

# **LAKANAL HOUSE INCIDENT**

## **ASSURANCE REVIEW**

**A review of actions taken by the Brigade in response to the Lakanal House incident.**

**A report prepared for the Grenfell Tower Investigation and Review Team.**

**7 August 2018**



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# INTRODUCTION



## THE LAKANAL HOUSE FIRE AND INQUESTS

On 3 July 2009 the Brigade was called to a fire in a high rise residential block, Lakanal House, Camberwell, London. The fire started in a maisonette on the 9<sup>th</sup> floor and very quickly spread up the building to the 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> floors. The first crews arrived within 3 minutes of being mobilised and began to tackle the flat fire within 10 minutes.

Unusually, the fire also spread down the building to the 5<sup>th</sup> and 7<sup>th</sup> floors. This unusual fire spread challenged our existing high rise policy and the national Generic Risk Assessment, both documents which rely on the compartmentation within the building containing a fire and allowing sufficient time for the Brigade to intervene. Over the next 30 minutes the fire and smoke breached the original flat compartment and spread to involve the 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> floors. Smoke logging affected large parts of the building including the communal staircase, communal corridors and many of the 98 flats in the 14 storey building. 6 people, including three children, lost their lives as a result of the fire. Additionally, 15 people were taken to hospital suffering from smoke inhalation and one firefighter was admitted to hospital to receive treatment for heat exhaustion. 38 people were assisted out of the building or rescued by the Brigade.

At the height of the incident more than 100 firefighters were at the scene as part of an attendance that included 18 pumping engines, 9 Fire Rescue Units and a range of other specialist fire engines and officers.

Following the fire the Metropolitan Police Service initiated an investigation, which involved the Health and Safety Executive and the Brigade, looking at possible manslaughter charges. However, in May 2012 the Crown Prosecution Service announced that they would not prosecute as they were satisfied there was no realistic prospect of conviction for an offence of manslaughter by gross negligence or corporate manslaughter against any body or persons.

Following the Crown Prosecution Service's decision not to prosecute, the Coroner, Her Honour Judge Frances Kirkham, set a date for the inquests. The inquests commenced at Lambeth Town Hall on 14 January 2013 and continued until 28 March 2013. The Coroner

summed up the evidence to the jury on 20 and 21 March 2013 and the jury provided their narrative verdicts on 28 March 2013. A full transcript of the Coroner's summing up to the jury, together with transcripts of the proceedings can be found on Lambeth Council's website:

<https://www.lambeth.gov.uk/elections-and-council/lakanal-house-coroner-inquest>

In relation to the Brigade's response to the incident the jury's comments focused mainly on three matters. Firstly the perceived lack of knowledge amongst Brigade personnel about the layout of the building and flat numbering system. Secondly, the fact that smoke logging within the communal areas of the building, together with firefighters becoming involved in rescuing other residents, hampered rescue attempts from flats 79 and 81 (where the 6 deceased people were found). Additionally, the jury commented that insufficient efforts were made to prioritise these flats. Brigade Control training, communications between Brigade Control and the fireground and Brigade Control operator's reliance on callers being rescued were issues also highlighted by the jury.

The jury also expressed their views in each verdict on the lack of fire compartmentation within the building. The jury's verdicts should be considered against the background of the evidence of the fire officers and experts that this was an unusual fire in the history of the fire and rescue services in the United Kingdom. In particular, the Coroner's firefighting expert Brian Davey explained that he had not found any other examples of fire having spread downwards in a similar manner. The Coroner made 5 recommendations using her powers under Rule 43 of the Coroners Rules 1984<sup>1</sup>. A Rule 43 report identifies actions that should be taken to prevent future deaths; one of these was addressed to the Brigade. However, the Coroner also acknowledged the extensive work that the Brigade has specifically undertaken in the period since the Lakanal House fire, which included the following:

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<sup>1</sup> Coroners Rules were changed in 2013. The Coroner's power to make recommendations to prevent future deaths is now covered in Regulation 28 of the Coroners (Investigations) Regulations 2013.

- guidance to crews making risk assessments for sites in their area
- guidance as to matters which should be noted by crews making familiarisation visits and visits pursuant to section 7(2)(d) of the Fire and Rescue Services Act 2004, including the gathering of information regarding flats or maisonettes with unusual layouts and
- arrangements for access and use of aerial ladder platforms and other specialist vehicles
- cooperation with London Boroughs to develop a pilot scheme for the provision of "premises information plates" at buildings
- awareness that fire can spread downwards and laterally in a building and that burning debris might fall through open windows or on to balconies
- awareness of the risk of spread of fire above and adjacent to a fire flat
- procedures for moving a bridgehead
- communication between Brigade Control and those at an incident
- new guidance as to the handling of fire survival guidance calls and training for officers dealing with such calls
- introduction of Mobile Data Terminals in all front line fire engines, and
- introduction of forward information boards.

result in rapid and frequent changes of Incident Commander. It is also recommended that consideration be given to training of Incident Commanders to enhance their performance in relation to a number of specific areas

- It is recommended that the Brigade consider whether training be given to operational crews about Brigade Control practices and procedures
- It is recommended that the Brigade consider whether it would be beneficial to use additional breathing apparatus radio communications channels and personal radio channels at major incidents to reduce the amount of traffic on each channel.

A summary of the specific Coroner's recommendations sent to the Brigade is as follows:

- It is recommended that the Brigade considers how to improve the dissemination of fire safety information to achieve effective communication with residents of high rise buildings
- It is recommended that the Brigade review procedures for sharing information as a result of section 7(2)(d), familiarisation and home fire safety visits with crews both within the station in question and at other local stations
- It is recommended that the Brigade review its policy and procedures concerning incident command, having regard to whether it is effective for the choice of Incident Commander to be tied closely to the number or type of fire engines attending an incident and the effectiveness of a policy which may

## PURPOSE OF THIS REPORT

This report was commissioned by the Grenfell Tower Investigation and Review Team following the Grenfell Tower fire in June 2017. Similarities had been observed between the Grenfell Tower fire and the Lakanal House fire of 3 July 2009 and it was determined that the Brigade should complete an internal review of the lessons learned following the Lakanal House fire and the progress made against actions identified internally and by HM Coroner following the inquests into the Lakanal House fire.

The primary aim of the review is to establish if actions taken by the Brigade in response to the Lakanal House fire have been completed and embedded in daily working routines.

The objectives of the review are to:

- (1) Identify the key actions taken by the Brigade following the Lakanal House fire to improve working practices and public safety in relation to residential high rise premises
- (2) Identify the key actions taken by the Brigade in response to the Coroner's recommendations to prevent future deaths following the inquests into the Lakanal House Fire
- (3) Assess whether all key actions have been completed, and
- (4) Assess whether all key actions have been embedded in the daily working routines of the Brigade.

Furthermore, if suitable evidence is not available to fully assess the above the review will:

- (5) Undertake to provide further assurance against actions where none is currently available
- (6) Raise any issues identified in the review with the Grenfell Tower Investigation and Review team

## SCOPE OF THE REVIEW

The review is limited to actions taken by the Brigade in response to the Lakanal House fire and includes actions independently identified by the Brigade following the fire and monitored by the Lakanal Board, those recommendations directed at the Brigade by HM

Coroner to prevent future deaths following the inquests into the into the deaths of 6 people who lost their lives in the Lakanal House fire and monitored by the Operational Directorates Coordination Board and those actions taken by the Brigade following the inquests that were identified and monitored by the Lakanal House Working Group.

It will not consider any actions that were directed at third parties by the Coroner or others.

It will not seek to identify any further work or actions that may be indirectly related to the Lakanal House fire where they were not identified by work directly in response to the Lakanal House Fire and/or where they were not incorporated into or monitored via these action plans.

# **METHODOLOGY**

## **Gathering and presenting evidence**



## METHODOLOGY – GATHERING AND PRESENTING EVIDENCE

Correspondence with the Coroner and minutes of Brigade meetings, such as the Lakanal Board and action plans used for monitoring progress have been used for the purposes of identifying the actions the Brigade undertook in response to the Lakanal House fire. For the purposes of this report these actions have been separated into:

- **Pre-inquest actions**; those actions identified by the Brigade in advance of the Coroner’s recommendations
- **Inquest actions**; those actions taken in direct response to the recommendations of the Coroner following the inquests into the deaths of 6 people who lost their lives in the Lakanal House fire, and
- **Post-inquest actions**; further actions identified by the Brigade following the response to the recommendations made by the Coroner but not directly related to the Coroner’s recommendations or any previous actions undertaken by the Brigade in response to the Lakanal House fire

The anticipated outcomes of Brigade actions were confirmed from action plans and minutes of the various working groups established by the Brigade over time to monitor improvements made in response to the Lakanal house fire, including the Lakanal Board, the Operational Directorates Coordination Board and the Lakanal House Working Group.

Responsible officers for actions were identified through action plans and minutes of Brigade meetings. Where responsible officers had left the Brigade or where staff had changed roles over time alternative officers were identified to provide a point of contact who could talk to the actions and the work undertaken to implement actions with authority.

The initial route to the identification of evidence for completion and/or implementation actions was to hold a series of meetings with responsible officers to discuss (a) the purpose of the Lakanal House Incident assurance review and (b) the actions undertaken and the evidence available to demonstrate that actions had been completed.

