

London Fire Brigade Operational Response to Grenfell Tower

Version 0.1
00:50hrs – 02:00hrs

OFFICIAL
24 May 2018

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1 Introduction

The purpose of this 'Operational Response' report is to detail the key activities and actions undertaken by the London Fire Brigade (LFB) in responding to the Grenfell Tower fire, which occurred on the 14 June 2017. The report forms a key component of the wider 'safety and learning' review that has been initiated by the Brigade as part of its statutory duty under the Fire and Rescue Services Act 2004.

The Brigade is a learning organisation and one that is committed to fully understanding the facts relating to its response to the Grenfell Tower fire. In order to fulfil this commitment the Brigade needs to understand all the activities and actions that its personnel took during the fire. The information detailed in this report is therefore a key part of achieving this understanding and will also help to shape on-going improvements to the services that the Brigade provides to Londoners while taking every opportunity to enhance the safety of firefighters.

The Brigade's key activities and actions during the fire are presented in chronological order starting with the time the Brigade received the first 999 Emergency Call reporting a fire at Grenfell Tower. In preparing this report the Brigade appreciates that not all readers will be familiar with the fire service's operational procedures, equipment and language. Therefore, a Glossary of abbreviations and commonly used fire service terminology, along with pictures of some of the fire service's operational equipment that is regularly referenced throughout the report, is appended as Appendix 1.

2 Grenfell Tower Fire

The Brigade received the first of a large number of 999 Emergency Calls to the Grenfell Tower at 00:54hrs on Wednesday 14th June 2017. The fire started in flat 16 located on the 4th floor and subsequently affected all 24-floors of the building. The fire was declared a Major Incident by the Brigade and saw in excess of 140 fire engines and 720 firefighters attending up to 20:00hrs on the 14th June, with the Brigade remaining in attendance for a further two weeks. The Metropolitan Police Service (MPS) confirmed that 71 people tragically died as a result of the fire.

3 The Brigade's 'Safety and Learning' Review

In the immediate aftermath of the fire the Brigade established a dedicated team called the 'Grenfell Tower Investigation and Review Team' (GTIRT), which has been given full responsibility for undertaking all the work relating to the Brigade's 'safety and learning' review. One of key elements of this wider review is understanding the key facts associated with the Brigade's operational response to the fire. This has involved reviewing and analysing a huge volume of data and information in order to verify the actions taken by the operational crews who attended the fire, the Control staff who were responsible for handling the 999 Emergency Calls and providing Fire Survival Guidance (FSG) to the Grenfell residents and all other Brigade personnel who were directly or indirectly involved. This is a significant, challenging and very time consuming task, which requires the information to be drawn together and presented in a series of reports. When this work is completed it will provide a comprehensive factual narrative of the Brigade's operational response to the fire from receipt of the first 999 Emergency Call to Grenfell Tower at 00:54:29hrs through to 08:00:00hrs on the 14 June

2017. This timescale has been adopted for this particular report as it covers the period of the Brigade's main life saving and firefighting activities.

4 Scope of Report

This first version of the report (version 0.1) covers the period from when the Brigade received the first call to the Grenfell Tower fire up to 02:00:00hrs on 14 June 2017. Over the coming months it is planned that there will be a number of further versions of this report published in the same format. This will culminate in a final report (version 1.0) that will cover the period from the first call to the fire at 00:54:29hrs to 08:00hrs on the 14 June 2017.

5 Methodology and Presentation of Information

In order to establish the Brigade's key operational response activities and avoid any potential for introducing unconscious bias in to the report the GTIRT have used, where available, two or more sources of information to corroborate each activity. This information will be written in standard type face. Other Brigade activities that have only one data source are designated as uncorroborated evidence and this information will be written in italics.

In relation to the time shown for each activity this is formatted in hours, minutes and seconds (00:00:00) and has been classified as either 'hard' or 'soft'. Where seconds cannot be confirmed they will not appear. All 'hard' times have been derived from an accurate and verified 'time stamped' data source and are written in standard type face. All 'soft' times have been captured from data sources that are time stamped, but which cannot be verified as accurate. These times will be written in italics and marked with an asterix (*). With regard to the timings taken from the Close Circuit Television (CCTV) these have been adjusted by the MPS, but are still shown as unverified and have therefore been represented as 'soft' times in this report. Details of the CCTV camera locations for Grenfell Tower are shown in Appendix 3.

It should be noted that activities can be a combination of the following:

- 'hard' time - corroborated activity
- 'soft' time* - corroborated activity
- 'hard' time - *uncorroborated activity*
- 'soft' time* - *uncorroborated activity*

In addition to the above there are a number of Brigade activities described in the report that have no specific 'hard' or 'soft' time recorded. These activities have been positioned in the chronology within the most likely time period that they occurred based upon the evidence and information currently available to the GTIRT. A full list of all the source material used in the production of this report, including a short description of what the source data is and whether it produces 'hard' or 'soft' times, has been appended to this report at Appendix 2.

To further assist in the understanding of some of the Brigade activities a number of images have been embedded within the report. The report also refers to video clips which can be viewed by opening

the relevant media files located in Appendix 3. Each media file should be viewed when referred to within the report. This visual imagery is primarily used to show the rapid fire development and conditions at Grenfell Tower.

For each activity and action the report includes a reference to the source data that was used to identify the activity and its associated time. This reference information appears in brackets under each activity description. Many of these references use a 'GTIRT' number, which is the internal references used by the Brigade to store and index all the relevant Brigade owned information. The majority of the GTIRT referenced information has already been disclosed to both the Grenfell Tower Inquiry (GTI) and the MPS's criminal investigation team (Operation Northleigh). An index of all the GTIRT reference numbers and the detail of the source information they each relate to is appended to this report at Appendix 4.

6 Data Sources

For each activity and action the report includes a reference to the source data that was used to identify the activity and its associated time. This reference information appears in brackets under each activity description. Many of these references use a 'GTIRT' number, which is the internal references used by the Brigade to store and index all the relevant Brigade owned information. The majority of the GTIRT referenced information has already been disclosed to both the Grenfell Tower Inquiry (GTI) and the MPS's criminal investigation team (Operation Northleigh).

As can be seen from the information supplied in Appendix 2 the Brigade does not own all of the information used in the production of this report. As such, the Brigade has been heavily reliant on Operation Northleigh releasing evidence that is relevant to the Brigade's 'safety and learning' review. At the time of writing this current version of the report the Brigade has only seen one witness statement taken from the BSRs of Grenfell Tower. It is anticipated that some of the other BSR witness statements are likely to contain important and relevant information that will assist to verify more of the Brigade's activities and their associated timings. The information may also help the Brigade to upgrade some of the uncorroborated activities to corroborated evidence. It is therefore likely that future versions of this report, which currently only covers the first hour of the Brigade's operational response to the fire, will include updates and revisions to this time period.

It should also be noted that another key element of the Brigade's 'safety and learning' review involves the detailed analysis of all the activities undertaken by the Brigade's Control Centre (known as Brigade Control). This is the part of the Brigade that has responsibility for handling all 999 Emergency Calls, mobilising fire engines, senior officers and other Brigade assets, maintaining operational emergency cover across the whole of London and providing FSG to residents trapped by fire and smoke. While some elements of Brigade Control's activities are detailed in this 'Operational Response' report, information such as the full transcripts of the fire survival conversations between Control staff and a number of the Grenfell Tower residents, is only contained in the Brigade Control report. It therefore may be helpful to readers to review both reports.

