall exactly, it is likely that I used the lifts to return to the floor to check the system had switched off, before using the stairs to go down to the next floor. This would explain the timings that Dr Lane queries. However, on 15 May 2017 I would not have been aware of what was usual for a high-rise building such as Grenfell Tower. I believe the entire day was blocked out for me by Allied. For the checks I actually carried out on the day (as outlined in this statement), I would say that 4 minutes per floor is normal based on my comments re lift and stair usage.

50 **Question 7(b) of the Request ("BM01": _____):** *Was the time period you spent on each floor on 15th May 2017 shorter than your usual practice (and, if so, by how much)?*

51 Please see my response at paragraph 49 above. The time period I spent on each floor would be considered normal for the extent of tests that I actually carried out on the day.

52 **Question 7(c) of the Request ("BM01": _____):** *Do you agree with Dr. Lane's assessment that it was not 'viable' to carry out 20 tests within a 1 hour 15-minute period of time? If you do not agree, why not?*

53 No, I do not agree. I carried out all the tests that I have described in this statement.

- 54 **Question 7(d) of the Request ("BM01": _____):** *Given the 4 minute per-floor inspection time, are you confident that your inspection of the smoke control system's components on each floor was sufficiently thorough to detect any malfunctions?*
- 55 Yes, I am confident that my tests were sufficiently thorough for what I was there to do.
- 56 **Question 8(a) of the Request ("BM01": _____):** *In your statement dated 26 June 2017 {LAK00000486}, you state that you asked 'Paul the caretaker' to "reset the panel after each activation", but he refused to do so. Did the caretaker explain why he refused to assist you?*
- 57 I do not have a clear recollection of why the caretaker refused to assist but I do recall that he was not willing. It may have been because he was busy.
- 58 **Question 8(b) of the Request ("BM01": _____):** *Is it your expectation that the building caretaker would assist with the testing of the smoke control system? If so, what is the basis for this expectation (common practice, training from Allied Protection etc.)?*
- 59 It is not my expectation no. The caretaker had explained to me that he did informal weekly tests of the smoke detectors and he showed me a jar of artificial smoke he used for that purpose. I therefore formed a view that he had good knowledge of the system and therefore may be able to assist me. In the moment, I asked if he wanted to help, especially given that I had been delayed by two hours. However, he did not want to assist. I accepted this and did not press him further. I carried on the work on my own.
- 60 **Question 8(c) of the Request ("BM01": _____):** *As far as you are aware, is the time allocated for each inspection visit involving the testing of a smoke control system premised on the assistance of a member of the client's staff at the location?*
- 61 No not at all, I believe I was allocated a full day to carry out the job by myself but, as mentioned already, I was delayed by two hours and the day was cut short by an emergency call out.

- 62 **Question 8(d) of the Request (“BM01”:** _____): *As part of such maintenance visits, are you ordinarily accompanied by another Allied Protection engineer who can reset the smoke control panel and communicate with you via handheld radios or similar?*
- 63 No. Until an engineer goes to a site, we are unfamiliar with what the job entails. After my visit on 15 May 2017, if asked I would have recommended that two people go to the Grenfell Tower in future.
- 64 **Question 9(a) of the Request (“BM01”:** _____): *The Inspection Certificate {LAK00000011}, under ‘Tests/Checks done’, asks ‘Clean, Lubricate and tighten all actuators, dampers and louvres?’ The answer to this question on the Certificate is ‘no’. Were you expected by Allied Protection to clean/lubricate/tighten actuators, dampers and louvres as part of the maintenance visit?*
- 65 For a simple AOV system I would have added lubrication if necessary during my visit. The Grenfell Tower AOV system was a sophisticated one, and I did not have the knowledge or the equipment to do anything other than what I did on the day.
- 66 **Question 9(b) of the Request (“BM01”:** _____): *If so, why was this not done during your visit on 15th May 2017?*
- 67 Please see my response above at paragraph 65.
- 68 **Question 10(a) of the Request (“BM01”:** _____): *In your statement dated 26 June 2017 {LAK00000486}, you state that you were “not aware of the override switches on each floor”. In your witness statement dated 16 June 2020 {LAK00000522}, at question 7, you explain that you would have tested the override switches (and other systems) if you had not been called away on an emergency. Do you accept that the override switches are part of the smoke control system and so ought to have been tested before the Inspection Certificate clearing the smoke control system is issued? If not, why not?*
- 69 Yes I do accept that the override switches were part of the smoke control system. These ought to have been tested but I didn’t even get time to consider override switches on the

day of my visit because I was only concerned at the start with the automatic system. I also did not have the keys with which to perform this task.