This generally identified relevant documentary evidence and records (e.g. reports, papers, minutes,

policies, training materials, communications) related to actions. These documents were reviewed to establish if the specific outcome required by actions had been achieved. Where relevant, evidence was reviewed in respect of national fire and rescue service guidance and national occupational standards.

Where documentary evidence was not immediately available to fully support the completion of actions Brigade databases, electronic records and email accounts were searched, using an electronic discovery software tool, in order to locate the necessary evidence in Brigade emails and electronic data stores.

A variety of information has been used to compile the report and to provide evidence that actions have been adequately completed, including:

- London Fire and Emergency Planning Authority (or sub-committees of the Authority) reports (publicly accessible- Authority papers)
- Brigade Corporate Management Board (CMB) reports
- Brigade internal reports
- External reports, commissioned by or produced for the Brigade
- Brigade policy (policies have been subject to internal consultation – some policies through governance)
- Official letters
- National Fire and Rescue Service guidance
- Brigade training records
- Brigade training materials
- Articles published in internal Brigade media

The relevant documentary evidence for actions has been referenced at the relevant position in the text and is provided as a full list at the end of the report. The referenced documents will generally provide the detail and description of work undertaken to achieve actions; this may be through discussion in a Brigade report or by providing the actual product of actions in terms of policy development or training materials. As such, discussion within the report has been kept to a minimum.

Documentary evidence has been selected such that it is the most relevant and reliable evidence for an action. Wherever possible publicly available papers (i.e. papers the Brigade has previously published on its

website or elsewhere) have been used to establish that outcomes have been achieved. This is because these papers and reports have been subject to additional governance and scrutiny through the Brigade's Corporate Management Board and/or a London Fire and Emergency Planning Authority committee(s), and so the content of such papers and reports will have been reviewed and evaluated by the Commissioner and their advisors and/or by Members of the London Fire and Emergency Planning Authority.

Where actions were related to the amendment or introduction of Brigade procedures and/or working routines further investigation was carried out to assess whether the changes made were communicated to staff and/or were the subject of staff training such that the changes were embedded in daily working routines.

As previously mentioned this report is presented in three sections: pre-inquest actions, inquest actions, and post-inquest actions (other than those directed at the Coroner's recommendations). Where actions have not been completed and/or further work may still be necessary this has been noted in the action description and in the summary to each of the sections.

Where issues are identified in the review they will be raised directly with the Grenfell Tower and Investigation Review Team for their consideration alongside other learning being identified through their investigations into the Grenfell Tower fire. Issues identified in the review will be considered for action in accordance with existing Brigade processes.

## **SECTION 1**

**Actions identified by the Brigade  
in advance of the inquests into the  
Lakanal House fire**

This section covers actions identified by the Brigade before the outcomes of the inquests into the Lakanal House fire and the specific recommendations directed to the Brigade by the Coroner. These actions were monitored through the Lakanal Board.

### **ACTION 1**

**Analyse Brigade High Rise policy in order to:**

- **identify differences between the national Generic Risk Assessment for high rise and the Brigade's policy**
- **identify where the fire behaviour and the response of the Lakanal House building were not supported by local policy and the national Generic Risk Assessment**

A gap analysis was completed to assess the differences between the Brigades High Rise policy (the analysis was completed using the high rise policy extant at July 2009) and the national Generic Risk Assessment for High Rise Firefighting<sup>1</sup>. When completing the gap analysis consideration was given to the specific nature of the Lakanal House fire. Where gaps in Brigade policy were identified recommendations were made to amend Brigade policy (see section 1; action 6). Gaps in the national Generic Risk Assessment were also identified and raised with the Chief Fire and Rescue Adviser's Unit<sup>2</sup>. Further to this action the Brigade subsequently undertook to review the national Generic Risk Assessment for High Rise Firefighting.

### **ACTION 2**

**Commission the Building Research Establishment to undertake modelling in order to:**

- **improve the understanding of the effects of the environmental factors on the building, and**
- **explain the fire development and spread**

The Brigade, together with the Metropolitan Police Service, commissioned Building Research Establishment to investigate how the fire developed and spread to affect the various parts of Lakanal House. Within the agreed objectives of this investigation the Building Research Establishment were asked specifically to develop 'a possible progression sequence for the fire spread and development'. The Building Research Establishment completed computer

modelling supported by a partial reconstruction of the fire, which included consideration of environmental factors, providing an analytical report to the Brigade with their conclusions<sup>3</sup>.

### **ACTION 3**

**Complete an operational sequential time event plot in order to provide a single reference point for all significant operational events and actions, recorded in chronological order at this incident.**

A detailed sequence of events (or timeline) was completed using information from the Brigade's management information system that takes the logs from the Brigade's mobilising system and translates them into incident management data (MobIS), main scheme radio logs and key events identified through investigation<sup>4</sup>.

### **ACTION 4**

**Complete a sequence of events in order to provide an evidenced timeline explaining the sequence in which events happened.**

A detailed sequence of events (or timeline) was completed using information from the Brigade's management information system that takes the logs from the Brigade's mobilising system and translates them into incident management data (MobIS), main scheme radio logs and key events identified through investigation<sup>4</sup>.

### **ACTION 5**

**Undertake a gap analysis of National and Brigade fire survival guidance policies and guidance in order to produce a report identifying where Brigade Control fire survival guidance policy differs from the national guidance.**

A gap analysis of the National Control guidance and Brigade fire survival guidance policies was completed<sup>5</sup>. The gap analysis specifically compared Fire Service Circular 10/1993 'Training of Fire Control Staff' and the accompanying Fire Control Personnel Training package 'Keeping People Safe' (1994) with Brigade policy 539 'Emergency call management' (September 2007 version)<sup>6</sup> and fire survival guidance training materials.



**ACTION 6**

**Undertake a review of high rise policy in order to improve guidance for front line staff to prepare them for the demands of a similar incident by recognising the activities that were necessary.**

Brigade high rise policy was reviewed by completing a gap analysis of existing high rise policy against the national generic risk assessment for high rise, with consideration given to the specific nature of the Lakanal House fire (see section 1; action 1). Following this review Brigade high rise policy was updated to address the recommendations made following the gap analysis and following a further review of the national generic risk assessment for high rise incidents<sup>7,8</sup>.

Changes to high rise procedures were communicated to staff through articles in the Brigade publication Operational News in November 2011<sup>9</sup>, June 2015<sup>10</sup> and again in July 2016<sup>11</sup>, which incorporated a mandatory requirement for watch-based staff to complete training on the high rise procedure. High rise procedures were also the focus of 'back to basics' training on stations in 2016. Changes to procedures, operational equipment and training for high rise firefighting were further promoted with staff in May 2017 as part of the Learning at Work week. This work was supported by the Lakanal House Case study training package, which covers a range of issues associated with the Lakanal House fire (see section 2; action 3(c)).

**ACTION 7**

**Undertake a review of Brigade Control involvement in the Performance Review of Command meetings and Operational Review Team meetings in order to ensure Brigade Control is represented at meetings when a significant control input has been made with the fire ground, such as when multiple fire survival guidance calls have been made.**

A review of Brigade Control involvement in Performance Review of Command meetings was completed and Brigade policy 421 'Performance reviews of the command function (PRC)' was amended to require a representative from Brigade Control to be invited to Performance Review of Command meetings for incidents of 12 pumps and above<sup>12</sup>. In addition a senior Brigade Control Manager attends weekly

Operational Review Team meetings to provide feedback on Brigade Control issues.

**ACTION 8**

**Include an input from Fire Safety Officers in Control Officers' Fire Survival Guidance training in order to ensure that training for Control Officers complies with the requirements of the national guidance (Fire Service Circular 10/1993 'Training of Fire Control Staff').**

Initial training and training for new entrants to the Control Room Officer role in fire survival guidance includes fire safety issues covering fire behaviour, building structure (types and concepts) and fire survival in accordance with the national guidance. This training material was designed by Fire Safety Officers. Fire Safety Officers deliver training presentations on fire behaviour, fire survival and building structure (types and contents) to new entrants to the Control Room Officer role.

The fire survival guidance presentations used for refreshing staff on the principles of fire survival guidance calls cover the basic elements of the national guidance with respect to escape from different types of properties and basic fire survival techniques to protect callers from the effects of flames, heat and smoke. Although recommended by the national guidance Fire Safety Officers are not involved in delivering fire survival guidance refresher training<sup>13</sup>.

**ACTION 9**

**Revise the Reference Information File used by Control Officers when delivering fire survival guidance in order to ensure that they comply with national guidance.**

Reference Information Files provide Control staff with a concise summary of the key actions that should be taken for an incident when handling emergency calls.

The two Reference Information Files relevant to fire survival guidance have been reviewed and amended to comply with Fire Service Circular 10/1993 'Training of fire control staff' (and associated training materials) and Fire Service Circular 54/2004 'Emergency Call Management'. The Reference Information Files are

installed on the Brigade's mobilising system where they are available electronically to Control staff.

Two Reference Information Files are available; one for Control Officers<sup>14</sup>, that covers the specifics of dealing directly with fire survival guidance calls, and one for Control Supervisors<sup>15</sup>, which outlines the role of the Control Officer in fire survival guidance, provides specific checks to make and describes how and what information should be passed to the incident ground.

