

IN THE MATTER OF THE GRENFELL TOWER INQUIRY

CLOSING SUBMISSIONS BY J S WRIGHT & CO. LIMITED

IN RESPECT OF PHASE 1 OF THE INQUIRY'S INVESTIGATION

1. J S Wright & Co Limited (JSW) remains fully committed to openly and fully assisting the Chairman with his Inquiry into the unprecedented events of 14th June 2017.
2. JSW was the Mechanical and Electrical sub-contractor appointed by Rydon Maintenance Limited to perform work within the overall refurbishment of Grenfell Tower (the M&E work). In order to assist the Chairman, JSW will make some brief comments about some of the evidence that relates to the M&E work and the issues under consideration in Phase 1.
3. This closing submission is made at a time when the Inquiry has already disclosed a vast amount of information and the process of disclosure is ongoing. This document does not, and cannot, cover every issue that is relevant to Phase 1 of the Inquiry and JSW's involvement in refurbishment work relevant to Phase 1 issues.
4. Phase 1 of the Inquiry is focussing on the factual narrative of the events of 14th June 2017 although JSW notes that in some respects evidence that is perhaps better suited to consideration in Phase 2 has already been disclosed and put into the public domain.
5. Certain comments have been made in writing and orally by some of the Inquiry's experts, and in particular by Dr Lane, concerning the alleged non-compliance of elements of the M&E work. There is a degree of understandable concern about the extent to which those comments, which are now going to be more closely assessed in Phase 2 and in all probability be subject to revision, will be taken into account at this stage of the Inquiry's work.
6. JSW will have the opportunity to comment further on all matters relevant to the M&E work during Phase 2 of the Inquiry.
7. In order to assist the Inquiry, the Chairman will be aware that JSW has submitted a detailed Position Statement dated 31st August 2018 and has also provided the Inquiry with 12 witness statements and exhibits which describe its role in the refurbishment works.

The dry rising main

8. This element of the M&E work included refurbishment to the existing dry rising main and extending it from level 4 to ground floor level. The work also involved the provision of a new inlet valve at ground floor level (south elevation near to the main entrance door of Grenfell Tower) and some new outlet valve equipment within lobby areas.
9. JSW engaged a specialist sub-contractor, Argus Fire Protection Company Limited, to undertake the main part of this work.
10. Further information about the dry rising main can be found in JSW's Position Statement dated 31st August 2018 (paragraphs 29-40) and in witness statements submitted on its behalf.
11. Issues about whether the existing dry riser should have been changed to a wet riser are best suited to investigation at Phase 2 of the Inquiry and JSW will provide the Chairman with such assistance as it can at that stage.
12. For present purposes, JSW would note that it raised this issue with others, including the Royal Borough of Kensington and Chelsea's (RBKC) Building Control Department. Building Control advised that there was no requirement to change the system to a wet riser (JSW Position Statement – paragraphs 37-39 (JSW00001883) and the witness statement of David Paul Bradbury dated 26th October 2018 – paragraphs 33-46.
13. The evidence presented to the Inquiry indicates that the dry riser operated as it should have done and as expected during the initial stages of the fire.
14. The first firefighters in attendance on 14th June 2017 were able to plug into the dry rising main outlet on the fourth floor as it was safe to enter the lift lobby due to the absence of any or any significant smoke (e.g. evidence of FF Badillo – transcript of evidence 29th June 2018 page 84, line 22, and of FF Dorgu – transcript of evidence 9th July 2018, page 105, line 22).
15. The dry rising main at Grenfell Tower allowed the first firefighters to charge the hose on the fourth floor and were able to in order to fight, and extinguish, the fire in flat 16 (e.g. transcript of evidence of FF O'Beirne – 2nd July 2018, page 136, line 15 and transcript of evidence of FF Dorgu - 9th July 2018, page 106 line 4).

16. When asked about the dry riser during her oral evidence on 26th November 2018, Dr Lane observed, “No, the evidence from early firefighting is that it performed effectively in their opinion” (transcript of evidence page 104, line 2). During the same evidence, Dr Lane said that she was not aware that detailing of the physical infrastructure of the dry riser was a problem (transcript of evidence page 105, line 4).
17. JSW makes no comment at this stage on whether the dry riser should have in fact have been a wet riser, whether the dry riser created any significant delay in the initial stages of firefighting, or on the suitability and effectiveness of the dry riser during the later stages of the fire when there were multiple fires in multiple locations on multiple floors.