7 Grenfell Tower Fire: Chronology of Events

7.1 14/06/17 – 00:50 to 02:00

00:50* – At around this time the resident of flat 16, Grenfell Tower, Mr Behailu Kebede is 'woken by the sound of a smoke alarm actuating'. He gets up and walks from the living room and goes to the kitchen via the kitchen door. On entering the kitchen he observes light coloured smoke in the area next to the fridge/freezer and window. The window is open about 10 inches. (Source: MPS Witness Statements GTIRT17-01573 - GTIRT17-01574)

00:51* – At around this time Mr Kebede leaves the kitchen and returns to the living room to dress and retrieve his mobile phone. (Source: MPS Witness Statements GTIRT17-01573 - GTIRT17-01574)

00:52* – At around this time Mr Kebede wakes his two lodgers, Almaz and Elsa by knocking on their two bedroom doors and warning them about the fire. (Source: MPS Witness Statements GTIRT17-01573 - GTIRT17-01574)

00:53* – At around this time Mr Kebede leaves the flat, leaving his keys inside but turning off the electricity at the 'fire box' (believed to be the electric fuse board) by the front door. He alerts his neighbours on the fourth floor by knocking on doors and shouting "fire". (Source: MPS Witness Statement GTIRT17-01573 - GTIRT17-01574)

00:54:29 – Brigade Control receive the first 999 call in relation to Grenfell Tower, Lancaster West Estate, London, W11 1TG. Control Room Officer (CRO) Pamela Jones takes the call from Mr Behailu Kebede. Call duration one minute 37 seconds. Incident Number 076029. (Source: 'Vision', GTIRT17-00470)

00:55:14 – Whilst on the telephone to Mr Kebede, CRO Jones enters the details into 'Vision' and the Pre-Determined Attendance (PDA) is automatically selected for a fire in a residential dwelling, known as an 'A1, Fire in a Residential Dwelling Mobilisation'. Three fire engines are selected as being the nearest available through the Automatic Vehicle Location functionality. Golf 272, North Kensington's Pump, Golf 271, North Kensington's Pump Ladder and Golf 331, Kensington's Pump Ladder. (Source: 'Vision', GTIRT18-00857)

Pre Determined Attendance for A1 Fire in a Residential Dwelling Mobilisation	Operational Response to the incident
<ul style="list-style-type: none"> 3 Fire Engines 	<ul style="list-style-type: none"> Golf 272, North Kensington's Pump Golf 271, North Kensington's Pump Ladder Golf 331, Kensington's Pump Ladder

00:56* – At around this time Mr Kebede, residents from flat 16 and some of the other flats on the fourth floor, leave the fourth floor and enter the stairwell. (Source: Mr Behailu Kebede's MPS Witness Statements GTIRT17-01573 - GTIRT17-01574)

00:56:46 – Golf 331, Kensington's Pump Ladder, book Status 2, mobile to incident. Golf 331, are riding with six firefighters. Watch Manager (WM) Brien O'Keeffe, Crew Manager (CM) Jamal Stern, Firefighter Benjamin Broderick, Firefighter Charles Cornelius, Firefighter Richard Hippel and Firefighter Desmond Murphy. (Source: 'Vision', GTIRT18-00857 and Staff attendance Recording System (StARS) Rota book)

00:56:52 – Golf 272, North Kensington's Pump, book Status 2, mobile to incident. Golf 272, are riding with five firefighters, CM Christopher Secrett, Firefighter Thomas Abell, Firefighter Alex De St Aubin, Firefighter Christopher Dorgu and Firefighter Justin O'Beirne. (Source: 'Vision' GTIRT18-00857 and StARS Rota book)

00:56:55* – Mr Manual Alves and Mrs Fatima Alves from flat 105 on the 13th Floor exit the building via the main entrance. (Source: Camera 4, CCTV).

00:57:44 –Brigade Control receive the second 999 call in relation to Grenfell Tower, CRO Christine Howson takes this call, it is from a remote monitoring company, Tunstall Response. Call Duration one minute 26 seconds. Incident number 76032. (Source: 'Vision', GTIRT17-00515)

00:58* – *At around this time Assistant Operations Manager (AOM) Peter May at Brigade Control believes that Grenfell Tower may be a high rise building and checks this on Google Maps. This check confirmed the building was a high rise premise and resulted in AOM May amending the PDA for Grenfell Tower from an A1 (fire in a residential dwelling) to an A1HR (fire in a high rise premise). This resulted in 'Vision' mobilising one additional fire engine Golf 362. (Source: GTIRT17-02934, 'Vision', GTIRT18-00857)*

00:58:26 – Brigade Control receive the third 999 call in relation to Grenfell Tower, AOM Debbie Real takes the call from an individual who is outside Grenfell Tower. Call duration 37 seconds. Incident number 76033. (Source: 'Vision', GTIRT17-00472)

00:58:48 – Brigade Control contact Golf 271, North Kensington's Pump Ladder by radio to confirm that they are enroute (Status 2) to Grenfell Tower. Golf 271, confirm they are enroute to the incident. (Source: Radio Message: GTIRT18-00240, 'Vision')

00:58:53 – The PDA is updated on 'Vision' by AOM May. (Source: 'Vision', GTIRT18-00857 and MPS Witness Statement: GTIRT17-02934)

00:58:55 – Golf 271, North Kensington's Pump Ladder, are booked Status 2, mobile to incident by Brigade Control. Golf 271 is riding with five crew members: WM Michael Dowden, CM Charles Batterbee, Firefighter David Badillo, Firefighter Daniel Bills and Firefighter Daniel Brown. The reason for the delayed status change is not known at present but Global Positioning Systems (GPS) data confirms Golf 271 and Golf 272 mobilise and arrive on scene together. ('Vision': GTIRT17-02934, StARS Rota book)

00:59:01* – Mr Kebede and Elsa Afeworki from flat 16, fourth floor, exit the building via the main entrance. (Source: Camera 4, CCTV)

00:59:01 - Brigade Control relay information to Golf 271, North Kensington's Pump Ladder, that the building is a high rise premises and an additional fire engine has been added to the attendance. (Source: Radio Message: GTIRT18-00242, and 'Vision': GTIRT17-02934)

00:59:08 – Golf 271, North Kensington's Pump Ladder, acknowledge receipt of this information. (Source: Radio Message: GTIRT18-00243 and 'Vision': GTIRT17-02934).

00:59:12 – AOM May at Brigade Control amends the incident type code to a fire in a high rise building (A1HR). This triggers the addition of an additional fire engine as part of the PDA. 'Vision' assigns Golf 362, Hammersmith's Pump to the incident to complete the high rise attendance.

At the same time Brigade Control contact the attending fire engines and inform them further calls to the incident are being received. This is broadcast on the main scheme radio. No additional brigade resources are sent.

WM Dowden intercepts the radio message that there have been further calls to Grenfell Tower. He relays this information to his crew, looks through the operational risk information for Grenfell Tower on the Mobile Data Terminal (MDT) and prints off the tactical plan. (Source: 'Vision', Radio Message: GTIRT18-00244, Contemporaneous Notes: GTIRT17-00293, GTIRT17-01215, and MPS Witness Statement: GTIRT18-01065).

Pre Determined Attendance for A1 HR Fire in a High Rise Premise	Operational Response to the incident
<ul style="list-style-type: none"> • 4 Fire Engines 	<ul style="list-style-type: none"> • Golf 272, North Kensington's Pump • Golf 271, North Kensington's Pump Ladder • Golf 331, Kensington's Pump Ladder • Golf 362, Hammersmith's Pump

00:59:24 – Golf 272, North Kensington's Pump, book Status 3, in attendance. This is the first fire engine to book in attendance at Grenfell Tower. (Source: Exhibit JOB/1, 'Vision' log: GTIRT18-00857, Camera 4, CCTV)

Firefighter O'Beirne states that Golf 272, parks behind Golf 271, under the covered area, opposite the main entrance at the South elevation. (Source: Exhibit JOB/1, 'Vision' log: GTIRT18-00857, Camera 4, CCTV)

00:59:28 – Golf 271, North Kensington's Pump Ladder, book Status 3, in attendance. This is the second fire engine to book in attendance at Grenfell Tower. (Source: 'Vision' log: GTIRT18-00857)

00:59:36* - Zak Mahamed, being carried by Mahad Egal, enter the main lobby. They are both from flat 15 on the fourth floor, they exit the building via the main entrance. (Source: Camera 2, CCTV).