#### **ACTION 10**

##### **Review Brigade policy 539 'Emergency Call Management' in order to ensure it complies with national guidance.**

Brigade policy 539 'Emergency Call Management' was reviewed in line with Fire Service Circulars 10/1993 'Training of Fire Control Staff' and 54/2004 'Emergency Call Management'. The policy contains guidance on fire survival calls and obtaining critical information from callers to be passed to the incident ground in accordance with the national guidance<sup>16</sup>.

#### **ACTION 11**

##### **Deliver initial Fire Survival Guidance (FSG) training which complies with the National Guidance to Control Room Officers (CRO) in order to develop the performance of the CROs when handling FSG calls.**

The Brigade reviewed fire survival guidance training, conducting a gap analysis of current training with national guidance<sup>5</sup> (Fire Service Circular 10/1993 'Training of Fire Control Staff'), before developing a suite of training presentations covering fire behaviour, building structure (types and concepts), fire survival and emergency call handling techniques to meet the requirements of both national guidance and Brigade policy<sup>13</sup>. These training presentations were initially delivered to all Control staff between July and September 2011.

This learning was supplemented for a number of Control staff with a fire survival guidance role play. A number of fire survival guidance scenarios were developed with the purpose of embedding learning and allowing Control staff to practically explore this learning in a realistic situation.

In the same period (2011/12 financial year) Brigade Policy 790 'Fire survival guidance calls' was released (See action 14) and all Control staff received a presentation on the content of the policy and in particular further guidance on information gathered in fire survival guidance calls to be passed to the incident ground.

All new entrants to the Control Room Officer role receive extensive training, which covers the full range of the Control Room Officer's role and duties. Specifically in relation to fire survival guidance new entrants receive training on fire survival guidance policy, fire survival guidance call handling techniques (including British Academy of Film and Television Arts (BAFTA) Award winning film on a fire survival call). All new entrants are also given training on fire behaviour and evacuation, which is delivered by a Fire Safety Officer.

#### **ACTION 12**

##### **Establish a recurring programme of Fire Survival Guidance (FSG) refresher training in accordance with the National Guidance for all Control personnel.**

The national guidance (Fire Service Circular 10/1993 'Training of Fire Control Staff') promotes continuation training, which it describes as 'further (continuation) training should be carried out progressively with the aim of improving skills and knowledge gradually'. The guidance also recommended that '... on-watch refresher training should be given to all fire control staff on a systematic basis, i.e. it should be both scheduled and monitored'. National guidance recommends that refresher training should be delivered no more than every 12 months.

The Brigade reviewed fire survival guidance training, conducting a gap analysis of current training with national guidance<sup>5</sup> (Fire Service Circular 10/1993 'Training of Fire Control Staff'), before developing a suite of training presentations covering fire behaviour, building structure (types and concepts), fire survival and emergency call handling techniques to meet the requirements of both national guidance and Brigade policy<sup>13</sup>. These training presentations were initially delivered to all Control staff between July and September 2011.



The Brigade provided refresher training to Control staff using a variety of training techniques in the years following 2011. This included:

- Fire survival guidance refresher presentations
- Fire survival guidance policy updates
- Fire survival guidance role play
- Fire survival guidance reference information file (RIF) training
- Fire survival guidance exercises (combined with operational firefighters)
- Computer-based training with the following topics:
  - Fire survival
  - Call handling techniques
  - Building types and concepts
  - Fire behaviour

The Brigade invested significant effort in developing and maintaining fire survival guidance training and in providing practical opportunities for Control staff to exercise this knowledge in realistic scenarios. Brigade training records show, however, that Control staff have not consistently completed refresher training for fire survival guidance on an annual basis<sup>17</sup>.

### **ACTION 13**

**Draft a letter to the Department for Communities and Local Government (DCLG) to obtain clarification on the national guidance for fire survival guidance in order to ensure that a consistent approach is followed by all Fire Rescue Services.**

The Brigade drafted a letter to the Chief Fire and Rescue Adviser (employed at that stage by the Department of Communities and Local Government), which included some recommendations for a review of national fire survival guidance<sup>18</sup>. The Brigade took the decision not to send this letter pending the outcome of the Coroner's Inquests. It has not been possible to confirm however that this letter was sent following the inquests.

### **ACTION 14**

**Create a policy describing how information between Brigade Control and the incident ground should be exchanged during fire survival guidance calls in order to:**

- **Standardise the protocols for sharing fire survival guidance information between Control and the fire ground, and**
- **Maintain updates from the fire ground at Control**

Brigade policy 790 'Fire survival guidance calls' was introduced to describe the two-way exchange of critical information between Brigade Control and the incident ground when fire survival guidance calls are occurring<sup>19</sup>.

The introduction of Brigade policy 790 was communicated to staff through articles in the Brigade publication Operational News in November 2011<sup>20</sup> and again in March 2013<sup>21</sup>, the latter of which incorporated a mandatory requirement for watch-based staff to complete training on the fire survival guidance calls procedure.

Training aimed at increasing awareness of Brigade Control practices and procedures, including fire survival guidance, was developed and implemented for operational crews (see section 2; action 4(b) and 4(c)). This was also supported by the Lakanal House Case study training package, which covers a range of issues associated with the Lakanal House fire (see section 2; action 3(c)).

### **ACTION 15**

**Brief the Fire Brigade's Union about the findings of Lakanal House incident investigations in order to secure an efficient and effective delivery of the required changes with all personnel.**

The Management Joint Secretary of the Brigade's Joint Committee for Health, Safety and Welfare met with the London Fire Brigade's Union Regional Chair and Staffside Joint Secretary to brief them on the Lakanal House investigation and associated actions in August 2010.

### **ACTION 16**

**Undertake a general review of the training delivered to Control Officers in order to confirm that the fire survival guidance training is suitable and sufficient**

Brigade Control Officer training and knowledge was reviewed and several recommendations were made to improve fire survival guidance training for Control Officers<sup>5</sup>. These recommendations were translated in to actions, which have been covered elsewhere in this review (see section 1; actions 8, 11, 12 and 17).

#### **ACTION 17**

**Develop and deliver an enhanced fire survival guidance training package for Control Supervisors in order to ensure that Control Supervisors are trained to support a Control Room Officer when they are handling a fire survival guidance call, to a standard commensurate with the national guidance.**

The Brigade reviewed fire survival guidance training, conducting a gap analysis of current training with national guidance (Fire Service Circular 10/1993 'Training of Fire Control Staff'), before developing a suite of training presentations covering fire behaviour, building structure (types and concepts), fire survival and emergency call handling techniques to meet the requirements of both national guidance and Brigade policy. These training presentations were initially delivered to all Control staff between July and September 2011.

An additional training presentation was developed for Control Supervisors<sup>22</sup>, which concentrates on providing support to the Control Room Officer as they take the fire survival guidance call and on passing information to the incident ground. Familiarisation was also provided in relation to the Reference Information File 'Fire survival guidance for Control Supervisors' (See section 1; action 9).

This learning was supplemented for a number of Control staff with a fire survival guidance role play. A number of fire survival guidance scenarios were developed with the purpose of embedding learning and allowing Control staff to practically explore this learning in a realistic situation. Control Supervisors played the role of the supervisor or the caller in these role play scenarios<sup>17</sup>.

#### **ACTION 18**

**Produce a Brigade Control Sequence of Events indexing all messages between the original**

**emergency call made at 16.18 and 21.00 on the same day (to be listed in chronological order).**

A detailed sequence of events (or timeline) was completed using information from the Brigade's management information system that takes the logs from the Brigade's mobilising system and translates them into incident management data (MobIS), main scheme radio logs and key events identified through investigation<sup>4</sup>.

In addition the calls made by the public to Brigade Control have been chronologically listed in a Brigade report<sup>23</sup>.

#### **ACTION 19**

**Review Brigade Control's response to the Lakanal House fire and produce a report analysing the actions at Control.**

The Brigade Control's response to the Lakanal House fire was reviewed and a comprehensive report detailing the role and actions of Brigade Control was published in September 2012<sup>24</sup>.

#### **ACTION 20**

**Undertake a review of high rise fires where fire spread beyond the compartment in order to identify recorded fires which could have produced a learning opportunity, prior to 3<sup>rd</sup> July 2009.**

The Brigade's Fire Investigation report<sup>25</sup> following Lakanal House reported that a study of high rise fires recorded within the Brigade's Incident Management System was carried out by the Brigade's Fire Investigation Team and concluded that none of those fires were found to have the same fire spread mechanisms as those at Lakanal House. A request was also made to approximately 900 members of a forum for fire, explosion and arson investigators, the International Association of Arson Investigators - UK (IAAI-UK) for information regarding any external fire spread within high rise buildings; the only feed back related to external upward vertical fire spread. There were no replies with evidence of external downward vertical fire spread.



**ACTION 21**

**Fire crews to increase the level of pre-planning at residential high rise fires to include single line diagrams showing the number and location of individual flats in order to ensure that access to risk information related to residential high rise buildings is available to assist with the implementation of high rise procedure and the development of an operational plan.**

The level of pre-planning at residential high rise premises was increased and is detailed in Brigade policy 800 'Management of Operational risk information' which lays out the Brigade's risk-based approach to recording risk information<sup>26</sup>. Where residential high rise premises were recorded on the Operational Risk Database, staff were instructed to include suitable line drawings<sup>27, 28</sup>, with details including:

- The internal layout of common areas
- The layout of flat numbers and their associated floors
- Whether the flats are single storey or maisonettes
- The location of staircases
- Any escape routes
- The availability of fixed installations, such as the dry rising mains and firefighting lifts

The importance of line drawings was highlighted in the Lakanal House case study training package (see section 2; action 3(c)) with a practical task to complete a line drawing.