70 **Question 10(b) of the Request** (“BM01”: _____): *In relation to maintenance/inspection work which was left incomplete due to the shortage of time on 15th May 2017 (checking all smoke detectors, checking the override switches and cleaning/lubricating/tightening actuators, dampers and louvres), what (if any) steps did you take to ensure these steps were completed following your visit?*

71 I marked the job as ‘incomplete’ on the Inspection Certificate. This would have confirmed to Allied that a second visit was required to complete the job. Allied would then take steps to arrange this. However, I did inform my manager, Chris Chatty, that my job was incomplete on the day of inspection when he called me to ask that I leave for another emergency job at around 3pm.

72 **Question 10(c) of the Request** (“BM01”: _____): *Did Allied Protection follow up with you about the 15th May 2017 Inspection Certificate’s note that not all required tests/checks/maintenance tasks have been completed?*

73 No, as mentioned, Allied only prompted me to complete the Inspection Certificate on the day of the fire.

74 **Question 11 of the Request** (“BM01”: _____): *What, if any, training or instruction (oral or written) were you provided on (a) the tests, checks and maintenance tasks to be carried out on a smoke control system during a preventative maintenance visit (b) how to correctly test a smoke control system (including on how to check that dampers correctly open/close)?*

75 By the time of my visit to Grenfell Tower I had not received any specific training or instructions regarding smoke control systems. As mentioned in my previous statement to the Inquiry dated 16 June 2020 (“BM03”: LAK00000522), I joined Allied as a trainee engineer on 1 September 2016. At the start of my employment with Allied I held the City and Guilds 236 electrical installation certificates, the City and Guilds 2377 PAT testing certificates and the 17th Edition wiring regulations certification. After I joined Allied, I undertook an emergency lighting course with the Fire Industry Association (FIA), various

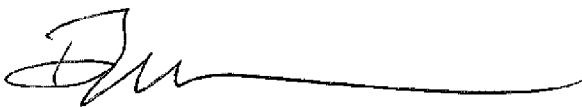
manufacturer-led courses for fire panels and FIA Units 1-5. However, at the time of the fire, I only had FIA Part 5. This covered servicing and maintenance. Before carrying out jobs alone, I was 'buddied up' with someone for four weeks. This buddy then determined whether I was capable of undertaking jobs alone. Prior to 15 May 2017, I had carried out jobs by myself for a couple of months but only on more basic AOV systems, unlike the complex system at Grenfell Tower.

76 As previously stated, I had no prior knowledge of Grenfell Tower or what to expect until I arrived at the building. My job sheet had no information.

77 **Question 12 of the Request ("BM01": _____):** *How was your work supervised (on 15th May 2017 and generally)?*

78 My work on the day was not supervised. I could call on a colleague for help if I needed to but I was generally on my own. I assessed the site to the best of my abilities and tested what I knew in good faith. I am confident that the work I carried out was done to a satisfactory standard. I concluded based on my tests that the AOV system at Grenfell Tower was functioning properly. This was confirmed in my mind as when the system was not on test the fire brigade responded.

This statement consisting of 13 pages is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true. I am willing for this witness statement to form part of the evidence before the Inquiry and published on the Inquiry's website, provided that all confidential personal information has been removed prior to such publication.



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Signed

01/07/21

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Date

Statement of Witness – Index of Documents

Document Number	Inquiry's Unique Reference Number	Document Description
BM01	<hr/>	Inquiry's Rule 9 Request Letter to Barry McAuliffe dated 26 May 2021
BM02	LAK00000486	Statement of Barry McAuliffe to Andrew Vernall Managing Director of Allied on 26 June 2017
BM03	LAK00000522	Statement of Barry McAuliffe to the Inquiry dated 26 June 2020 made pursuant to a Rule 9 Request