#### **GRENFELL TOWER INQUIRY**

# MODULE 5 ADDENDUM OPENING WRITTEN STATEMENT ON BEHALF OF BSR REPRESENTED BY BHATT MURPHY, BINDMANS, HICKMAN & ROSE AND HODGE JONES & ALLEN SOLICITORS

#### WATER SUPPLY<sup>1</sup>

#### [A.] OVERVIEW: AN ADDITIONAL KEY DEFICIENCY

1. The in-depth analysis of Dr Ivan Stoianov on The provision of water for fighting the fire at Grenfell Tower on 14 June 2017,<sup>2</sup> exposes an additional key deficiency in the LFB response to the fire that has not previously been appreciated. The available ground monitor situated on Grenfell Walk was capable of reaching the 15<sup>th</sup> floor and the available aerial pumps were capable of reaching the top of the building. Both of these things did not happen because of a fundamental misunderstanding of the technical features of water supply and a consequential failure to alter incident strategies to secure greater water flow. This is an extraordinary revelation over four years after the fire. Until this point, it was thought that the non-availability of the taller 42 metre ladders was the critical absent equipment on the night of fire, whereas, in fact, there was equipment present that might have made a difference, but for the lack of institutional knowledge on how to secure optimum water flow in order to use it to capacity. While the BSR must wait to consider the response of the LFB and others to the report, it is also troubling that the Inquiry's expert evidence is the first time that the issue is apparently being ventilated. This, along with the evidence given by LFB witnesses during Phase 1, suggests that within the LFB there has been no, or at least insufficient, appreciation of the issue.

### [B.] LEGAL AND REGULATORY FRAMEWORK

2. The provision of water at a fire is a bare basic firefighting tool. Section 38(1) of the Fire and Rescue Services Act 2004 ('FRSA') states that a "*fire and rescue authority must take all reasonable measures for securing that an adequate supply of water will be available* 

<sup>&</sup>lt;sup>1</sup> This an Addendum to the main opening statement on behalf of the Team 1 BSR dated 6 August 2021

<sup>{</sup>**BSR0000076**}

<sup>&</sup>lt;sup>2</sup> Stoianov {ISTRP00000001 to ISTRP00000011} dated 20 July 2021

for the authority's use in the event of fire". Section 7(2)(d) requires "effective arrangements" for obtaining information which it needs to carry out its functions, which may include "availability of and access to water supplies".<sup>3</sup> The national operational guidance identifies liaison between individual Fire and Rescue Services and Water Companies as being of "vital importance because it is at this level that operational effectiveness rests".<sup>4</sup>

3. While the requirements are emphatic and almost trite given the importance of water to the function of firefighting, the national regulation suffers from want of detail and clarity about what adequate water supply should entail, as well as failing to differentiate between different sizes of buildings, materials used and presence of other passive and active systems. Dr Stoianov considers, "*England and Wales has currently fallen behind other international standards and codes in Europe and the USA*", which specify minimum supply pressure for firefighting, taking into account variations in building materials, and require the periodic inspection of flow rates from hydrants.<sup>5</sup>

## [C.] SHORTCOMINGS OF WATER SUPPLY MANAGEMENT DURING THE GRENFELL TOWER FIRE

4. The identified shortcomings of water supply management by the LFB now read like a micro drama of the deficiencies at play in other aspects of the disaster.

<u>First</u>, in terms of fundamental flaws in governance and training, the LFB and presumably other FRSs, have operated with lesser water supply than necessary, because they have failed to train staff in how to optimise hydrant use, or to pre-test hydrants, and if necessary compel water suppliers to evolve their service to ensure necessary supply is available.