00:59:43* - Jamie Murray and Vega-Lily Mahamed, also from flat 15 on the fourth floor, exit the building via the main entrance. (Source: Camera 4, CCTV).

01:00:00* – Golf 272, North Kensington's Pump, arrives under the covered walkway outside the South elevation. (Source: Camera 4, CCTV)

01:00* – On arrival, WM Dowden is the first WM in attendance and he becomes the Incident Commander (IC) as he is the highest ranking officer in attendance. He is identified by an IC surcoat. Firefighter Brown, Firefighter Bills, Firefighter O'Beirne and CM Secrett all state that they see the fire on the fourth floor but it appears to be contained. (Source: Contemporaneous Notes: GTIRT17-

01215, GTIRT17-00293, GTIRT17-00460, GTIRT17-00010 and GTIRT17-00013 and MPS Witness Statement: GTIRT18-00072).

At around this time WM Dowden meets Mr Kebede, from flat 16 at ground floor level, outside the South elevation. Mr Kebede explains the fire is on the fourth floor and when asked what is on fire, he states he thinks it is his fridge/freezer. WM Dowden asks if there is anyone in the flat, Mr Kebede says "no, everyone is out". (Source: Contemporaneous Notes: GTIRT17-01215 and GTIRT17-00293, MPS Witness Statement: GTIRT18-01065, Camera 4, CCTV and Mr Kebede's MPS Witness Statement: GTIRT17-01573 - GTIRT17-01574)

At around this time Firefighter Abell locates the nearest hydrant, (to secure a water supply) and starts to plug fire hose into Golf 271, North Kensington's Pump Ladder, from the hydrant using two lengths of 70 millimetre (mm) fire hose. (Source: MPS Witness Statement: GTIRT18-01065, Contemporaneous Note GTIRT17-00010)

Firefighter Bills starts to plug fire hose into the Dry Riser Main (DRM) inlet on the South elevation from Golf 271. This is completed at 01:06:47. (Source: Camera 4, CCTV, Contemporaneous Notes: GTIRT17-00010, GTIRT17-00014 and MPS Witness Statement: GTIRT18-00043)

At around this time WM Dowden briefs CM Secrett to set up the bridgehead on the second floor. When the bridgehead is set up and there is a confirmed water supply CM Secrett is to commit a Breathing Apparatus (BA) team into the flat. (Source: Contemporaneous Notes: GTIRT17-00013, GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT18-01065, GTIRT17-01551)

01:00:09* - Jalal Chentite and Ishmael Boatey, who are visiting Grenfell Tower, enter the building via the main entrance. (Source: Camera 4, CCTV)

01:00:22* – Mrs Fatima Alves from flat 105, 13th floor exits the building via the main entrance and speaks to firefighters. (Source: Camera 4, CCTV)

01:00:28 – Hotel 41 Sierra, Station Manager (SM) Andrew Walton is paged by Brigade Control and informed about the fire at Grenfell Tower. This is a prescribed "notification action" for a high rise fire PDA. (Source: 'Vision' and MPS Witness Statement: GTIRT18-01000)

At the time of paging he is located at his 'callout base' at Fulham fire station, which is approximately 3.5 miles from Grenfell Tower. (Source: 'Vision' Log: GTIRT18-00857, Google Maps, Contemporaneous Notes: GTIRT17-00004, GTIRT17-00278, GTIRT17-01137, GTIRT17-01138, GTIRT17-01139 and MPS Witness Statement: GTIRT18-01000)

01:00:52* – CM Secrett gains access to Grenfell Tower with assistance from a member of the public. Once inside he tries the door to the lift lobby but he requires a key fob to open the internal door (all internal and external doors on the ground floor of Grenfell Tower require a key fob). He leaves the building and gets a resident (now known to be Mrs Alves) to assist him in opening the lift lobby door. (Source: Camera 4 and 5, CCTV)

01:01:12* – Firefighter Badillo, carrying an Entry Control Board (ECB), and WM Dowden enter the building via the main entrance, followed by CM Batterbee, Firefighter Brown (BA Team One), Firefighter De St Aubin and Firefighter Dorgu. (Source: Camera 4, CCTV)

Mrs Alves is in the main lobby.

CM Batterbee states that Mrs Alves asks whether it is safe to go back to her flat on the 13th floor. CM Batterbee states he tells her that it is probably better to stay down stairs for now. Mrs Alves asks him about a relative (now known to be her children). CM Batterbee states he believes she is enquiring about her son. The information confirmed to CM Batterbee at this time is that a fridge is alight in flat 16 on the fourth floor, so he advises Mrs Alves that the best thing to do for now is to tell her relative to stay inside and close the windows. (Source: Contemporaneous Notes: GTIRT17-00012 and GTIRT17-00458)

01:01:16 – Golf 362, Hammersmith's Pump, book Status 2, mobile to incident. Golf 362, are riding with four firefighters, CM David Davies, Firefighter Wayne Archer, Firefighter Nicholas Barton and Firefighter John O'Hanlon. (Source: 'Vision' and StARS)

01:01:26* - CM Secrett enters the lift lobby with CM Batterbee, Firefighter Brown, Firefighter Badillo, Firefighter De St Aubin and Firefighter Dorgu. CM Batterbee is wearing BA and carrying a length of 45 mm fire hose, Firefighter Brown is wearing BA and carrying a length of 45 mm fire hose, Firefighter Badillo is carrying an ECB, Firefighter De St Aubin is carrying a Thermal Image Camera (TIC) and breaking in tools and Firefighter Dorgu is carrying a length of 45 mm fire hose. (Source: Camera 5, CCTV, Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460, GTIRT17-00011, GTIRT17-00009, GTIRT17-00431, GTIRT17-00015, GTIRT17-00017 and GTIRT17-00013 and MPS Witness Statements: GTIRT17-01551, GTIRT18-01837, GTIRT17-01434, GTIRT18-01411, GTIRT18-00917, GTIRT18-01136 and GTIRT18-00641)

CM Secrett tries to take control of the fire lift by putting a lift key in the designated area. He tries several times but this does not activate the fire lift. He subsequently calls the lift by pressing the call button and the lift arrives at ground floor level. CM Secrett radios through to WM Dowden and informs him the fire lift is not working. (Source: Contemporaneous Notes: GTIRT17-00013, GTIRT17-01215 and GTIRT17-00293, MPS Witness Statement: GTIRT18-01065 and GTIRT17-01551 and Camera 5, CCTV)

The first lift on the left is a fire lift, which can be operated by a firefighter with an appropriate lift key



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The fire lift is on the left as you face them.

