

Executive Summary

- 2.1. The following is a summary of the Health & Safety investigation conducted by the Fire Brigades Union (FBU) into the tragic fatalities of Firefighter Wornham and Firefighter Miller who lost their lives at 85 Harrow Court, Silam Road, Stevenage, Hertfordshire on 2nd February 2005. The investigation identified areas of organisational weakness that the FBU believes significantly contributed to the risks faced by Ff Wornham and Ff Miller – risks that ultimately took their lives.
- 2.2. There has been, and shall continue to be, much debate and speculation as to the exact scientific nature of the fire phenomena that occurred at the Harrow Court incident. Experts shall continue to muse over the distinguishing features of a flashover, a backdraught, a smoke explosion, a blow torch effect, wind assisted rapid development and other extreme fire phenomena. As with all scientific theories, they all remain valid until such time as they may be disproved and so it is difficult to establish in this case which type of fire phenomenon caused the deaths.
- 2.3. However, there is one important area of agreement in the case of the Harrow Court incident between the various scientific theories: It was the opening of the front door to Flat 85 that gave rise to the rapid manifestation of whichever fire phenomenon that did then occur.
- 2.4. Given this common area of agreement, it can be concluded that had Ff Wornham and Ff Miller not opened the front door at the exact time that they did, then the fire phenomenon is unlikely to have occurred at the time that it did and the two Firefighters would not have been exposed to its fatal effects. This being the case, the FBU believes that establishing the cause of their deaths has less to do with the precise definition of the fire phenomenon that occurred and more to do with those factors that led to Ff Wornham and Ff Miller opening the front door when they did and without the necessary water, resources or personnel they required.
- 2.5. Distressing as it is, particularly for the friends and family members involved, attention should be drawn to the evidence that Ff Miller appears to have been killed instantly inside the bedroom of Flat 85, whilst Ff Wornham was found on the floor of the lobby immediately outside the flat, entangled in the electrical cabling that had fallen as a result of the plastic cable-trunking having melted. Moreover, specific attention should be drawn to the evidence that Ff Wornham was found *entangled* in the electrical cabling, with melted plastic fire alarm cable-insulation adhered to the inside palm of his glove, rather than being found with the electrical cabling simply lying on top of him. The FBU believes this evidence indicates that, unlike Ff Miller, Ff Wornham was somehow able to make his own way out of Flat 85, or was already outside Flat 85, before becoming entangled in the electrical cabling that had fallen in the lobby outside. In either circumstance, the FBU concludes that it was outside Flat 85, trapped amongst the cabling, that Ff Wornham lost his life.
- 2.6. These pieces of evidence reinforce the FBU's view that the reasons for the absence of water, other resources and sufficient personnel must be examined in order to establish the extent to which those factors contributed to the causes of death.

- 2.7. Moreover, it is only by examining those factors that the tragic deaths of Ff Miller and Ff Wornham might be used to prevent a similar tragedy occurring again.
- 2.8. The FBU report makes 73 recommendations which had they been identified and fully acted upon prior to the incident, the FBU believes would have significantly reduced the risks faced by the two Firefighters and may have effectively saved their lives. Sadly, it is too late for Ff Wornham and Ff Miller, but, the FBU believes that properly acting upon the recommendations in this report now would significantly improve the Health & Safety of all Firefighters when they inevitably encounter similar incident types as that attended by the Hertfordshire Firefighters in the small hours of the morning at Harrow Court on 2nd February 2005.
- 2.9. This comprehensive report is divided into specific sections and sub-sections but the areas of organisational weakness can be summarised as falling into 3 main categories: Standard Operating Procedures (SOPs), Training and Emergency Response Resources.

Standard Operating Procedures

- 2.10. The investigation identified many organisational weaknesses in the development, monitoring and review of Standard Operating Procedures. In particular, the High Rise Incident Procedures were wholly inadequate and failed to take account of recommendations following the HSE Improvement Notice awarded to the Strathclyde Fire Board; the Breathing Apparatus Procedures failed to satisfy the provisions of national guidance issued by Her Majesty's Inspectorate; and the Incident Command Procedures were inadequate and omitted many provisions contained in the national guidance issued by Her Majesty's Inspectorate.
- 2.11. The FBU considers these Standard Operating Procedures produced by Hertfordshire Fire & Rescue Service (HFRS) were inadequately drafted, monitored and reviewed and as a result, were not fit for purpose at the time of the Harrow Court Incident.