<u>Second</u>, all the available water hydrants were not marked on the ORD, or otherwise inspected, as they should have been as a result of properly conducted s. 7(2)(d) visits and there was no requirement under UK law, unlike other countries, to periodically test the hydrants to establish what level of water they could produce; both per minute and per second.<sup>6</sup>

<sup>&</sup>lt;sup>3</sup> McGuirk {SMC00000046/12 §14} and Explanatory notes to Section 7(2)(d) FRSA {https://www.lcgislation.gov.uk/ukpga/2004/21/notcs/division/5/2/1/2}

<sup>&</sup>lt;sup>4</sup> National guidance document on the provision of water for firefighting (LGA & Water UK. 2007){**THA00000006/9**} and McGuirk {**SMC00000046/62 §165**}

<sup>&</sup>lt;sup>5</sup> Stoianov {ISTRP00000002/16} {ISTRP00000005/22 §4.2} {ISTRP00000005/44-45 §4.2.3}

<sup>&</sup>lt;sup>6</sup> Stoianov {**ISTRP00000002/22 §§38-39**}{**ISTRP00000008/101-104**}, Torero {**JTO**00000005/27/881-888}

<u>Third</u>, available hydrants were not properly utilized on the night, including by wrongly relying on a non-firefighting wash-out hydrant, and compromising the available pressure of one hydrant due to the length of hoses and maintaining the pump values at constant bar pressures.<sup>7</sup>

<u>Fourth</u>, available sources of water were not properly utilised, whether by multiple use of hydrants into one pump or monitor, the service of the Hammersmith pumping station, or simply using the swimming pool in the nearby Kensington Leisure Centre.<sup>8</sup>

<u>Fifth</u>, the two-way communication between Thames Water Utilities Limited (TWUL) and the LFB was conducted by practitioners who did not have the competence to appreciate how to improve the water supply network.<sup>9</sup> This was especially clear as the conversation focused only on water pressure, as opposed to water flow.<sup>10</sup> Both the LFB and TWUL suffered from lack of training, but the problem was compounded by TWUL providing no formal training on how to assist the LFB during fire incidents, and no training in the operation and maintenance of key parts of the water system.<sup>11</sup>

<u>Sixth</u>, none of the incident commanders appreciated that water trajectory could go beyond the 11-13<sup>th</sup> floor, and therefore did not lead on making the issue a major incident action.<sup>12</sup>

<u>Seventh</u>, although GM Welch was deployed to the fire as the Bulk Media Adviser, he relinquished the role as a result of his temporary rank of incident commander,<sup>13</sup> and the role was not taken back up until SM Payton became BMA at around 06:30, albeit even then water problems were not proactively addressed with TWUL.<sup>14</sup>

<u>Eighth</u>, there was never a proper operational overview as to how the available pumps and ground monitors could do better to contain the downward spread of fire. Coupled with the failure to have in place a competent Bulk Media Adviser, this is an additional institutional failing of the incident command system during the night.<sup>15</sup>

5. It is an astonishing indictment on the LFB as a modern fire service that it was not technically equipped to operate what is the quintessential tool of the trade. It radiates the

<sup>&</sup>lt;sup>7</sup> Stoianov {ISTRP00000002/19 §25}{ISTRP00000006/236-238 §§1-6}, Torero{JTO00000005/28/872-878}

<sup>&</sup>lt;sup>8</sup> Stoianov {ISTRP00000002/19-20 §26-28}{ISTRP00000006/238-242 §§7-9}

<sup>&</sup>lt;sup>9</sup> Stoianov {ISTRP00000002/31-35 §§82-105}{ISTRP00000010/49-58 §§8.5.3 and 8.5.4}

<sup>&</sup>lt;sup>10</sup> Torero {**JTO0000005/27/872-878**}

<sup>&</sup>lt;sup>11</sup> Stoianov {ISTRP00000002/33 §§91-92}, Torero {JTO00000005/28/916 - 29/925}

<sup>&</sup>lt;sup>12</sup> Stoianov {**ISTRP0000006/58**}

<sup>&</sup>lt;sup>13</sup> Stoianov{ISTRP00000002/29 §§73-74} {ISTRP00000009/5-8}{ISTRP000000010/44-48 §8.5.2}