Camera C18, CCTV, inside the fire lift. (Source, GTIRT18-00274)

01:02:00 – The photograph below is taken by Mr Kebede on his mobile phone outside the East elevation of Grenfell Tower. Smoke and possibly flames can be seen emitting from the kitchen window. (Source: Mr Kebede's mobile phone)

BA Team One has not entered flat 16 at this time. (Source: BA Data and TIC imagery)



01:02:08* – Salah Yusuf from flat 21, fifth floor and Fatima Alves, flat 105, fourth floor exit the building via the main entrance. (Source: Camera 4, CCTV)

01:02:15* – CM Secrett, CM Batterbee, Firefighter Brown, Firefighter Dorgu and Firefighter Badillo enter the lift carrying the equipment they have brought into the building. (Source: Camera 5 and C18, CCTV, Contemporaneous Notes: GTIRT17-00013, GTIRT17-00012, GTIRT17-00458, GTIRT17-00460, GTIRT17-0001, GTIRT17-00017, GTIRT17-00009 and GTIRT17-00431 and MPS Witness Statement: GTIRT17-01551, GTIRT18-01837, GTIRT17-01434, GTIRT18-00641, GTIRT18-01411 and GTIRT18-00917)

01:02:31 – Firefighter De St Aubin goes to exit the lift lobby as there is not enough room for him in the lift. He opens the lift lobby door and Firefighter O'Beirne, carrying the Immediate Emergency Care (IEC) pack (a large first aid kit) and a branch, enters the lift lobby. Firefighter O'Beirne goes to the lift and hands a branch to Firefighter Dorgu in the lift. (Source: Camera 5, Camera 18, CCTV)

01:02:43 – CM Secrett and his team travel from the ground floor to second floor in the lift. (Source: Camera C18, CCTV)

01:02:43 – SM Walton responds to the pager message and calls Brigade Control on his mobile phone. He speaks to CRO Adams and she confirms Golf 271, North Kensington's Pump Ladder, Golf 272, North Kensington's Pump, Golf 331, Kensington's Pump Ladder and Golf 362, Hammersmith's Pump, are in attendance. CRO Adams also confirms it is a high rise premises and that WM Dowden is in charge. CRO Adams confirms there have been three calls received. SM Walton asks what the

callers have said and CRO Adams says she doesn't know as she didn't take any of the calls. None of the information about the call from Mr Kebede is passed to SM Walton. SM Walton states that he will remotely monitor his 'Airwave' radio and listen for the first informative message. (Source: Vision, GTIRT18-00255 Contemporaneous Notes: GTIRT17-00004, GTIRT17-00278, GTIRT17-01137, GTIRT17-01138, GTIRT17-01139 and MPS Witness Statement: GTIRT18-01000).

01:02:45* - Firefighter O'Beirne and Firefighter De St Aubin leave the ground floor lift lobby and head to the stairs. (Source: Camera 5, 3 and 4, CCTV)

01:02:54* - Mohamed Hariri exits the building via the main entrance. (Source: Camera 4, CCTV)

01:02:55* - Fatima Alves, from flat 105, 13th floor, lets Firefighter O'Beirne and Firefighter De St Aubin through the door to the stairwell using her key fob. Both firefighters ascend the stairs to the second floor followed by Fatima Alves. (Source: Camera 2, 3 and 4, CCTV)

01:03:00* - Firefighter Bills and Firefighter Abell are outside the South elevation running a fire hose out to the dry rising main inlet. (This is where the fire hose is plugged from the fire engine into the dry rising main inlet on the side of the building, to supply water into the building). (Source: Camera 4, CCTV, Contemporaneous Notes: GTIRT17-00010, GTIRT17-00014, GTIRT17-01197 and GTIRT17-00054 and MPS Witness Statement: GTIRT18-00043)

01:03* - *At around this time the bridgehead is set up on the second floor. Firefighter De St Aubin sets up the Breathing Apparatus Entry Control Point (BAECP) which includes the ECB and IEC pack. (Source: Contemporaneous Notes: GTIRT17-00015 and MPS Witness Statement: GTIRT18-01136)*

01:04:00* - Mr Kebede and WM Dowden walk at pace along the South elevation to the South East corner of the building. Almaz Kinfu from flat 16, fourth floor is sitting on the stairs outside the boxing club with a large silver suitcase behind her. (Source: Camera 1 Boxing Club, CCTV)

01:04* - *At around this time Firefighter Dorgu, Firefighter O'Beirne and Firefighter Badillo go to the fourth floor, with no BA on, and set up the fire hose on the fourth floor. The DRM outlet is positioned outside flat 13. This is for BA Team One to use to fight the fire in flat 16. (Source: Contemporaneous Notes: GTIRT17-01215, GTIRT17-00293, GTIRT17-00009, GTIRT17-0043, GTIRT17-00016 and MPS Witness Statement: GTIRT18-00641, GTIRT18-01411, GTIRT18-00917 and GTIRT18-00072 and Senior Accident Investigator (SAI) Transcript: GTIRT18-00568, GTIRT18-00562 and GTIRT18-00577)*

01:04:11 - BA Team One, CM Batterbee and Firefighter Brown remove their BA tallies, put their facemasks on and start breathing from their BA sets. (Source: BA Data and Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011)

01:04:55* - Fatima Alves, Ines Alves and Tiago Alves from flat 105, 13th floor exit the building via the main entrance. (Source: Camera 4, CCTV)

01:05* - *At around this time WM Dowden uses his fire ground radio to inform the oncoming fire engines, Golf 331, Kensington's Pump Ladder, and Golf 362, Hammersmith's Pump, that there firefighters will need BA on arrival. WM O'Keeffe (Golf 331, Kensington's Pump Ladder) and CM Davies (Golf 362, Hammersmith's Pump) acknowledge the request via their fireground radios. (Source: Contemporaneous Notes: GTIRT17-00018, GTIRT17-01522, GTIRT17-01215 and GTIRT17-*

00293 and GTIRT17-00026 and MPS Witness Statement: GTIRT17-01252, GTIRT17-02889, GTIRT18-01065 and GTIRT18-00972)

At around this time that WM O'Keeffe (Golf 331, Kensington's Pump Ladder) calls up WM Dowden on his fireground radio prior to arrival to establish the location of the fire and confirm what resources are required from Golf 331, Kensington's Pump Ladder. He is told by WM Dowden that the fire is on the fourth floor and that two BA wearers are required. (Source: Contemporaneous Notes: GTIRT17-00018, GTIRT17-01522, GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT17-01252, GTIRT17-02889 and GTIRT18-01065)

01:05:26* – WM Dowden is at the South elevation walking to the dry rising main inlet. (Source: Camera 4, CCTV)

01:05:36 – Video footage from Mr Kebede's mobile phone shows flames at the kitchen window of flat 16. A fire engine can be heard in pumping mode (meaning the fire engine is ready to pump water or is already pumping water). A firefighter speaking over a radio can also be heard talking about a covering jet. Fire and smoke can be seen coming out of the window. This could be because the window, according to Mr Kebede, was open ten inches. BA Team One have not yet entered flat 16. (Source: Mr Kebede's MPS Witness Statements GTIRT17-01573 - GTIRT17-01574)

Please play Video '20170614_010536' in Appendix 3.

01:05:55* – WM Dowden walks back towards the East elevation away from the dry rising main inlet. (Source: Camera 4, CCTV)

01:06:03* - Fatima Alves (flat 105) takes Firefighter Abell to the lift lobby. Once this has been done they both leave the building at 01:07:04. (Source: Camera 1, 3, 4 and 5, CCTV)

01:06:47* – The fire hose leading to the dry rising main inlet can be seen filling with water. (Source: Camera 4, CCTV)

At around this time it is understood the following events take place, CM Secrett is informed via radio that the dry rising main has been set into and water is available. (Source: CM Secrett Contemporaneous Notes: GTIRT17-00013)

WM Dowden notes from his position at ground floor level that the fire has breached the window of flat 16 and he wants to put a covering jet onto it. CM Secrett advises him not to at this point due to the risk to BA Team One who are about to enter the flat (Source: Contemporaneous Notes: GTIRT17-00013, GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT18-01065, GTIRT17-01551)

Firefighter O'Beirne plugs the 45 mm fire hose into the fourth floor dry rising main outlet and waits for it to fill with water. Firefighter Dorgu and Firefighter Badillo assist him. (Source: Contemporaneous Notes: GTIRT17-00017, GTIRT17-00009 and GTIRT17-00431 and MPS Witness Statement: GTIRT18-01411, GTIRT18-00917 and GTIRT18-00641)

BA Team One wait for water before they force the door to flat 16 open. Firefighter O'Beirne estimates it takes approximately 60 seconds from plugging the fire hose into the dry rising main outlet on the fourth floor before water is available at the branch. (Source: Contemporaneous Notes: GTIRT17-00016)