The Brigade supplemented single line drawings with electronic-Premises Information Plates, which allowed additional important operational details to be included on diagrams (See section 2; action 2a).

Information recorded on the Operational Risk Database is available to staff through the mobile data terminal installed on fire engines.

**ACTION 22**

**Develop a Brigade policy on recording command information at the bridgehead in order to establish a standardised protocol supporting**

**commanders at forward command points and allowing the recording of command decisions and operational progress.**

Brigade policy 820 'Forward Information Board' has been developed introducing portable Forward Information Boards designed to allow the recording of key information at locations that are remote to the Command Unit, including the bridgehead<sup>29</sup>.

The Forward Information Board has been designed with a range of operational templates to support the gathering and recording of information at a range of different incident types. Additionally the Forward Information Board can provide incident and sector commanders with information that can be used to support briefings to staff and the transfer of information from one officer to another during handovers.

The introduction of the Forward Information Board was communicated to staff through an email message from the Assistant Commissioner responsible for Operational Policy in January 2013<sup>30</sup>, which incorporated a mandatory requirement for watch-based staff to complete training on the use of the Forward Information Board. This was supported by an article in the Brigade publication Operational News in July 2016<sup>11</sup> and by the Lakanal House Case study training package, which covers a range of issues associated with the Lakanal House fire (see section 2; action 3(c)).

**ACTION 23**

**Develop a Brigade policy for operational staff dealing with fire survival guidance calls at incident in order to standardise the protocols for managing fire survival guidance information on the fire ground.**

Brigade policy 790 'Fire survival guidance calls' has been developed and introduced<sup>19</sup>; the policy explains what a fire survival guidance call is and describes how critical information should be exchanged between Brigade Control and the fire ground and how this information is to be recorded for use by incident commanders.

The introduction of Brigade policy 790 was communicated to staff through articles in the Brigade

publication Operational News in November 2011<sup>20</sup> and again in March 2013<sup>21</sup>, the latter of which incorporated a mandatory requirement for watch-based staff to complete training on the fire survival guidance calls procedure.

Training aimed at increasing awareness of Brigade Control practices and procedures, including fire survival guidance, was developed and implemented for operational crews (see section 2; action 4(b) and 4(c)). This was also supported by the Lakanal House Case study training package, which covers a range of issues associated with the Lakanal House fire (see section 2; action 3(c)).

#### **ACTION 24**

**Develop a Brigade policy for controlled movement of the bridgehead at high rise incidents in order to enable front line crews to be able to relocate the bridgehead when necessary.**

Brigade policy 633 'High rise firefighting' was amended to reflect this requirement. Section 7.33 of the policy<sup>31</sup> provides directions on repositioning the bridgehead in the event of worsening conditions or fire spread below the bridgehead. The policy also provides actions that should be taken when the bridgehead is moved in order to maintain staff safety.

Policy amendment on repositioning the bridgehead was communicated to staff through an article in the Brigade publication Operational News in November 2011<sup>9</sup>, which incorporated a mandatory requirement for watch-based staff to complete training on the high rise procedure. This was also supported by the Lakanal House Case study training package, which covers a range of issues associated with the Lakanal House fire (see section 2; action 3(c)).

#### **ACTION 25**

**Develop a Brigade policy for conducting search operations, which includes guidance for those conducting the search and those having to manage search operations, in order to:**

- **Provide consistent guidance for crews conducting complex searches, and**

- **Provide consistent guidance for the officers giving briefings and managing crews undertaking search operations**

Brigade policy 803 'Search and rescue procedures within structures' has been developed and introduced to address this requirement<sup>32</sup>. The policy includes compartment search procedures for crews conducting searches and rescuing casualties and guidance for incident commanders on information gathering, selecting the appropriate method of searching premises, briefing for search operations and maintaining communications.

The introduction of Brigade policy 803 was communicated to staff through articles in the Brigade publication Operational News in October 2013<sup>33</sup> and again in July 2017<sup>34</sup>, which incorporated a mandatory requirement for watch-based staff to complete training on the search and rescue procedure. This was also supported by the Lakanal House Case study training package, which covers a range of issues associated with the Lakanal House fire (see section 2; action 3(c)).

#### **ACTION 26**

**Develop a Brigade policy to mitigate the risk presented by cables that fall when affected by fire.**

Cable cutters were introduced in October 2013 and provided to all breathing apparatus wearers to deal with the hazards of firefighters becoming entangled in loose and fallen cables at incidents. Brigade policy 466 'Respiratory protective equipment – breathing apparatus – Operational procedure' provides guidance on their operational use<sup>35</sup>.

This work was supported by articles in the Brigade publications 'Operational News' in November 2010<sup>36</sup> informing staff of the risk and 'Shout' in October 2013<sup>37</sup> where staff were provided with further details of the introduction of cable cutters. In addition, a practical cable entanglement exercise, where operational crews had the opportunity to use the cable cutters for their intended purpose, was also included in the 'back to basics' training on stations in 2015.



**ACTION 27**

**Consideration of changing national requirements for the fixing of cables in order to influence a change in the national standards and reduce the risk of entanglement to firefighters and the public.**

The Brigade provided evidence and supported the change to wiring regulations to help prevent dropping cables and make consumer units safer. This was covered by the Brigade's involvement in the review of British Standard (BS) 7671; 'Requirements for Electrical Installations', which provides the national standard for the UK in the installation of low voltage electrical installations. The British Standard was amended to require that wiring in escape routes should be supported to avoid premature collapse in the event of fire.

The Brigade have since worked with others to expand this requirement beyond 'escape routes'. The Brigade provided a physical demonstration to stakeholders, which showed how cables could entangle firefighters, and as a result the next amendment of the standard (set to be released in July 2018) should cover cables in 'all areas'<sup>38</sup>.

**ACTION 28 (linked with action 29)**

**Revise the agreements between the Brigade and London Boroughs, in relation to Fire Safety responsibilities for residential premises (as described in the Housing Act 2004 and the Fire Safety Order 2005) to support compliance with the national Local Authorities Coordinators of Regulatory Services protocols.**

The protocols between London Boroughs and the Brigade that establish the principles and describe the joint working arrangements to deliver the objective of improved fire safety within housing occupied by more than one household were revised in accordance with Local Authorities Coordinators of Regulatory Services Housing Fire Safety guidance. Each London Borough has signed such an agreement with the Brigade<sup>39</sup>.

Examination of a proportion of the agreements between the Brigade and London Boroughs shows that not all agreements have been reviewed within the timescales identified and that generally the

requirement for both parties to the agreement to jointly produce a monitoring and evaluation report on an annual basis is not being observed.

**ACTION 29 (linked with action 28)**

**Review the engagement with London Boroughs in order to support a Local Authorities Coordinators of Regulatory Services agreement as described in the national guidance and seek agreement with all 33 London Boroughs.**

The protocols between London Boroughs and the Brigade that establish the principles and describe the joint working arrangements to deliver the objective of improved fire safety within housing occupied by more than one household were revised in accordance with Local Authorities Coordinators of Regulatory Services Housing Fire Safety guidance. Each London Borough has signed such an agreement with the Brigade<sup>39</sup>.

Examination of a proportion of the agreements between the Brigade and London Boroughs shows that not all agreements have been reviewed within the timescales identified and that generally the requirement for both parties to the agreement to jointly produce a monitoring and evaluation report on an annual basis is not being observed.

**ACTION 30**

**Raise standards on installation and testing of fire lifts as a national issue, and in particular influence the amendment of the national industry standards to include inspection of the lift's firefighting functions as part of routine testing.**

The Brigade places representatives on numerous committees for the introduction and amendment of national industry standards and this has included influencing standards for the inspection and maintenance of firefighting lifts.

In 2016 British Standard (BS) 8899:2016 'Improvement of fire-fighting and evacuation provisions for existing lifts: a code of practice' was introduced. Chapter 8 of this standard is dedicated to the testing and maintenance of firefighting lift installations.

BS EN 81-72:2015 'Safety rules for the construction and installation of lifts - Particular applications for passenger

and goods passenger lifts. Part 72: Firefighters lifts' was rewritten in 2015 and Annex J was added specifically to cover the maintenance requirements for firefighting lifts.

Annex I of BS9999:2017 'Fire safety in the design, management and use of buildings – code of practice' also gives basic instruction on appropriate testing and maintenance for firefighter and evacuation lifts.

### **ACTION 31**

**The Brigade continue targeting of social housing using a risk based approach in order to demonstrate the methodical use of Fire Safety resources by inspecting premises according to their assessed risk levels.**

The Brigade have been using a risk based approach to inspections for many years utilising a risk matrix to determine the length of time before revisiting a premises<sup>40, 41, 42</sup>. This applies to residential blocks of flats and converted houses into flats or houses of multiple occupation in partnership with the Local Authority. The Brigade also conduct responsive visits based on concerns from residents and will inspect premises post fire.

In addition to this risk based approach, the Brigade have over the last few years built up relationships with Residential Social Landlords and Local Authorities using partnership agreements and memorandums of understanding to work together at a strategic level to identify risk to vulnerable persons using a 'person centred risk assessment' approach. This includes older people, people with mobility or cognitive impairments and those that are living in poverty, for example using unsuitable heating.