The AOV/smoke control system

18. JSW engaged PSB UK Limited (PSB) as its specialist sub-contractor to design the smoke control system.
19. PSB prepared a series of Technical Submissions in relation to the proposed design and operation of the system which were submitted to the RBKC Building Control Department.
20. Building Control approved the design contained in PSB’s Technical Submission (Rev 3) in June 2015 (see witness statement of David Paul Bradbury dated 26th October 2018 – paragraph 105-108).
21. The Inquiry has already received a lot of evidence about the smoke control system. Questions of suitability and compliance are to be investigated in great detail during Phase 2 of the Inquiry during which JSW will provide assistance as required.
22. JSW will not comment further about those matters for the following main reasons;
 - 1) Dr Lane observed during her evidence to the Inquiry on Monday, 26th November 2018, this topic is “fiendishly complex to understand” (transcript page 141 line 13);
 - 2) Dr Lane will undertake further detailed investigations in relation to the smoke control system as part of her Phase 2 work (indicated by her during oral evidence on 22nd November 2018 and on 26th November 2018). Therefore, comments already made by Dr Lane, in writing and orally, in relation to the smoke control system may need to be

reviewed once her Phase 2 work has been completed and a further report has been submitted; and

- 3) The Inquiry Team has indicated in writing that the Inquiry will not be reaching any conclusions in Phase 1 on the compliance of the smoke control system (letter from the Inquiry Team dated 26th October 2018).

23. That being said, and having regard to the main factual issues for consideration in Phase 1, JSW makes the following observations about the smoke control system which it believes are relatively non-controversial:

- 1) It was a mechanical system;
- 2) It activated automatically upon detection of smoke by a smoke detector head installed in lift lobbies at Grenfell Tower;
- 3) Upon activation, it set in chain a series of events including notifying a remote monitoring company. This company was Tunstall and they are recorded in the LFB Operational Response document as being the second 999 call to the LFB Control Operations Room at 00:57:44 hours on 14th June 2017 (LFB00001914_0007).
- 4) The system was designed and intended to operate on one floor only;
- 5) It was not designed or intended to operate in a multi-floor, multi-location internal fire;
- 6) The system was designed and intended to operate by controlling smoke in the lift lobby areas, keep the stairs clear of smoke and facilitate egress of residents and ingress of firefighters;
- 7) Although the initial activation was automatic, the system provided a manual override mechanism to change the floor on which the smoke control system could be operated.

24. The smoke control system was tested, commissioned, demonstrated and witnessed by various stakeholders including Building Control, and PSB provided a completion certificate dated 3rd May 2016 to JSW (JSW Position Statement -paragraphs 50-51 (JSW00001883) and the witness statement of Alan Whyte dated 26th October 2018.

25. The smoke control system was also inspected by a third party engaged, JSW understands, by the KCTMO. This is referred to at paragraph 55 below.
26. All issues relating to the smoke control system will be fully investigated during Phase 2 of the Inquiry's work.

Fire and smoke spread

27. The Chairman has been provided with a substantial amount of evidence relating to the initial cause of the fire and subsequent spread of fire and smoke from flat 16 to the exterior of Grenfell Tower, and thereafter within the Tower itself.
28. The evidence from all witnesses, lay, professional and expert on the subject of fire and smoke spread is lengthy and complex and will be the subject of further detailed investigation within Phase 2 of the Inquiry's work. JSW will provide such assistance as it can at that stage.
29. The evidence relating to the smoke control system in particular will form a significant element of that work (see above).
30. The evidence indicates that in the very early stages of the fire the level 4 lobby, other lobbies and the stair were relatively clear of smoke (see for example the evidence of the first firefighters in attendance).
31. Professor Purser indicated in his evidence to the Inquiry on 29th November 2018 that up until approximately 01:30 hours on 14th June 2017 lobbies and stair were reasonably clear and navigable (transcript of evidence page 90, line 13).
32. The following is a brief comment on the potential routes of fire and smoke spread within Grenfell Tower in so far as they may be relevant to the M&E work (none of the following are relevant to the cause of the fire in the kitchen of flat 16):

- 1) Within flats

Within the flats at Grenfell Tower, the M&E work included work to installations such as radiators and the Heat Interface Units (HIU - sometimes wrongly referred to as boilers) including the electrical work to those units.

There is no evidence that this work contributed to any significant extent to the spread of fire and smoke on 14th June 2017.