Firefighter O'Beirne recalls seeing BA Team One in the lobby of the fourth floor with an enforcer waiting to force entry into the flat. (Source: Contemporaneous Notes: GTIRT17-00016)

01:06:52* - Farshid Kaficheraghi from flat 91, 12th floor exits the building via the main entrance. (Source: Camera 4, CCTV)

01:07:21* - At around this time it is understood the following events take place, BA Team One make entry into flat 16. They use an enforcer to gain entry. They take a 45 mm jet and TIC with them. (Source: Contemporaneous Notes: GTIRT17-00460 and GTIRT17-00011, GTIRT17-00012 and GTIRT17-00458 and TIC imagery). At around this time that thick black smoke is seen coming from flat 16 as the door is opened. (Source: Contemporaneous Notes: GTIRT17-00016)



Firefighter O'Beirne, Firefighter Badillo and Firefighter Dorgu retreat from the fourth floor lobby to the stairwell due to the smoke. They shut the door to the fourth floor behind them to stop smoke getting into the stairwell. (Source: Firefighter O'Beirne's MPS Witness Statement: GTIRT18-00072)

Firefighter Bills sets about establishing a covering jet with Firefighter Abell consisting of 45 mm fire hose as he can see flames emanating from a fourth floor window on the East elevation of Grenfell Tower. (Source: Contemporaneous Notes: GTIRT17-00014, GTIRT17-01197 and GTIRT17-00054, GTIRT17-00010 and MPS Witness Statement: GTIRT18-00043)

Firefighter O'Beirne goes to the fifth floor to see if there has been any fire spread. He meets a family (believed to be the Temesgens) who have just left flat 26, which is directly above flat 16. They tell him that their flat is on fire and it is locked. The family leave and Firefighter O'Beirne looks through the letter box and sees the light is on but can't see any smoke. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

01:08:06 – Video footage from Mr Kebede's phone shows the fire breaking out of the kitchen window. There is a large bang in the background around six seconds into the footage. It also shows

clearly that the fire is fully developed in the compartment and appears to be venting. (Source: Mr Kebede's phone)

Please play Video '20170614_010806' in Appendix 3.

01:08:27 – Golf 362, Hammersmith's Pump, book Status 3, in attendance. This is the third fire engine to book in attendance at Grenfell Tower. (Source: 'Vision' Log)

01:08:30* - *At around this time, CM Davies radios WM Dowden and confirms he is sending two firefighters in BA to the bridgehead.*

CM Davies states he runs to the end of Grenfell Road to stop any further appliances entering. (Source: Contemporaneous Notes: GTIRT17-00026 and MPS Witness Statement: GTIRT18-00972)

Shortly after arriving Firefighter Archer states "he could see a small amount of flames exiting through the window". (Source: Contemporaneous Notes: GTIRT17-00024)

01:08:33 - Golf 331, Kensington's Pump Ladder, book Status 3, in attendance. This is the fourth fire engine to book in attendance at Grenfell Tower. (Source: 'Vision' log)

WM O'Keeffe (Golf 331) states "he can see flames issuing from the fourth floor balcony and a significant amount of smoke issuing from the building lobby". It should be noted that Grenfell Tower does not have balconies to any flats. (Source: Contemporaneous Notes: GTIRT17-00018 and GTIRT17-01522 and MPS Witness Statement: GTIRT17-01252 and GTIRT17-02889)

01:08:40* – Miguel Alves from flat 105, 13th floor, exits the building, via the main entrance. (Source: Camera 4, CCTV)

01:08:49* – WM Dowden enters the lobby with Firefighter Barton and Firefighter O'Hanlon, both in BA. WM Dowden asks an individual (believed to be Mr Alves from flat 105) for his key fob, which the member of the public gives to him. (Source: Camera 4, CCTV)

01:09:02* – BA Team One enter bedroom number one in flat 16. From the TIC footage below, the curtains on the North elevation of the flat can be seen blowing vigorously by the wind. On the night the wind was travelling in a North Westerly direction and it was reported by the Met Office to have been at a speed of 0 to 5 miles per hour. (Source: Met Office data, TIC imagery)

Searching first bedroom



01:09:05* – Firefighter Barton and Firefighter O'Hanlon exit the building in BA via the main entrance. (Source: Camera 4, CCTV)

01:09:09* – Firefighter O'Beirne exits the building. (Source: Camera 4, CCTV, Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

01:09:26 – Video footage shows flames have broken through the kitchen window area. Small embers can be seen dropping to ground floor level. BA Team One are in flat 16, searching the bedrooms. (Source: Mr Kebede's phone and TIC)

Please play Video '20170614_010926' in Appendix 3.

01:09:40* – Firefighter O'Hanlon and Firefighter Barton both rigged in BA and carrying two lengths of 45 mm fire hose enter through the main entrance. (Source: Camera 4, CCTV)

01:10* – At around this time that Firefighter Badillo starts to set into the dry rising main outlet on the third floor and starts to lay out a 45 mm fire hose with a branch. Firefighter Badillo doesn't state he is with anyone else but Firefighter Dorgu talks about setting into the dry rising main outlet on the third floor. Firefighter O'Beirne corroborates this in his SAI interview. (Source: SAI Transcript: GTIRT18-00577, Contemporaneous Notes: GTIRT17-00009 and GTIRT17-00431, GTIRT17-00016, GTIRT17-00017 and MPS Witness Statement: GTIRT18-01411 and GTIRT18-00917, GTIRT18-00072, GTIRT18-00641)

01:10:00* – Firefighter Hippel and CM Stern both rigged in BA enter through the main entrance and proceed up the stairs with Firefighter O'Hanlon and Firefighter Barton. (Source: Camera 4 and 2, CCTV)

01:10:09* – WM Dowden and WM O'Keeffe enter the building via the main entrance. They are with Firefighter Murphy and Firefighter Cornelius. (Source: Camera 4, CCTV)

01:10:35* – Firefighter Murphy and Firefighter Cornelius leave the building via the main entrance. (Source: Camera 4, CCTV)

01:10:43* - Ilyas Sedrati, Hafida Sedrati and Sarah Sedrati from flat 55 on the eighth floor and Almaz Kinfu from flat 16, fourth floor, exit the building via the main entrance. (Source: Camera 4, CCTV)

01:10:51* – WM Dowden and WM O'Keeffe exit the building via the main entrance. (Source: Camera 4, CCTV)

01:11:11* – A length of 45 mm fire hose at ground floor level outside the East elevation is being filled with water. (Camera 4, CCTV)

At around this time it is understood the following events take place. Firefighter Archer is operating a covering jet (45 mm) at the East elevation, spraying water above the window of flat 16. CM Davies approaches Firefighter Archer and tells him to get rigged in BA. Firefighter Archer hands the jet to Firefighter Murphy and Firefighter Cornelius from Kensington. (Source: Contemporaneous Notes: GTIRT17-00024, GTIRT17-00020, GTIRT17-00026, GTIRT17-00021 and MPS Witness Statements: GTIRT18-00312, GTIRT18-01416, GTIRT18-00972, GTIRT18-00993)

01:11:34 - BA Team Two, Firefighter O'Hanlon and Firefighter Barton remove their tallies and start breathing under air. Their briefing is to go to the fourth floor, enter flat 16 with a 45 mm jet and back up BA Team One. (Source: BA Data and Contemporaneous Notes: GTIRT17-00025, GTIRT17-00027)

01:11:40* – Firefighter O'Beirne enters the building via the main entrance. He is carrying a length of 45 mm fire hose and a sledge hammer. (Source: Camera 4, CCTV)

01:12* - At around this time WM Dowden asks CM Davies to formulate an informative message. This message is to explain to Control and anyone monitoring the airwave radio what the incident is. This will normally confirm the address, the type of building, number of floors, dimensions of the building, number of persons believed involved and the percentage of the building on fire. (Source: Contemporaneous Notes: GTIRT17-01215 and GTIRT17-00293, GTIRT17-00026 and MPS Witness Statement: GTIRT18-00972, GTIRT18-01065)

At the same time the fire now appears to be spreading out of the kitchen window of Flat 16 and flames can be seen licking up the side of the building. Small embers can also be seen falling to the floor. A covering jet is set up on the North East corner of Grenfell Tower. BA Team One are still searching flat 16. (Source: Mr Kebede's phone and TIC: LFB Information Management Team Image Library)

Please play Video '20170614_011200' in Appendix 3.