Training

- 2.12. The investigation identified serious inadequacies in the provision of training for the Hertfordshire Firefighters that attended the Harrow Court incident. The circumstances and events of the Harrow Court Incident on 2nd February 2005 exposed wider concerns of the apparent under-provision of training in HFRS.
- 2.13. Between them, it is apparent that the Firefighters and supervisory officers in the initial attendance at Harrow Court had received insufficient formal Incident Command training, Crew Command training, Dynamic Risk Assessment training, Breathing Apparatus (heat and smoke) Refresher training and separately dedicated, practical and theoretical Compartment Fire Behaviour training to deal safely and effectively with the situation they were confronted with. Specifically, the FBU notes the lack of practical attack training for compartmental fires.
- 2.14. In addition, it is clear that any basic awareness of High Rise Incident procedures was not sufficiently underpinned with practical High Rise Incident training at either the Training & Development Centre or at fire stations.

- 2.15. The Firefighters were unfamiliar with the premises and the likely risk they would encounter in an emergency, as they no longer carried out 1(i)(d) inspections on these types of premises.
- 2.16. The deficiencies in training exposed by the Harrow Court incident seem to betray an apparent and endemic organisational weakness in the provision of training in many other operational areas of firefighting. Predominantly, this seems due to a lack of strategic emphasis, planning, monitoring and review by senior managers of actual training undertaken and insufficient resource allocation.
- 2.17. The recommendations on training in this report primarily seek to develop sufficient training to underpin the recommended revisions of HFRS Breathing Apparatus procedures, High Rise Incident procedures and Incident Command procedures. Thereafter, it is clear that improved systems, increased resources and allocated training time are required both at fire stations and at the Training & Development Centre to enable the effective delivery of a wide range of safety critical training for all firefighting personnel and supervisory officers. The resource increases necessarily include the need for additional instructors to deliver, monitor and review training and the maintenance of sufficient staffing levels at fire stations to afford firefighting personnel the amount of dedicated training time their safety deserves.

Emergency Response Resources

- 2.18. To determine the appropriate resources to be deployed in response to an emergency it is necessary to assess the actual risks that exist in the area, the emergency scenarios that might occur and the Standard Operating Procedures to be systematically deployed to deal safely and effectively with those emergency scenarios. The Fire Services Act 2004 and guidance issued by the Office of the Deputy Prime Minister (ODPM) require HFRS to plan for, and provide, the required weight and speed of emergency response resources to actual risks that exist in HFRS territory.
- 2.19. However, the FBU Investigation identified serious organisational weaknesses in the identification, assessment and inspection of actual High Rise risks; serious organisational weaknesses in the systematic assessment, monitoring and review of standard operating procedures to respond to compartment fires within actual High Rise risks; and insufficient provision of emergency response resources to form the initial attendance for compartment fires in High Rise risks such as Harrow Court.
- 2.20. The 3 main categories above attempt to summarise the wide-ranging findings of the report. The full list of recommendations can be found in Section 14. Broadly, these recommendations seek to achieve:
- 2.21. the proper identification, assessment and regular inspection of High Rise premises such as Harrow Court;