<sup>&</sup>lt;sup>14</sup> Stoianov{**ISTRP00000007/30**}

<sup>&</sup>lt;sup>15</sup> McGuirk {**SMC0000046/58 §152**}

gap in operational training and knowledge, a point made by Professor Torero in both of his reports. The findings suggest a breach of the Commissioner's obligations under Section 38(1) FRSA. More broadly they require a transformation in structure and culture that would enable the LFB and other FRSs to deal with complex fires.<sup>16</sup> Although again the LFB was not equipped in terms of policy, training and knowledge, TWUL also did not provide technical guidance or expert engineering advice, and were inactive in the use of real time data. Both core participants need therefore to be examined on this issue.<sup>17</sup>

6. However, the BSR are particularly concerned about two key findings, that do require proper public ventilation. Dr Stoianov concludes that "*it is highly likely*" that aerial pumps "*were capable of projecting water jets to the full height of Grenfell Tower (65.4m) if supplied with their rated flow and nozzle pressure from the pump appliances*." <sup>18</sup> He also records that the ground monitor that was utilised at different parts of Grenfell Walk and able to attack the South and South West of the fire, was able to reach the 15<sup>th</sup> floor. Indeed, during the course of the night that ground monitor generally worked at 63% to 74% capacity reaching the 10<sup>th</sup> and 11<sup>th</sup> floor, but at a later stage the flow was increased and it worked at 86% capacity and reached the 15<sup>th</sup> floor.<sup>19</sup>

## [D.] POTENTIAL OPERATIONAL CONSEQUENCES

- 7. All the experts are cautious in drawing conclusions about the operational consequences of the shortcomings of water supply.<sup>20</sup> Commissioner Cotton and AC Roe certainly took the view that external firefighting became largely a lost cause.<sup>21</sup> That does not mean that the Inquiry should shut its eyes to the issue. In particular, the BSR are entitled to consideration of what could and could not have made a difference.
- 8. The evidence tragically suggests that it is unlikely that greater water supply and more aerial pumps and monitors would have prevented the extraordinary upward vertical spread of the fire, or its horizontal spread across the crown at the top of the building. These features of the cladding inferno meant that within a very short time there were multiple fires across the building and not all of them could have been suppressed even with a higher trajectory of

<sup>&</sup>lt;sup>16</sup> Torero {**JTO**00000005/29-30/931-966}

<sup>&</sup>lt;sup>17</sup> Stoianov {ISTRP00000002/27-28 §§68-69} {ISTRP00000002/34 §99}, Torero {

<sup>&</sup>lt;sup>18</sup> Stoianov {ISTRP00000002/18 §23} {ISTRP00000006/238 and 241}

<sup>&</sup>lt;sup>19</sup> Stoianov {ISTRP00000010/19}, {ISTRP00000006/101} and the figures at {ISTRP00000006/98-118}

<sup>&</sup>lt;sup>20</sup> Stoianov {**ISTRP**00000002/19 §26} and {**ISTRP**0000006/101}, Torero {**JTO**00000005/29/929-930} and McGuirk {**SMC**00000046/70 §188 and 72 §197}

<sup>&</sup>lt;sup>21</sup> Cotton {MET00012492/18} and Roe {T48/213/19 to 214/18}

water from multiple pumps. Yet the evidence of the success achieved by the ground monitor on the raised section of Grenfell Walk does suggest that there was a strong correlation between water supply and containment of downward fire spread. Indeed it is starkly apparent from photographs and diagrams depicting the south side of the building<sup>22</sup> and has been identified by both Dr Lane and Professor Bisby as part of their Phase 1 evidence.<sup>23</sup>