At around this time WM Dowden notes that the external cladding appears to be burning. He states it was sparking and spitting in a similar way to when magnesium and was making me feel uncomfortable. This is supported by Mr Kebede's telephone footage. He asks for a Make Pumps six and one Hydraulic Platform (HP) radio message to be sent immediately. (Source: Contemporaneous Notes: GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT18-01065)

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01:12:27* – Mr Eamon Zada from flat 53, eighth floor, runs down the stairs and exits the building via the main entrance. (Source: Camera 2 and 4, CCTV)

At around the this time BA Team One enter and search the second bedroom of flat 16. See image below. (Source: TIC imagery)



01:12:30* – WM Dowden tasks firefighters to lay out a ground monitor ready to work at the East elevation, if it is required. This is to supplement the covering jet that is already working. (Source: Contemporaneous Notes: GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT18-01065)

At around this time Firefighter O'Beirne goes up stairs to the third floor and meets Firefighter Dorgu and assists him with the second line of fire hose from the dry rising main outlet. (Source: Contemporaneous Notes: GTIRT17-00016, GTIRT17-00017 and MPS Witness Statement: GTIRT18-00072, GTIRT18-00641)

01:12:54* – A TIC captures BA Team One searching the toilet area off the corridor in flat 16. (Source: TIC imagery)

01:12:59 – Golf 331, Kensington's Pump Ladder, (Firefighter Broderick) sends an 'Assistance' radio message to Brigade Control. **"Make Pumps Six, Request One Turntable Ladder, sorry One Hydraulic Platform"**. (Source: Contemporaneous Notes: GTIRT17-01215, GTIRT17-00293, GTIRT17-00018 and GTIRT17-01522, MPS Witness Statement: GTIRT18-01065, GTIRT17-01252 and GTIRT17-02889, Radio Message: GTIRT17-02473 and 'Vision')

The control room is not only responsible for ensuring the correct fire service resources are sent to an incident they are also responsible for carrying out a range of other actions and notifications. Throughout this document a table of the operational response and notification actions is provided to indicate the volume of work required by the control room staff during large incidents.

Six Pump fire operational response and notifications

Incident type	Operational response	Notification actions
<ul style="list-style-type: none"> 6 pump fire 	<ul style="list-style-type: none"> 6 x Pumps 1 x 135 (Pump Appliance) 3 x WM 1 x Fire Investigation Unit (FIU) 2 x CU (CU) 2 x SM 1 x Group Manager (GM) as Monitoring Officer (MO) 1 x Press Officer (exclusive) 1 x Fire Safety course 	<ul style="list-style-type: none"> Order Water Service Technician (unless incident is a special service) Inform Police Inform Environment Agency (EA) Supervisor inform nearest Bulk Media Advisor (BMA) Supervisor inform Resource Management Logistics (RML) Supervisor inform Operational Review Team (ORT) Supervisor inform Duty Brigade Control Senior Manager Inform Deputy Assistant Commissioner (DAC) with Assistant Commissioner (AC) 1as Remote MO

01:13* - At around this time WM O'Keeffe is detailed to manage BA and the bridgehead on the second floor by WM Dowden. (Source: Contemporaneous Notes: GTIRT17-01215, GTIRT17-00293, GTIRT17-00018 and GTIRT17-01522 and MPS Witness Statement: GTIRT18-01065, GTIRT17-01252 and GTIRT17-02889)

01:13:19 – Brigade Control confirm receipt of the 'Make Pumps Six Message' message. (Source: Radio Message: GTIRT17-02474 and 'Vision')

01:13:29* - Abdirahman Hiris from flat seven, third floor, Miss Zoe Dainton and Mr David Benjamin, flat 12, fourth floor, and Shuhayab Hersee (address unknown) all exit the building via the main entrance. (Source: Camera 4, CCTV)

01:13:41 - Golf 331, Kensington's Pump Ladder, send a radio message to Brigade Control to make a change to their last 'assistance' message. **"Message Should Read Make Pumps Six, Aerials One"**. (Source: Radio Message: GTIRT17-02475 and 'Vision')

This amendment is to change the type of aerial appliance required. The change is from one hydraulic platform to one "aerial". Where the assistance requested is "an aerial". The nearest aerial appliance is despatched irrespective of its type.

01:13:58 - Brigade Control confirm they have received the amendment to the assistance message. (Source: Radio Message: GTIRT17-02476 and 'Vision')

01:14* - At around this time BA Team Two, Firefighter O'Hanlon and Firefighter Barton make their way up the stairwell from the bridgehead. They meet Firefighter Badillo who has already plugged the second fire hose into the third floor DRM outlet. BA Team Two proceed up the stairs to the fourth floor with this fire hose. Both firefighters see members of public self evacuating as they go up the stairs (Source: Contemporaneous Notes: GTIRT17-00009, GTIRT17-00431, GTIRT17-00027, and GTIRT17-00025 and MPS Witness Statement: GTIRT18-01411, GTIRT18-00917, GTIRT18-00387 and GTIRT18-00321).

01:14:00* – WM O'Keeffe attempts to gain access through the main entrance. It is 50 seconds before an individual opens the door for him. He enters with two firefighters who are both in BA. (Source: Camera 1 and 4, CCTV)

01:14:16* – At around this time BA Team One in flat 16, open the door to the kitchen for the first time. CM Batterbee explains the change in temperature is significant. "The water we put on the fire just turned to steam, I couldn't see any glowing or flame. I tried to use the TIC but every time we opened the door to apply water, visibility was zero". (Source: TIC imagery, Contemporaneous Notes: GTIRT17-00012 and GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011)

01:14:21 – Golf 272, North Kensington's Pump contacts Brigade Control via Main Scheme radio and sends an 'Informative' message, this reads; **"From WM Dowden at flat 16, Grenfell Tower, a residential block of flats of 20 Floors, 25 metres by 25 metres, a five roomed flat on the fourth floor, 75% alight, high rise procedure implemented, MDT in use, Tactical Mode Oscar"**. (Source: Contemporaneous Notes: GTIRT17-00026, GTIRT17-01215 and GTIRT17-00293, Vision: GTIRT17-02477, GTIRT17-02478, GTIRT17-02479, GTIRT17-02480, GTIRT17-02481 and 'Vision' Log)

01:14:32* – At around this time BA Team One make multiple attempts to enter the kitchen in flat 16. Both firefighters speak of high levels of heat. The TIC image below shows a fire in the far corner of the kitchen, a kitchen appliance believed to be a fridge/freezer can be seen to the bottom middle right and to the left of the yellow is believed to be the kitchen window. (Source: Contemporaneous Notes: GTIRT17-00012 and GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011 and TIC imagery)

2nd opening of kitchen door. Heat around window and fridge.