- 2.22. the comprehensive review of Breathing Apparatus procedures & training, Compartment Fire Behaviour procedures & training, High Rise Incident procedures & training and Incident Command procedures & training in the light of this report, other recent fatal incident reports, relevant HSE Improvement Notices, Fire Service Manuals and other relevant technical research, information and Fire Service Circulars;
- 2.23. the review of the HFRS Integrated Risk Management Plan such that the initial attendance of emergency response resources for High Rise Incidents ensures a minimum of 13 Firefighters arrive in sufficient time of each other to enable all of the service's safe systems of work to be implemented in full at the outset and without endangering Firefighters due to a delay in their arrival.
- 2.24. Under the direction of the Minister, The Review of Standards of Emergency Cover Report – Technical Paper C – Response & Resource Requirements came to the conclusion that:
- 2.25. ***“It is essential to avoid situations which could motivate or pressurise Firefighters to act unsafely in the interests of saving life”.***
- 2.26. At High Rise Incidents the recognised means of achieving this is through establishing a “Bridgehead” as the platform from which to launch rescue and firefighting operations in accordance with appropriate standard operating procedures for Breathing Apparatus, Compartment Firefighting and Incident Command. The FBU firmly believes that HFRS failed to ensure their standard operating procedures (SOPs) were fit for purpose; failed to ensure the application of the SOPs were systematically and practically trained for; and failed to ensure that sufficient personnel were mobilised for deployment on the initial pre-determined attendance (PDA) to allow the immediate, safe and effective implementation of the applicable SOPs.
- 2.27. The FBU applauds the courage shown by all the HFRS firefighting crews that attended the Harrow Court incident in the small hours of 5th February 2005. In particular, the selfless and courageous actions of Ff Wornham and Ff Miller were immense given the circumstances they found themselves in.

The key questions are:

- 2.28. *Would the fatalities of Ff Wornham and Ff Miller have been prevented had HFRS ensured adequate procedures, training and resources were systematically in place?*

Almost certainly!

- 2.29. *Would the life-threatening risks faced by the Firefighters at the Harrow Court incident have been significantly reduced had HFRS ensured adequate procedures, training and resources were systematically in place?*

Without doubt!

Conclusion

- 2.30. As a conclusion to our Health and Safety Investigation, the FBU believes that the conduct of Hertfordshire Fire & Rescue Service significantly contributed to the deaths of Ff Wornham and Ff Miller in that they failed to comply satisfactorily with the Fire Services Act 2004; the Health and Safety at Work Act 1974; the Management of Health and Safety at Work Regulations 1999; national guidance issued by Her Majesty's Inspectorate; and failed to act adequately upon relevant Health and Safety Executive (HSE) improvement notice recommendations available to them. Similarly, during the course of the FBU's Health and Safety Investigation HFRS failed to comply with the Safety Representative and Safety Committee Regulations 1977.
- 2.31. It is not known whether the smoke alarm in Flat 85 activated or not. However, nobody reported hearing the smoke alarm in Flat 85 sounding at any time. Since it may not have activated and had it done so the occupants *may* have made their own way to safety, the FBU's Health & Safety Investigation concludes that Stevenage Borough Council (SBC) *may* have contributed to the deaths of Ff Miller and FF Wornham in that they failed to undertake a review of the smoke alarm installations in the individual flats at Harrow Court to assess their appropriateness as recommended in BS 5839-6:2004 annex A 4.1 a & b and 5.1 a, b & c.
- 2.32. Similarly, until such time as the relevant Fire Safety Completion Certificate is made available or it is confirmed that the installation of the new fire detection and alarm system to the common areas at Harrow Court complied with the latest Building regulations and the appropriate British Standard, the FBU's Health and Safety Investigation also concludes that SBC *may* have contributed to Ff Wornham's death in that they *may* have failed to ensure their contractor complied with BS 5839-1: 2002; clause 26.2(f) in respect of precluding the use of plastic trunking for securing the electrical cabling of their common area fire alarm system.
- 2.33. Finally, Firefighters have always known that there are some elements in fire situations that are unpredictable and can prove fatal. Thankfully, modern research and diagnostics have assisted the development of procedures and techniques that minimise the risks presented by previously unpredictable elements.
- 2.34. However, this report identifies areas of organisational weakness that the FBU believes led to HFRS (primarily) failing to prevent or adequately reduce the known risks that eventually overcame Ff Wornham and Ff Miller on 2nd February 2005. The recommendations in this report seek to correct those organisational weaknesses so that other Firefighters facing similar circumstances in the future will benefit from the lessons learnt and the lives sadly lost.