The Brigade support vulnerable people to register with UK Power Networks priority services register so they can get enhanced support in the event of a power cut, reducing the fire risk that can result from using alternative light and heat sources. Residential Social Landlords and Local Authorities refer people that they have identified as high risk to the Brigade for Home Fire Safety Visits.

The Brigade continue to carry out Home Fire Safety Visits for vulnerable people<sup>43, 44, 45, 46</sup>, particularly those

at higher risk from fire and with the reduced ability to respond or escape from a fire. The Brigade provide free smoke alarms in all rooms of risk.

The Brigade continue to operate within our Safeguarding policies, identifying those that are high risk and referring to the Local Authority for action, including those with hoarding behaviours, where Brigade Officers work locally with partners to address risk within their localities<sup>47</sup>.

### **ACTION 32**

**Conduct a post investigation/prosecution review, in particular in relation to liaison with the Metropolitan Police Service, Crown Prosecution Service and the Health and Safety Executive in order to confirm compliance with the recommendations arising from the inquests or enforcement.**

The Brigade reviewed the investigative process following the Lakanal House fire and identified a number of elements that would benefit from being covered in policy or guidance. These elements included governance, project management, accommodation, data collection, storage, communications, investigation, physical evidence collection, evidence presentation, working with partner agencies and the support of witnesses.

These elements were covered in a new policy, Brigade policy 920 'Major incidents investigation'<sup>48</sup>, which identifies key actions to take following a major incident. The policy covers liaison with partner agencies in any investigative process and includes a draft memorandum of understanding for liaison between agencies at appendix 2 of the policy.

This policy was in draft for some time (a version is appended to a Corporate Management Board report in September 2015<sup>49</sup>) and was not formally published until 12 December 2017.

### **ACTION 33**

**Review the learning and training for inspecting officers in terms of social housing in order to demonstrate that organisationally the Brigade has a robust process to develop the competency of**



### fire safety inspecting officers in relation to these types of premises.

Inspecting Officers complete a range of audits on premises where the Regulatory Reform (Fire Safety) Order (the 'Fire Safety Order') applies to reduce risk and carry out other duties in respect of the Fire Services Act, Fire Safety Order and building consultation requirements.

There are National Occupational Standards for Fire Safety. National Occupational Standards specify UK standards of performance that people are expected to achieve in their work, and the knowledge and skills they need to perform effectively. National Occupational Standards are approved by UK government regulators. Skills for Justice is the body responsible for the fire safety, investigation and enforcement sector.

The Brigade train Inspecting Officers in accordance with the relevant National Occupational Standards. Since 2012 the development route for Inspecting Officers has been to complete and pass the following qualifications:

- Level 3 certificate in Fire Safety (Advisor)
- Level 4 certificate Fire Safety (Auditors)
- Level 4 Diploma in Fire Safety (Inspecting Officer)

The candidate has to pass twelve assessments to demonstrate they can apply the knowledge they have acquired in the formal qualification correctly in the work place, which cover all types of premises.

### **ACTION 34** Consider any external and national regulatory fire safety issues.

The Brigade identified a range of regulatory fire safety issues that it considered should be raised nationally, including:

- The definition of the term 'parts used in common' in buildings containing multiple domestic premises

- Whether the Fenestration Self Assessment Scheme (FENSA) is an appropriate means for certifying compliance with Building Regulations 2010 in tall residential buildings
- The definition of the term 'window' as detailed in the FENSA scheme.
- Spread of fire over the external surfaces the building (Requirement B4 of the Building Regulations 2010 refer).
- How the 'responsible person' should assess that the risk assessor has sufficient training, experience and knowledge to undertake a suitable assessment of the risks in complex and high risk premises

The Brigade wrote to the Fire Minister (Parliamentary Under Secretary of State for Communities and Local Government ) outlining all of the points above and making a series of recommendations with respect to how each of these issues may be improved or resolved<sup>50</sup>.

The Department of Communities and Local Government responded by letter<sup>51</sup> and further to this there were some meetings between Brigade officers and Government officials (See section 3; action 1).

### **SUMMARY OF PRE-INQUEST ACTIONS**

A number of actions were identified by the Brigade through their own internal reviews and investigations prior to the Coroner's recommendations following the Lakanal House inquests.

These represented a broad range of activities including:

- Producing investigative reports analysing the actions at Brigade Control
- Developing new policies and procedures for search and rescue operations
- Reviewing existing policy for high rise firefighting and fire survival guidance
- Reviewing staff training in a numbers of areas including fire survival guidance for control operators

- Introducing new operational equipment including the forward information board and cable cutters
- Considering external and national Regulatory issues and informing Government
- Influencing third parties to review national guidance, legislation and standards

The majority of actions have been completed satisfactorily. Several issues were however identified and these have been raised directly with the Grenfell Tower Investigation and Review Team. They include:

- (1) Whilst Fire Safety Officers were involved in developing the building structure/fire safety issues content for the fire survival guidance training and they have delivered the content on initial training, they have not consistently delivered that content in the refresher courses
- (2) Training records show that fire survival guidance refresher training has not been completed by all staff on an annual basis in accordance with national guidance
- (3) It has not been possible to confirm that a letter was sent to the Chief Fire Rescue Adviser in relation to national guidance for fire survival guidance calls
- (4) A review of a proportion of the Local Authorities Coordinators of Regulatory Services agreements between the Brigade and London Boroughs shows that not all agreements have been reviewed within the timescales identified and that generally the requirement for both parties to the agreement to jointly produce a monitoring and evaluation report on an annual basis is not being observed.

## **SECTION 2**

**Actions identified by the Brigade  
in response to recommendations made  
by the Coroner**

This section covers actions identified by the Brigade in direct response to recommendations made against the Brigade by the Coroner. These actions were monitored through the Operational Directorates Coordination Board.

## CORONER'S RECOMMENDATION 1

### Public awareness of fire safety

A number of former residents of Lakanal House gave evidence. There was little awareness of fire safety advice published by London Fire Brigade, whether through leaflets, the website or home fire safety visits. Residents of high rise residential buildings need to be aware of the dangers associated with fire in such buildings and to have a clear understanding of what they should do in case of fire. Whilst this is a matter which concerns housing providers, **it is recommended that your Brigade also consider how to improve dissemination of fire safety information to achieve effective communication with residents of such buildings.**

To address this recommendation the Brigade explored how communications with partners could be improved through the following:

#### ACTION 1a

#### Establishing a fire safety high rise forum

The Brigade worked with partners to establish a fire safety high rise forum. The Inaugural Forum meeting, organised and chaired by Brigade Officers, was held on 4 October 2013<sup>52</sup>. This was attended by 22 delegates representing both public and private sector landlords, including London Councils, the National Social Housing Fire Strategy Group, the Association of Residential Letting Agents and a number of other associations. The initial meeting of the forum covered a range of topics including:

- the purpose of the forum
- issues raised by the Coroner in their recommendations to prevent future deaths identified by the Lakanal House inquests
- a discussion on the Regulatory Reform (Fire Safety) Order 2005 and the experiences of each

organisation regarding its effectiveness and how it could be improved

- expectations and outcomes of the Forum and other topics for consideration

The Brigade continued to organise and chair the forum, which met regularly throughout 2014 and 2015. The forum established a work programme concerning relevant topics and issues raised by stakeholders. The last meeting of the high rise forum was held on 27 November 2015<sup>53</sup>, when it was concluded that most of the work programme had been debated at previous meetings of the forum.

#### ACTION 1b

#### Review existing information provided to residential high rise dwellers

The Brigade reviewed Home Fire Safety guidance and subsequently developed specific guidance for high rise dwellers. The Brigade produced 25,000 leaflets on Compartment Fires, which it made available for use by station staff and Community Safety teams.

The Brigades website has been updated to reflect the revised guidance. General guidance is available at <https://www.london-fire.gov.uk/safety/> and specific guidance on flats and maisonettes is available at <https://www.london-fire.gov.uk/safety/the-home/escape-plan/escape-plan-blocks-of-flats/>. Information on the risks of fire at home and the special considerations for purpose built flats or maisonettes can also be downloaded from the Brigade's website in a booklet called 'Fire safety in the home'<sup>54</sup>.

#### ACTION 1c

#### The Brigade's communications department will run a campaign in 2014 targeted at housing providers and people who live in purpose built blocks of flats

The Brigade's 'Know the Plan' campaign was launched on 28 March 2014 and finished on 29 March 2015<sup>54</sup>. The aim of the 'Know the Plan' campaign was to encourage people to have an escape plan and know who to ask for fire safety advice. It was a London-wide campaign targeted at those living in high-rise premises.



The campaign used a variety of means to promote the know the plan message including (but not limited to):

- advertising the campaign in newspapers and on radio
- advertising the campaign through social media
- letters advising of the campaign were sent to all London Boroughs and Housing Associations
- campaign literature was sent to all fire stations for them to use and distribute locally
- know the plan guides prepared for local councillors<sup>55</sup>
- campaign microsite 'www.knowtheplan.co.uk' was introduced with clear sections for residents and landlords (NB: fire safety advice including information on 'escape plan' for residents<sup>56</sup> and landlords is now provided via the Brigades website: <https://www.london-fire.gov.uk/safety/the-home/escape-plan/escape-plan-blocks-of-flats/> )

Two YouGov surveys were used to assess whether the campaign had achieved its objective of raising public awareness regarding safety in residential high rise building. The survey results showed behaviour change after six months of the campaign with a 70 per cent increase in the number of people saying they had an escape plan for if there were a fire in their home.