01:14:44* - Jose Vieiro and Cameron Vieiro from flat 46, seventh floor, enter the lobby on the seventh floor and return to the area outside their flat. (Source: Camera C15, CCTV)

01:15* –Firefighter Badillo whilst on the third floor meets a group of individuals who show signs of having been in smoke. He states 'they have streaming eyes, they are coughing and look panicked. They say they are from the fifth and sixth floors'. (Source: Contemporaneous Notes: GTIRT17-00009 and GTIRT17-00431 and MPS Witness Statement: GTIRT18-01411 and GTIRT18-00917)

At around this time Firefighter O'Beirne returns to the fifth floor. He enters the fifth floor lobby and sees no smoke. When he looks through the letterbox of flat 26 the hallway of the flat is full of thick black smoke and he can no longer see the light on in the hall way. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

Firefighter O'Beirne radios WM Dowden and says that flat 26 directly above flat 16 is now on fire. Firefighter O'Beirne states he doesn't get a reply from WM Dowden or anyone else. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

01:15:03* – WM O'Keeffe goes up the stairs. (Source: Camera 2, CCTV, Contemporaneous Notes: GTIRT17-00018 and GTIRT17-01522 and MPS Witness Statement: GTIRT17-01252 and GTIRT17-02889)

01:15:16 - Brigade Control confirm and repeat back the informative message. (Source: Radio Message: GTIRT17-02483 and 'Vision')

01:15:28 – Control page Oscar Kilo 13, WM Matthew Leaver, who is a Fire Investigation Officer (FIO), to inform him there is a six pump fire in progress at Grenfell Tower. (Source: 'Vision')

The table below show the resources required and mobilised to the six pump fire:

Pre Determined Attendance for a six pump fire	Operational Response to the incident
<ul style="list-style-type: none"> • 6 x Pumps • 1 x 135 (Pump Appliance) • 3 x WM • 1 x FIU • 2 x Command Unit (CU) • 2 x SM • 1 x GM as MO • 1 x Press Officer (exclusive) • 1 x Fire Safety course 	<ul style="list-style-type: none"> • Golf 272, North Kensington's Pump • Golf 271, North Kensington's Pump Ladder • Golf 331, Kensington's Pump Ladder (assigned WM Romeo attribute, this means a substantive WM is in attendance) • Golf 362, Hammersmith's Pump • Golf 361, Hammersmith's Pump Ladder, • Alpha 212, Paddington's Pump • Oscar Kilo 13, WM Leaver from the Fire Investigation Team • CU 7 • CU 8 • Hotel 41 Sierra (Kingston's SM) SM Andrew Walton (as SM) • Golf 22 Sierra (Chelsea's SM) SM Brett Loft (as SM) • Foxtrot 115 GM Patrick Goulbourne (as GM) • Oscar Golf 54 SM Gareth Cook (as the Press Officer) • Oscar Foxtrot 67 SM Daniel Egan (as Fire Safety Officer)

01:15:32 – The fire has now grown and a large quantity of debris is falling externally. A covering jet is now being operated in the North East corner, believed to be by Firefighter Murphy and Firefighter Cornelius. Firefighter Cornelius states that "the jet was having no impact on fire suppression as the fire was spreading behind the panelling and it was difficult to direct a flow of water on to the fire". (Source: Contemporaneous Notes: GTIRT17-00020, GTIRT17-01215, GTIRT17-00293 and GTIRT17-00021 and MPS Witness Statement: GTIRT18-01416, GTIRT18-01065 and GTIRT18-00993 and Mr Kebede's phone footage)

WM Dowden notes that the external cladding is becoming more involved at a rapid rate. (Source: Contemporaneous Notes: GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT18-01065 and Mr Kebede's phone footage)

Please play Video '20170614_011532' in Appendix 3.

01:15:34* – BA Team One open the door to the kitchen again. The TIC imagery below shows flames around the kitchen window. (Source: TIC imagery, Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011 and MPS Witness Statement: GTIRT18-01837 and GTIRT17-01434).

Opening of kitchen door. Flames around window.
Adj. time approx. - 01:15:34



01:15:40* – Firefighter Archer in BA enters main entrance. (Source: Camera 4, CCTV, Contemporaneous Notes: GTIRT17-00014, GTIRT17-01197 and GTIRT17-00054, GTIRT17-00024 and MPS Witness Statement: GTIRT18-00043, GTIRT18-00312)

01:16:00* – Firefighter Abell leaves the building via the main entrance. (Source: Camera 4, CCTV).

01:16* – The picture below shows a fully developed fire within the fabric of the building spreading from the fourth floor to approximately the sixth or seventh floors. A covering jet can be seen working from the bottom middle of the picture. (Source: MPS fire spread presentation, GTIRT18-01590)



01:16:05 – Golf 272, North Kensington's, send a radio message to Brigade Control confirming that Golf 272, is now the Initial Command Pump (ICP). This is the fire engine that will make and receive all radio messages for the incident, until relieved by a CU. (Source: Radio Message: GTIRT17-02484, 'Vision' log: and Policy 238: GTIRT17-00908)

01:16:14 - Brigade Control confirm that Golf 272, North Kensington's Pump, is now Incident Command Pump. (Source: Radio Message: GTIRT17-02485 and 'Vision' Log)

01:16:26 – Golf 361, Hammersmith's Pump Ladder book Status 2, mobile to Grenfell Tower. Golf 361 are riding with five firefighters; WM Paul Watson, CM Matthew Sephton, Firefighter Patrick Murray, Firefighter Benjamin Felton and Firefighter Mark Brodrick. (Source: 'Vision' and StARS rota book)

01:16:33* – Daniel Griffin from flat 31, sixth floor exits the building via the main entrance. (Source: Camera 4, CCTV)

01:16:43 – AOM Real calls the MPS informing them of a six pump fire at Grenfell Tower, The police give the Computer Aided Dispatch number as 482. (Source: Vision: GTIRT18-00860)

01:16:45* - Dorinda Suarez and Dore Costa, believed to be from flat 103, 13th floor comes down the stairs holding towels over their mouths, indicating deteriorating conditions in the stairwell. (Source: Camera 2, CCTV)

01:17* – *At around this time Firefighter O'Beirne leaves the fifth floor and goes to the sixth floor. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)*

Firefighter Dorgu meets a woman (now known to be Rebecca Ross) who informs him that her father is in flat 122, 15th floor (now known to be Stephen Power) and is bedbound. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

01:17:09* – At around this time BA Team One, close the door to the kitchen due to the severe heat. They check the opposite door on the left, now known to be the door to the lounge to see if there is another entrance to the kitchen. They do not find one. (Source: Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011 and MPS Witness Statement: GTIRT18-01837 and GTIRT17-01434 and TIC imagery)

BA Team Two, Firefighter O'Hanlon and Firefighter Barton, meet BA Team One, CM Batterbee and Firefighter Brown, in the hallway of flat 16. BA Team One are conducting a right hand search, BA Team Two are doing a left hand search. TIC imagery shows both BA teams in the hallway. (Source: TIC imagery and MPS Witness Statement: GTIRT18-01837, GTIRT17-01434, GTIRT18-00321 and GTIRT18-00387)

01:17:09* – Jose Costa Costello from flat 103, 13th Floor exits the building via the main entrance. (Source: Camera 4, CCTV)

01:17:11 –Alpha 212, Paddington's Pump, book Status 2, mobile to Grenfell Tower. Alpha 212 are riding with five firefighters; CM Ben Gallagher, Firefighter Harry Bettinson, Firefighter Geoffrey Campbell, Firefighter Raymond Keane and Firefighter James Wolfenden. (Source: 'Vision' Logs and StARS rota book)

01:17:12* - Brigade Control receive the fourth 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Call duration one minute 18 seconds. Incident number 76038. (Source: 'Vision', GTIRT17-00473)

Durinda Suarez Chans from flat 103, 13th floor exits the building via the main entrance. (Source: Camera 4, CCTV)