2) From flats into lobbies

This is likely to be due to flat doors being opened and/or left open and/or not closing or being closed properly, or due to leakage from around doors.

JSW did not undertake any works to flat doors.

3) From lobbies into the stairs

This appears to have been mainly through stair doors that had been opened or propped open by people exiting the Tower and/or by firefighters.

JSW did not do any works to stair doors.

4) Via lift shafts and lift doors

JSW did not undertake any work to the lifts or lift shafts

5) Vertically within the core of Grenfell Tower

The M&E work involved the installation of pipework distributing water from the basement to individual flats (flow and return, and boosted cold water). The holes cut in the floors to enable this installation were fire stopped by a third party

6) Horizontally between flats and lobbies (other than through doors)

The installation of that water distribution pipework from the lobbies into flats required holes to be cut above flat doors and fire stopped (by a third party).

There has not been any evidence that this pipework or associated work played any significant role in the spread of fire and smoke on 14th June 2017.

7) From shafts into lobbies via smoke dampers

The Inquiry has heard some evidence to suggest that some smoke entered the lobby of floor 23 from the shafts via the smoke dampers installed as part of the M&E work. As this issue will be investigated further by the Inquiry's experts in Phase 2, JSW will need

to consider this evidence in detail and will provide information for the Chairman at that time.

- 8) Between lobbies and stairs and vertically through the stair well due to new gas pipe work

JSW did not undertake any works to gas pipework within Grenfell Tower, other than minor works in the basement for the new boilers.

- 9) Ventilation ducts in each bathroom

JSW did not undertake works to these risers.

33. There are many potential routes for fire and smoke spread. The extent to which they contributed to fire and smoke spread at any given location, the relative extent of that contribution and the impact of that will be assessed in Phase 2, particularly by Dr Lane. JSW will provide further information at that time.
34. JSW would confirm that the M&E work did not involve works to the windows or window areas (other than to the kitchen extract fans) nor to the external envelope of Grenfell Tower (save for work to the ductwork/grille at level 2 which does not appear to have played any role in the cause or spread of fire or smoke within Grenfell Tower).

The kitchen extract fan

35. The Chairman has been provided with evidence about how the kitchen extract fans, particularly the kitchen fan in flat 16, may have played a part in the events of 14th June 2017.
36. It now seems clear that neither the kitchen extract fan nor the wiring and switches from the spur to the extractor fan were the cause or origin of the fire in the kitchen in flat 16. Support for this proposition can be found in the evidence of Dr J Duncan Glover given to the Inquiry on 27th November 2018 (transcript of evidence pages 37 – 43).
37. This is supported by the evidence of Professor Niamh Nic Daeid given to the Inquiry on 28th November 2018 during which she agreed that the extractor fan effectively played no causative role in the initial fire (transcript of evidence page 50, line 18).

38. Even if the extractor fan in flat 16 was operating in the ‘on’ mode and sucking air out of the kitchen this would have made a slight difference in terms of the egress of fire and smoke from flat 16 compared to fire and smoke exiting via an open window (and the kitchen windows in flat 16 were open at the time of the fire on 14th June 2017) (Professor Torero – evidence to the Inquiry on 20th November 2018, pages 44-45).
39. Professor Bisby notes that there is insufficient evidence to assign to the extract fan a causal role in fire egress from flat 16 and his initial hypothesis, B1, “has just vanished” (transcript of evidence, 21st November 2018, page 111, line 1).
40. With regard to other issues relating to kitchen extractor fan, JSW will provide assistance to the Chairman during Phase 2.

Gas works

41. One minor element of the M&E work involved the installation of a small piece of gas pipework running off one of the existing gas pipes to connect to three new boilers.
42. There has not been any evidence suggesting that this work contributed to the spread of fire or smoke on 14th June 2017.
43. JSW will provide assistance into how this integrated with life safety systems and building management systems at Grenfell Tower during Phase 2.

Other internal works

44. The following additional internal works were part of the M&E work.

Smoke detector heads

45. These were installed in the lift lobbies and were designed to activate upon detection of smoke setting in chain a series of events alluded to above.
46. These were not part of an all-building audible fire alarm or fire warning system; such a system was not installed and was not required at Grenfell Tower.