## **CORONER'S RECOMMENDATION 2**

### **Visits made pursuant to section 7(2)(d) Fire and Rescue Services Act 2004, general familiarisation visits and home fire safety visits**

**It is recommended that the Brigade review procedures for sharing information gained as a result of section 7(2)(d), familiarisation and home fire safety visits with crews both within the station in question and at other local stations.**

To address this recommendation the Brigade reviewed its policies for information gathering during 7(2)(d) visits, established a risk-based approach to premises inspection and reviewed its policy for identifying serious outstanding fire risks during home fire safety visits.

## **ACTION 2a**

### **Review existing policy related to information gathering and contingency plans**

Following the Lakanal House fire the Brigade committed to increase the level of pre-planning at residential high rise fires and to specifically include single line diagrams showing the number and location of individual flats (See section 1; action 21). In the same period the Brigade were reviewing how information could be made available to operational crews at the incident via a mobile data terminal and mobile data terminals were fitted to all frontline fire engines in 2010. The mobile data terminals are supported by a robust database, the Operational Risk Database, which allows for the provision of instantly accessible safety critical information to Incident Commanders at the incident.

The Brigade's Operational Risk Database is the main database which holds operational risk information for premises. In addition, the Operational Risk Database also holds information derived from centrally managed datasets (some obtained externally). All the information held in the Operational Risk Database is made available to crews via icons on maps displayed on fire engine mobile data terminals and can also be accessed by the subsequent incident commanders through the systems available on the Brigade's Command Units.

In 2011, following the inspection of a number of Fire and Rescues Services, the Health and Safety Executive made a number of recommendations, to all Fire and Rescue Services; one of these centred on operational risk information with the Health and Safety Executive recommending that all services should ensure that:

- They provide adequate training for staff gathering and assessing risk critical information
- There is a system in place to actively collect relevant risk critical information
- They monitor the effectiveness of these arrangements
- Risk critical information is kept up to date and is in a suitable format
- Incident commanders are able to access the information to inform their command decisions

The Health and Safety Executive also recommended that national guidance on the classification of risk premises and the collection and dissemination of risk information was produced. The Brigade reviewed its policies and procedures in relation to 'risk information' and the Health and Safety Executive's recommendations and concluded that its existing systems were compliant with expectations<sup>57</sup>.

Further to the Health and Safety Executive's recommendations the Chief Fire and Rescue Adviser of the Department of Communities and Local Government produced guidance on 'operational risk information', which was issued in April 2012. The Brigade reviewed its policies, procedures and processes for collecting, recording and providing information to crews in accordance with this national operational guidance<sup>58</sup>. Whilst making some recommendations for improvements in line with the guidance the Brigade concluded that its arrangements for the gathering of risk information appeared to be robust and largely in compliance with the national operational guidance.

The Brigade reviewed its policy for collection and management of operational risk information again following the Coroner's recommendations. At this stage the Brigade's policy for the collection and management of operational risk information had already been reviewed and was consistent with national guidance issued following the Lakanal House fire and the Health and Safety Executive's inspection of Fire and Rescue Services. As such, the Brigade focussed this review on optimising the Brigade's pre-planning activities to ensure the effective sharing of information gained as a result of 7(2)(d) familiarisation and Home Fire Safety Visits and to maximise the use and availability of this information when operational personnel respond to emergencies.

The Brigade gave consideration to the way in which crews could access specific building information when required to attend operationally. The Brigade conducted a trial during 2014 where over 160 plates containing building information relevant to firefighters were installed at blocks within the boroughs of Tower Hamlets, Camden, Wandsworth, Lambeth, Southwark,

Lewisham, Croydon, Hackney, Haringey and Hounslow.

Feedback from the trial was positive, both from crews and our external partners. All parties involved recognised the benefits that the plates can provide and the improved working relationships delivered with housing providers and local authorities.

As part of the trial, virtual images of the plates were included on the mobile data terminals and these proved useful for crews. Following a thorough evaluation it was agreed that instead of rolling out physical plates, electronic images (virtual plates – called electronic premises information plates or ePIPs) with improved layout and design, would be provided to crews via the mobile data terminals on fire engines<sup>59</sup>.

This allowed a number of further improvements including:

- improved icons
- a single plan view allowing improved detail and visibility
- additional information of sprinklers, non 'fire' lifts, legend for flats and location of fire lifts
- the inclusion of roads to provide improved orientation
- improved detail regarding location of hydrants
- replacing information on the height of building with dimensions to assist formulation of the first informative message.

A series of amendments were required to Brigade computer systems to accommodate this change and electronic-premises information plates were made available to staff on the station diary (outside duties) system on 30 June 2015. As a result all residential high rise premises visited by crews for the purpose of premises risk assessment were required to have an electronic-premises information plate created, which would be available electronically to all staff regardless of their base location via the mobile data terminal.

Further changes were made to Brigade policy 800 'Management of Operational Risk Information' in August 2015<sup>60</sup>. Additional detail was included in the 'information gathering' section and new sections were added on 'recording information in the Operational



Risk Database' and '7 (2) (d) visits and the review of information'.

The management of operational risk information was communicated to staff through an article in the Brigade publication *Operational News* in July 2016<sup>61</sup>, which incorporated a mandatory requirement for watch-based staff to complete training on the management of operational risk information policy.

### **ACTION 2b**

#### **Create an inspection regime targeted at high priority buildings**

An order of priority for inspecting premises based on risk was developed. Premises were grouped into three bands based on premises type and risk. Staff were informed of a priority order for inspecting premises based on risk via email and instructed to focus on band 1 premises, which included residential high rise<sup>62</sup>. The use of the risk assessment in Brigade policy 800 'Management of operational risk information' determines the level of risk in relation to a premises<sup>63,60</sup>.

The level of risk is applied to a risk matrix, which determines how often the premises should be visited, whether it requires an on site exercise and whether hazard information or a full tactical plan need to be recorded.

### **ACTION 2c**

#### **Develop new policy/guidance to address known outstanding risks identified through home fire safety visits**

Guidance has been developed with the objective of identifying and lowering the risk of harm to members of the public from fire in their homes<sup>43, 44, 45, 46</sup>. The guidance describes the actions to be taken by staff when a serious outstanding risk is identified in a home fire safety visit. This may be a risk from fire which cannot be fully resolved through installation of smoke alarms, e.g. where the resident's risk factors may mean that we would also recommend provision of resources such as fire retardant bedding, a telecare link and in some cases sprinklers.

Where serious outstanding risks are identified the station manager will work with the resident, their representative and where appropriate the local social services or health team, to identify the measures that would help to protect the resident and to discuss how those measures might be provided.

In October 2012 the Brigade commissioned an outside organisation (Cordis Bright) to complete a review of the effectiveness of home fire safety visits<sup>64</sup>. The report concluded that the Brigade's approach to home fire safety visits has reduced accidental dwelling fires. The report noted that home fire safety visits were effective in the high priority postcodes (those postcodes where the most domestic fires have occurred over the last 5 years) and with high priority people (those people who are likely to be more vulnerable to a fire should one occur) that the Brigade was prioritising for visit. The development of the Serious Outstanding Risk process to identify residents for whom a standard home fire safety visit is not enough to significantly reduce the risk of fire was noted as part of the review.

### **ACTION 2d**

#### **Set corporate targets for 7 (2) (d) activities**

There is no evidence that a corporate target was set for 7(2)(d) activities, in the sense that such a target was not established in the corporate suite of performance indicators, or that a target was established elsewhere to define and monitor the number of 7(2)(d) visits completed by the Brigade.

That is not to say that 7(2)(d) activities were not monitored however. In the minutes of the Operations, Prevention and Response department Principle Management Board meeting of December 2013 it is recorded that, in respect to this action, the Chair of the Board confirmed that "the corporate target will be to complete all 7(2)(d) inspections"<sup>65</sup>. The description of this target is ambiguous and it has not been possible to confirm what this meant specifically. It appears to have been interpreted as relating specifically to those premises already recorded on the Operational Risk Database and the target was to ensure that those premises were revisited in accordance with the

frequency determined by their premises risk assessment.

For some time the Brigade monitored completions of outside duties visits (i.e. 7(2)(d) visits) to premises already recorded on the Operational Risk Database (i.e. these were revisits to residential high premises that had already been subject to a premises risk assessment). The last available monitoring report for this activity is from October 2016 and no monitoring is currently taking place. Whilst the Brigade established a process for prioritising inspections to buildings based on risk (see section 2; action 2b) there is no evidence that any targets were ever set for inspecting residential high rise premises that were not already recorded on the Operational Risk Database (i.e. those residential high rise premises that had not previously been visited for the purposes of carrying out a premises risk assessment).

A review of the Operational Risk Database shows that on average approximately 40 visits to residential high rise premises, that were not yet recorded on the Operational Risk Database, were completed each month under the requirements of section 7 (2) (d) of the Fire and Rescue Services Act resulting in the production of an electronic-Premises Information Plate for those premises (Note: data between April 2014 and October 2017). Using the same data set (i.e. as of October 2017) it was identified that approximately 1,700 residential high rise premises had a premises risk assessment recorded against a total of approximately 6,900 residential high rise premises in London.