- 9. Taking this evidence into account and with all due caveats about the challenges of the incident, especially once it became a multiple fire event on multiple floors and multiple sides of the building, Mr. McGuirk is still bound to draw a distinction between limiting the downward spread of the fire, and the upward vertical spread: the latter being more problematic.<sup>24</sup> He concludes that, "*it is possible that a higher reach appliance deployed earlier in the incident might have been able to reach a higher level of the tower. This might have enabled more water to be applied to the cladding which, in turn, might have retarded the progress of the fire, and/ or might have had some impact on firefighting in individual flats, with water being applied externally." <sup>25</sup>*
- 10. This is what happened with the partial containment of the fire on floors 10 and 11, such as to enable the late rescues of Antonio Roncolato [Flat 72 (06.05.15)] and Elpidio Bonifacio [Flat 83 [08.07.20]). The fact that the families of Natasha Elcock [Flat 82 (04.47.22)] and Anne Chance [Flat 73 (04.20.54)] also survived until rescue in the later hours of the fire, attests to the contribution that external water provided as a containment function until BA crews were eventually able to get to the relevant floors.
- 11. Flat 113 was three floors above Flat 83, and within the range of south side ground monitor firefighting. Unlike the flats below it became completely engulfed in fire by 04.09.<sup>26</sup> The evidence from the police camera recording indicates that there was life in the flat as of 04.06.16.<sup>27</sup> The bereaved of those who died in that flat are entitled to seek examination of how a better strategy of water supply and use may have allowed for a potentially longer period of time that could have facilitated rescues, or escapes. The Inquiry is also well aware of missed opportunities to rescue those who took shelter in Flat 113 earlier in the night.

<sup>&</sup>lt;sup>22</sup> Stoianov{**ISTRP0000006/98-118**}

<sup>&</sup>lt;sup>23</sup> Lane {**BLAS0000017/41 §17.4** esp. **§17.4.5-6**}, Bisby {**LBYS0000001/192 §929**}

<sup>&</sup>lt;sup>24</sup> McGuirk{SMC0000046/68 §183 §188 and §197}

<sup>&</sup>lt;sup>25</sup> McGuirk{SMC0000046/72 §195}

<sup>&</sup>lt;sup>26</sup> {**MET00012593/43**} and Lane {**BLAS0000005/38** §5.4.62}

<sup>&</sup>lt;sup>27</sup> PC Jacobs Body Worn Camera records two men approaching, one in a black blazer (Abdul Alaman Abbass) and one in a green polo shirt (this is Ammar Alkabib), and one of them saying, *"Flat 113, he just called me now, he said in the corner, he's still alive one guy, don't know maybe there is someone else but...he just called now"*.

The new expert evidence on water adds a potential additional reason as to why Flat 113 stands as the paradigm of preventable death.<sup>28</sup>

# [D.] CONCLUSION

12. The findings of Dr Stoianov clearly support Mr. McGuirk's criticism as to the "absence of any substantial or effective water strategy" at the incident.<sup>29</sup> But they describe a much more deep rooted problem concerning the competency of both the LFB and the water supplier. In Modules 5 and 6, the issue of the supply and use of water at Grenfell Tower should therefore be investigated as regards: (1) the adequacy of the statutory and regulatory requirements on the provision of water, (2) whether or to what extent the LFB's institutional response to facilitate water supply and use in London was appropriate or effective, (3) the skills, knowledge and training of firefighters pertaining to water, (4) the further shortcoming in the s. 7(2)(d) system as regards identifying and testing hydrants, as well as considering potential difficulties with water supply at the building(s) in question and deploying plans (contingency or otherwise) to mitigate those difficulties, (5) the coordination between the LFB and Thames Water for the provision of water for firefighting and (6) the potential operational consequences that the proper supply and use of water might have achieved during the course of the fire.

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BHATT MURPHY, BINDMANS, HICKMAN & ROSE, HODGE JONES & ALLEN 3 September 2021

<sup>&</sup>lt;sup>28</sup> Phase 1 Closing statement on behalf of the G4 firms 6 December 2018 {**INQ00000569/47 §4.7**}

<sup>&</sup>lt;sup>29</sup> McGuirk {**SMC0000046/62 §167**}