The Human Mechanical Interface (HMI)/Mimic Panel

47. This was in a red box located in the ground floor entrance lobby to Grenfell Tower and was seen in some photographs of the fire fighters in the lobby on the night of the fire.
48. Its purpose was to facilitate routine inspection and maintenance of the system (by a third party), check the functioning of the smoke control system and to identify the floor on which the system had activated. It was also used to assist changing the floor of operation of the system by changing the operation from automatic to manual. It was not a fire alarm panel.

Other matters

49. Although the Chairman has not heard much, if any, direct evidence on the following issues, they have been raised by others and may in part be relevant to Phase 1 issues. They are also likely to feature within Phase 2 and JSW will provide further information then.

Maintenance and servicing of the smoke control system

50. In PSB's Opening Statement it refers to it sending a maintenance proposal to JSW on 5th May 2016 (PSB00001300_0007) and states, "The proposal for a maintenance contract was not taken up".
51. This may be relevant to whether the smoke control system operated on the night and if so, how effectively. Although JSW understands that these issues will feature prominently in Dr Lane's Phase 2 work, JSW believes that the Chairman will be assisted if it explains its obligations around routine inspection, maintenance and servicing post installation.
52. As part of its contract with Rydon Maintenance Limited, JSW was not responsible for Planned Preventative Maintenance and this was made clear in the Practical Completion letters sent by JSW to Rydon (see JSW's Position Statement dated 31st August 2018 at paragraph 17 (JSW00001883)).
53. JSW understands that the smoke control system was in fact inspected, maintained and serviced by a third-party contractor, Allied Protection, and their representative attended at Grenfell Tower on 17th January 2017 (LAK00000009) and on 15th May 2017 (LAK00000011). The Allied Protection Inspection and Servicing Certificates indicate that the smoke control system had been tested on those dates and was in working order.

Reporting of a potential fault in June 2017

54. This is mentioned by PSB in its Opening Statement at PSB00001300_0008.
55. JSW was responsible for dealing with reactive issues during the various 12-month defects liability periods and it attended to various issues that arose during those periods.
56. At the time of the events of 14th June 2017, the smoke control system was still within the relevant 12 month defects liability period.
57. Rydon reported an issue to JSW's Aftercare Department by e-mail 1st June 2017. The Rydon representative, Dave Hughes, stated that he had walked all the floors in Grenfell Tower and said that the system in environmental mode was not working on any floor.
58. This issue is covered in more detail in the witness statement of Alan Whyte dated 26th October 2018 at paragraphs 193-198. However, for present purposes it is important to note that the complaint related to the system not operating in environmental mode, not in smoke mode. Environmental mode only activated once the internal temperature within Grenfell Tower had reached a pre-set figure. Based on the information provided by Rydon to JSW, it would appear that the pre-set figure had not been reached and therefore the environmental mode had not been activated.
59. This is not indicative of any problem with the smoke control system at Grenfell Tower.
60. JSW also received two other defects reports from Dave Hughes on 1st June 2017. A JSW engineer, Shkelzen Canaj, attended Grenfell Tower and did not find any defects or faults. Further information is contained in Mr Canaj's witness statement.

JSW attendance at Grenfell Tower on 13th June 2017

61. There is one further issue which JSW feels it should bring to the Chairman's attention.
62. Mr Shkelzen Canaj attended at Grenfell Tower on 13th June 2017 and resolved a minor issue with the Heat Interface Unit in one of the flats. As he was leaving, he saw four people standing outside the main entrance to Grenfell Tower looking up at the top of the Tower. One of these people was the Tower's caretaker, who was known to Mr Canaj. There was also someone with a KCTMO logo on his shirt.
63. One of the other people was a fire protection company representative who said to the others in the group words to the effect that the fire alarms were not registering properly. Nothing was

raised specifically with Mr Canaj and he was not asked to make a formal report or to do anything in response to that statement. Further information is contained in Mr Canaj's witness statement.

Conclusion

64. JSW wishes to state that the brevity of its closing submission does not in any way indicate its unwillingness to play an active role in the Inquiry or to engage in the Chairman's investigations, nor should it be seen by anyone in that way.
65. As Phase 1 is focussing on the factual narrative, JSW does not feel it can provide further or more detailed assistance to the Chairman at this time.
66. JSW remains committed to continued engagement in Phase 2 during which it may be able to provide more relevant assistance to the Chairman.
67. At this time, JSW does not intend to submit proposals for interim recommendations although it may comment on those proposals as set out in the timetable already provided to Core Participants by the Inquiry.

Signed: S McGarry

Dated: 06.12.18