Of premises that have been scored using the risk matrix (premises risk assessment) in Brigade policy 800 'Operational risk information' the majority (approximately 75%) of residential high rise premises are categorised as having 'low' or 'negligible' risk. A further 23% (approximately) of residential high rise premises were categorised as having 'medium to low' risk and less than 2% (approximately) of residential high rise premises were categorised as having 'medium' or 'high' risk.

### CORONER'S RECOMMENDATION 3

#### Incident commanders

During the Lakanal House fire there were six changes of Incident Commander (IC) with some serving as IC for brief periods.

**It is recommended that the Brigade review its policy and procedures concerning incident command, having regard to whether it is effective for the choice of IC to be tied closely to the number or type of appliances attending an incident and the effectiveness of a policy which may result in rapid and frequent changes of IC. It is also recommended that consideration be given to training of ICs and potential ICs to enhance their performance in relation to the following**

- use of the Dynamic Risk Management model and other management tools to enable ICs to analyse a situation, and to recognise and react quickly to changing circumstances
- to recognise when to escalate attendance by more experienced ICs
- to anticipate that a fire might behave in a manner inconsistent with the compartmentation principle
- to be aware of the risks to those above and adjacent to the fire flat
- handover from one IC to the next and effective deployment of outgoing ICs
- the collection of information from all possible sources
- use of methodical search patterns.

To address this recommendation the Brigade implemented the recommendations of the report 'Review of incident command and support levels and undertook a further review of incident command training with respect to the issues identified by the Coroner.

#### ACTION 3a

**Implement recommendations from the report 'Review of incident command and support levels'.**



The Brigade completed a review of incident command and support levels<sup>66</sup> and recommended changing the incident command thresholds at 8 pump fire and above such that Group Managers would remain in charge at incidents longer and at incidents up to and including 10 pump fires<sup>67</sup>. The recommendations to change incident command thresholds for Group Manager and above were implemented in November 2013<sup>68, 69</sup>, following agreement with the Representative Bodies.

### **ACTION 3b**

#### **Review incident command training to ensure the 7 points are adequately covered.**

The Brigade delivers incident command training through its training provider, Babcock Training Ltd. Together with the training provider the Brigade reviewed incident command training to establish whether the existing incident command training needed to be amended to include or enhance the specific elements highlighted by the Coroner.

The review started with Brigade Officers submitting a formal request to its training provider to commission and/or alter incident command training to ensure that the 7 areas highlighted by the Coroner were being met by current training or changes were required<sup>70</sup>. The Brigade supplied detail of the Coroner's recommendations, relevant existing operational policy and training, and instructed its training provider to provide a proposal detailing how training would need to be delivered in order to meet the recommendations.

The Brigade's training provider translated the Coroner's recommendations into learning outcomes and cross referenced these against existing training. They used this to produce the proposal for changes to incident command training, which they submitted to the Brigade<sup>71</sup>.

The areas of incident command focussed on in this action have been carried through into a new suite of incident command courses, including Level 1 and Level 2 incident command development and maintenance courses. Some of the focus areas are scenario specific and they are covered variously across a range of Command Decision Exercises. One Command Decision

Exercise (Blackwall Tower) was designed to incorporate all of the focus areas and is set in a high rise residential block with a scenario that includes an escalating incident with fire spread beyond the compartment of origin, search and rescue activities and multiple fire survival guidance calls<sup>72</sup>.

The training commissioning documentation describes the development of a further residential high rise command decision exercise called 'Holcroft House'. No evidence was provided to confirm that this command decision exercise has been completed and is in use.

### **ACTION 3c**

#### **Introduce a case study training package incorporating learning outcomes from inquests.**

A computer based training (CBT) solution, the Lakanal House Case Study, was developed to cover the learning outcomes from the Lakanal House inquests<sup>73, 74</sup>. The specified learning outcomes for the case study incorporated both the Coroners recommendations (above) and the relevant training recommendations from the Brigade's Operational Review Report. All watches completed the case study training package as station-based training. Senior Officers were invited to attend one of a series of Lakanal House training presentations where the case study was delivered by a senior officer who had been closely involved in the Lakanal House investigation.

Training records are available, which show case study completions by watch and attendance of senior officers at training presentations. The case study remains available for use by staff but has not been promoted with staff since the initial training.

## **CORONER'S RECOMMENDATION 4**

### **Brigade Control**

**It is recommended that the Brigade consider whether training be given to operational crews about Brigade Control practices and procedures.**

To address this recommendation the Brigade reminded operational crews about fire survival guidance procedures and developed a training package for

operational crews covering Brigade Control practices and procedures.

**ACTION 4a**  
**Remind staff of revised Fire Survival Guidance practices**

An article covering fire survival guidance was published in the Brigade’s publication ‘Operational News’ in March 2013<sup>21</sup>. In addition to the article watches were required to review Policy 790 ‘Fire Survival Guidance Calls’ as a watch.

**ACTION 4b and 4c**  
**4b - Develop a specification for a new training solution covering Brigade Control practices and procedures**  
**4c – Deliver the training to operational staff**

A training commissioning document was drafted that required the development of a new training solution aimed at raising awareness of Brigade Control practices and procedures<sup>75</sup>. A computer-based training package (Brigade Control Fire Survival Guidance) was developed for station-based staff (firefighter to watch manager) and all watches completed the training package.

Training records for all watches are available. This training has not been repeated with staff since the initial training.

**CORONER’S RECOMMENDATION 5**  
**Communications**

**It is recommended that the Brigade consider whether it would be beneficial to use additional breathing apparatus radio communications channels and personal radio channels at major incidents to reduce the amount of traffic on each channel.**

In response to this recommendation, the Brigade considered whether it would be beneficial to use additional breathing apparatus (BA) radio communication channels at major incidents to reduce

the amount of traffic on each channel. The risks and benefits of multiple channel use were explored and the Brigade concluded that the risks associated with using more than one BA channel during an incident would outweigh the benefits that this operational practice would afford<sup>76</sup>.

Through the introduction of BA telemetry capability the Brigade have reduced the amount of BA radio communication required at incidents and in so doing further increased capacity when using a single BA radio channel and reduced the risk of congestion.

The Brigade also committed to undertake some additional incident communications familiarisation training, which is detailed in action 5a below.

**ACTION 5a**  
**Engage with the Brigade’s training provider to ensure that issues relating to incident communications are embedded within current operational training**

A training commissioning document has been drafted<sup>77</sup> that required the development of a new training solution aimed at ensuring operational staff have the knowledge and understanding to use Authority-issued radio communications equipment (including handheld radios and airwave ‘main scheme’ radios). Computer-based training packages station-based staff (firefighter to watch manager) and senior officers (Station manager and above) were signed off in May 2015, however, the training packages have not yet been released.

**SUMMARY OF INQUEST ACTIONS**

A variety of actions were taken by the Brigade in direct response to the recommendations made by HM Coroner following the Lakanal House inquests.

These represented a broad range of activities including:

- Establishing a forum to discuss fire safety issues in high rise buildings with other stakeholders including local authorities and housing associations

- Launching a significant campaign to raise awareness of fire safety issues in high rise buildings with high rise dwellers and housing providers
- Reviewing existing policy for gathering operational risk information
- Reviewing incident command training
- Introducing a case study training package specific to the Lakanal House fire
- Developing awareness of Brigade Control practices and procedures with operational crews

The majority of actions have been completed satisfactorily. Several issues were however identified and these have been raised directly with the Grenfell Tower Investigation and Review Team. They include:

- (1) The Brigade has not introduced clear targets or other guidelines for the completion of 7(2)(d) visits to high rise premises that have not previously been subject to a premises risk assessment. It appears the intention was to carry out premises risk assessments for all residential high rise premises. This has not been completed.
- (2) Whilst training interventions have been introduced (Lakanal case study and Brigade Control practices for operational crews) and these have been completed by staff and remain available for use there has been no repeat promotion of this training
- (3) Training packages developed in relation to incident communications have not yet been released

## **SECTION 3**

**Actions identified by the Brigade following the Coroner's inquests but not directly related to either the Coroner's recommendations or the actions identified by the Brigade before the inquests**



This section covers additional actions identified by the Brigade following the inquests but which are not directly related to the Coroner's recommendations or any previous actions undertaken by the Brigade in response to the Lakanal House fire. These actions were monitored by the Lakanal House Working Group.

### **ACTION 1**

**The Brigade will seek to secure clarification and further guidance from the Fire Minister and the Department for Communities and Local Government on issues previously raised with them (see section 1; action 34) including:**

- **The definition of the term 'parts used in common' in buildings containing multiple domestic premises**
- **Whether the Fenestration Self Assessment Scheme (FENSA) is an appropriate means for certifying compliance with Building Regulations 2010 in tall residential buildings**
- **The definition of the term 'window' as detailed in the FENSA scheme.**
- **Spread of fire over the external surfaces the building (Requirement B4 of the Building Regulations 2010 refer).**
- **How the 'responsible person' should assess that the risk assessor has sufficient training, experience and knowledge to undertake a suitable assessment of the risks in complex and high risk premises**

The Chairman of the London Fire and Emergency Planning Authority and the Commissioner of the Brigade wrote to the Fire Minister (Parliamentary Under Secretary of State for Communities and Local Government ) requesting an update on progress made in Government on the issues that had been raised<sup>78, 79</sup>.

A response to these letters has not been identified.

### **ACTION 2**

**The Brigade will undertake a review into whether building control and other processes within local authorities are effective in protecting the fire safety integrity of a building during significant refurbishment projects**

The Brigade completed a review of structural fire safety in new and refurbished buildings<sup>80</sup>. This involved a piece of work to examine whether those who take decisions about building and maintenance works can feel confident that those works have been designed and delivered in a way that at least maintains the fire safety integrity of the building.

In response to this work the Brigade produced an audit tool for use by Local Authorities or housing providers to seek assurance on the efficacy of all key stages of their building maintenance and refurbishment programme in relation to fire safety precautions. The audit tool covers three areas:

- Governance and assurance
- Process and policy
- Practical assessment and risk

The tool is designed to provide a consistent level of assurance against a refurbishment project. The outcomes of the audit should not only address any issues with the building itself but also inform future policy and governance arrangements around commissioning and supervision of relevant programmes, thus reducing the risk of a major fire safety failure.

The 'Fire Safety in Refurbished Buildings – Audit Tool' is available on the Brigade's website on its advice pages for Landlords (<https://www.london-fire.gov.uk/safety/property-management/landlords-responsibilities/large-landlords-las-social-landlords-and-private-blocks/>).

**ACTION 3**

**The Brigade should raise awareness regarding the risks, in terms of increased fire loading, associated with the build up of paint layers within communal areas of residential high rise premises.**

The Brigade originally raised this as an issue with Local Authorities and social landlords in January 2009. The Brigade wrote again to all London Borough Directors of Housing and over 200 Housing Associations and Residential Social Landlords reminding them of the risk in 2013<sup>81</sup>. The issue was also raised as agenda item at the High Rise Forum and information on the risk has been added to the guidance note 'Councillor guide for fire safety for use during estate visits' available for landlords on the Brigade's website at <https://www.london-fire.gov.uk/safety/property-management/landlords-responsibilities/large-landlords-las-social-landlords-and-private-blocks/>.

**ACTION 4**

**The Brigade should raise awareness of the needs of those people who are directly affected by incidents such as the Lakanal House fire, in terms of victim support.**

The Brigade reviewed the role of Local Authorities and humanitarian assistance organisations in response to a major incident<sup>82</sup>. This led the Brigade to meet with a number of voluntary sector organisations in order to discuss their role in large scale incidents. This confirmed that the British Red Cross Fire and Emergency support Division has a Memorandum of Understanding with the majority of London Councils to provide welfare support and humanitarian services in the aftermath of a major incident.

**ACTION 5**

**The Brigade should improve the use of intelligence from fire investigation work to ensure that fires in premises where building structural issues or deficiencies in building control/management have**

**played a part in the spread or development of the fire are systematically identified and the relevant building control body informed.**

The Brigade has policies and procedures for completing post fire audits and reviews following fires meeting certain criteria<sup>83</sup>. The purpose of these audits and reviews is to develop a greater understanding of the contributory factors of an incident to prevent similar incidents occurring in the future.

A Post Fire Audit will be considered following every primary fire<sup>2</sup> within premises where the Regulatory Reform (Fire Safety) Order 2005 applies or partly applies and must be undertaken where a fire related fatality, injury or rescue has occurred. A Post Fire Review is an extra level of scrutiny applied to the more significant incidents, including fatal and injury fires and those fires where building structural issues or deficiencies in building control/management have contributed to the development or spread of the fire.

Where building structural issues or deficiencies in building control/management are identified the Brigade will give consideration to enforcement and prosecution of the responsible person under the Regulatory Reform (Fire Safety) Order 2005. Where planning issues or contributory factors that were related to a current or recent construction/refurbishment are identified then the relevant Building Control will be informed. On occasion this will involve joint inspections by the Brigade with Building Control and/or other local authority enforcement teams.

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<sup>2</sup> Primary fires are generally more serious fires that harm people or cause damage to property. Primary fires are defined as fires that cause damage and meet at least one of the following conditions:

- Any fire that occurred in a (non-derelict) building, vehicle or (some) outdoor structures
- Any fire involving fatalities, casualties or rescues
- Any fire attended by five or fire engines.



**ACTION 6****The Brigade should review whether Borough Commanders have sufficient awareness of significant refurbishment projects in high rise residential premises.**

The Brigade reviewed Borough Commanders proactive and collaborative liaison with Borough Councils and the private sector in relation to significant refurbishment projects. The review showed that the overwhelming majority of Borough Commanders enjoy a close and effective relationship with their Borough Council<sup>84</sup>.

**ACTION 7****The Brigade should produce guides for councillors relating to fire safety requirements and the responsibilities of local authorities as landlords.**

The Brigade produced two guides for councillors:

- the 'Councillor guide on fire safety for use during council meetings', which sets out the role of the local authority as a responsible person under the Regulatory Reform (Fire Safety) Order 2005, and
- the 'Councillor guide on fire safety for use during estate visits', which provides some fire safety issues that should be considered when visiting estates.

These guides are available on the Brigade's website at <https://www.london-fire.gov.uk/safety/property-management/landlords-responsibilities/large-landlords-las-social-landlords-and-private-blocks/>.

**ACTION 8****The Brigade should complete a study of the experience of the operation of the Regulatory Reform (Fire Safety) Order 2005 in London.**

The Brigade developed terms of reference for a study of the experience of the operation of the Regulatory Reform (Fire Safety) Order 2005 in London<sup>85</sup> and commissioned BRE Global Ltd to complete the work. The outcome of BRE Global Ltd's review was reported

to the Strategy Committee of the London Fire and Emergency Planning Authority in November 2015<sup>86</sup>.

**SUMMARY OF POST-INQUEST ACTIONS**

A variety of actions were taken by the Brigade after the Lakanal House inquests but which were not in direct response to the recommendations made by HM Coroner following the Lakanal House inquests.

These actions were generally directed by the Lakanal House Working Group and represented a broad range of activities including:

- Seeking further clarification from the Department of Communities and Local Government on a range of fire-related standards and regulatory issues
- Reviewing building control activity with respect to protecting the fire safety integrity of a building
- Reviewing existing policy for gathering operational risk information
- Producing a 'Fire Safety in Refurbished Buildings – Audit tool'
- Reviewing policies and procedures for post fire audits and reviews
- Raising awareness of issues such as victim support and multilayer paint
- Developing a range of fire guides for local councillors relating to fire safety requirements and the responsibilities of local authorities as landlords

All Brigade actions have been completed satisfactorily. With respect to the issue of clarifying a range of fire-related standards and regulatory issues the Brigade raised with the Department of Communities and Local Government, and as there is some uncertainty as to the current status of those issues, this action has however been referred to the Grenfell Tower and Investigation Review Team for their attention.

## REFERENCES



## REFERENCES

References are supplied within the text of the document. References include the title of the documentary evidence followed by the reference used by the Grenfell Tower Investigation and Review Team (GTIRT Reference) for the purposes of disclosure to the Grenfell Tower inquiry.

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- 79** Brigade letter to Parliamentary Under Secretary of State for Communities and Local Government (responsible for fire).  
**GTIRT Reference:** PI\_D2\_GTIRT17-01066\_SECTION\_2.6.1\_SPPT\_DOC\_xxxvii
- 80** London Fire and Emergency Planning Authority report (FEP 2265) 'Structural Fire Safety in New and Refurbished Buildings'.  
**GTIRT Reference:** PI\_D21\_TRANCHE\_4\_GTIRT18-03409\_SECTION\_10\_FEP\_2265\_Structural\_Fire\_Safety\_in\_New\_and\_Refurbished\_Buildings
- 81** Brigade letter to Heads of Housing all London Boroughs, Arms Length Management Organisations, and social housing landlords on 'multi-layer paint – fire safety issues'.  
**GTIRT Reference:** PI\_D2\_GTIRT17-01012\_SECTION\_2.5.2\_SPPT\_DOC\_xvi
- 82** London Fire and Emergency Planning Authority Briefing Note 'Lakanal House Working Group – Victim Support', January 2013.  
**GTIRT Reference:** PI\_D2\_GTIRT17-00996\_SECTION\_2.5.1\_SPPT\_DOC\_xii



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- 83** Brigade Fire Safety Information and Guidance Note 206 'Post fire audits and post fire reviews'.  
**GTIRT Reference:**  
PI\_D21\_TRANCHE\_4\_GTIRT18-03419\_SECTION\_10\_FSIGN\_206
- 84** Minutes of the Lakanal House Working Group (LHWG) meeting, held in March 2014 (For details see agenda item 5 and Appendix 3 of the minute).  
**GTIRT Reference:** PI\_D2\_GTIRT17-01000\_SECTION\_2.5.1\_SPPT\_DOC\_xvi
- 85** Terms of reference for review of the Regulatory Reform (Fire Safety) Order 2005 in London (See Appendix 2 to London Fire and Emergency Planning Authority report (FEP2262) 'Lakanal House Working Group'.)  
**GTIRT Reference:** PI\_D2\_GTIRT17-01037\_SECTION\_2.6.1\_SPPT\_DOC\_k
- 86** London Fire and Emergency Planning Authority report (FEP 2538) 'Evaluation of the effectiveness of the Regulatory Reform (Fire Safety) Order 2005', November 2015.  
**GTIRT Reference:** PI\_D2\_GTIRT17-01053\_SECTION\_2.6.1\_SPPT\_DOC\_xxvii.ppt