01:17:21 - Golf 22 Sierra, SM Loft calls Brigade Control via telephone following a pager message to a six pump fire at Grenfell Tower. CRO Duddy takes the call from SM Loft. He tells SM Loft he is the first SM assigned to the incident. CRO Duddy informs SM Loft that the following resources have been mobilised to the fire. Golf 271, North Kensington's Pump Ladder, with WM Dowden as Incident Commander, Golf 272, North Kensington's Pump and Golf 331, Kensington's Pump Ladder, are in attendance. Golf 361, Hammersmith's Pump Ladder, Golf 362, Hammersmith's Pump and Alpha 212, Paddington's Pump, are enroute. SM Walton, GM Goulbourne, SM Cook and SM Egan are Status 2 (Mobile to the Incident). Brigade Control informs SM Loft has escalated from a three fire engine attendance to six fire engine fire and reports four 999 emergency calls have been received. Golf 22 Sierra SM Loft confirms he is Status 2, mobile to incident. (Source: 'Vision' and Vision Radio Message GTIRT18-00254)

01:17:22 – BA Team Three, CM Stern and Firefighter Hippel report to the bridgehead, remove their tallies and start to breath under air. They are briefed to go to the fifth and sixth floors to check to see if the fire has spread. (Source: Contemporaneous Notes: GTIRT17-01198 and GTIRT17-00019, MPS Witness Statement: GTIRT18-01111 and GTIRT18-00427 and BA Data)

01:17:28* – Firefighter Archer wearing BA goes to the main entrance door and opens it. (Source: Contemporaneous Notes: GTIRT17-00024, MPS Witness Statement: GTIRT18-00312 and Camera 4, CCTV)

01:17:31 – SM Cook (Oscar Golf 54) books Status 2, mobile to Grenfell Tower from his home address in [REDACTED] (Source: 'Vision' Log)

01:17:45* - Alk Haxhisefa, Avni Haxhisefa and Adriana Zymberaj, flat 106, 13th floor exit the building via the main entrance. (Source: Camera 4, CCTV)

01:17:51 – SM Walton (Hotel 41 Sierra) phones Brigade Control and books Status 2, mobile to Grenfell Tower from Fulham fire station. (Source: 'Vision' Log, Contemporaneous Notes: GTIRT17-00004, GTIRT17-00278, GTIRT17-01137, GTIRT17-01138 and GTIRT17-01139, MPS Witness Statement: GTIRT18-01000 and Vision: GTIRT18-00256)

01:18* – *At around this time Firefighter O'Beirne enters the sixth floor lobby and he states it appears to be a little bit smoky. A Spanish speaking family of three come out of flat 36, sixth floor (two floors directly above flat 16). They inform Firefighter O'Beirne that their flat is alight. He confirms with them there is no one else in the flat. The door is closed but unlocked Firefighter O'Beirne enters the flat and sees a wall of thick black smoke from floor to ceiling. The family leave via the stairs. The occupants are believed to be Ms Stephanie Millan, Mr O Millan from flat 36 and Mr Urbano from flat 176, 20th floor. (Source: MPS Grenfell Tower Disaster Victim Identification Recovery Floor Plan: GTIRT18-01470)*

At around this time, WM O'Keeffe contacts WM Dowden via handheld radio and suggests sending a 'Make Pumps 8' radio message as he requires additional resources (Source: Contemporaneous Notes: GTIRT17-00018 and GTIRT17-01522 and MPS Witness Statement: GTIRT17-01252 and GTIRT17-02889)

01:18* – between 00:58 - 01:18 the following residents have either been rescued, assisted out or have self evacuated from Grenfell Tower. (Source: MPS Grenfell Tower Residents List by Flat and Floor Number document: GTIRT18-01141 and MPS Grenfell Tower CCTV Named Exits spreadsheet: GTIRT18-01051)

1. Abdirahman Hirsi (Flat 7) (2 nd Floor)
2. Mr S H Duale (Flat 7) (2 nd Floor)
3. Suhayb Hirsi (Flat 7) (2 nd Floor)
4. Alison Moses (Flat 11) (4 th Floor)
5. David Benjamin (Flat 12) (4 th Floor)
6. Zoe Dainton (Flat 12) (4 th Floor)
7. Maryam Adam (Flat 14) (4 th Floor)
8. Abdulwahab Abdulhamid (Flat 14) (4 th Floor)
9. Amna Moehemmed (Flat 14) (4 th Floor)
10. Mahad Egal (Flat 15) (4 th Floor)
11. Zak Mahamed (Flat 15) (4 th Floor)
12. Jamie Murry (Flat 15) (4 th Floor)
13. Vega-Lily Mahamed (Flat 15) (4 th Floor)
14. Bekailu Kebede (Flat 16) (4 th Floor)
15. Almaz Kinfu (Flat 16) (4 th Floor)
16. Elsa Afeworki (Flat 16) (4 th Floor)
17. Salah Yusuf (Flat 21) (5 th Floor)
18. Mohamed Hariri (Flat 21) (5 th Floor)
19. Daniel Griffin (Flat 31) (6 th Floor)
20. Eamon Zada (Flat 53) (8 th Floor)
21. Ilyaas Sedrati (Flat 55) (8 th Floor)
22. Hafida Sedrati (Flat 55) (8 th Floor)
23. Sarah Sedrati (Flat 55) (8 th Floor)
24. Farshid Kaficheraghi (Flat 91) (12 th Floor)
25. Ms MM Ahmed (Flat 102) (13 th Floor)
26. Jose Costa Costello (Flat 103) (13 th Floor)
27. Durinda Suarez-Chans (Flat 103) (13 th Floor)
28. Fatima Alves (Flat 105) (13 th Floor)
29. Ines Alves (Flat 105) (13 th Floor)
30. Tiago Alves (Flat 105) (13 th Floor)
31. Miguel Alves (Flat 105) (13 th Floor)
32. Alk Haxhisefa (Flat 106) (13 th Floor)

33. Avni Haxhisefa (Flat 106) (13 th Floor)
34. Adrianna Zymberaj (Flat 106) (13 th Floor)
35. Ishmael Boaitey (Flat Unknown) (Floor Unknown)
36. Jalal Chentite (Flat Unknown) (Floor Unknown)

01:18:18 – All on duty ORT officers are paged through a group page system informing them of the six pump fire. (Source: 'Vision' Log)

01:18:20* – Firefighter Archer returns to the front door and opens it. (Source: Camera 4, CCTV)

01:19:08 – Golf 272, North Kensington's Pump, send an assistance message to Brigade Control. **"Make Pumps Eight"**. Brigade Control confirm receipt of make pumps eight radio message. (Source: Vision: GTIRT17-02487 and 'Vision' Log)

Eight Pump fire operational response and notifications

Incident type	Operational response	Notification actions	
<ul style="list-style-type: none"> 8 pump fire 	<ul style="list-style-type: none"> 8 x Pumps 1 x 135 (Pumping Appliance) 3 x WM 1 x FIU 1 x FRU 2 x CU 3 x SM 1 x GM (IC 7-10 pumps) Officer 1 x Press Officer (exclusive) 1 x DAC as MO 1 x BA Unit (on the Operational Support Unit) 1x Damage Control Unit (on the Operational Support Unit) 	<ul style="list-style-type: none"> Order Canteen Van or inform of incident upgrade if already attending Inform AC on duty type 24 AC 1 or next in sequence if not available Order Ambulance Order Water Service Technician (unless incident is a special service) Inform Police Inform Environmental Agency Supervisor inform RML Supervisor inform ORT Supervisor inform nearest BMA Officer of fires of 6 pumps and above (not grass or special service or above) Supervisor inform Duty Radio officer Supervisor inform Duty non uniformed Press 	<ul style="list-style-type: none"> Officer of the Day 1 or 2 Duty DAC AC 1 Commissioner and Staff Officers as appropriate Authority members

		<p>Officer</p> <ul style="list-style-type: none"> • Supervisor inform Duty Borough Commander SM • Supervisor considers diverting press line to Duty non uniformed Press Officer. • Inform AC 1 as Remote MO • Action Make Pumps 8 	
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01:19:08* – Firefighter O'Beirne states he believes he is between the seventh and 10th floors when the 'Makes Pumps Eight' radio message is sent. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

At around this time Firefighter Bills is ordered to move Golf 272, North Kensington's Pump, to allow access for the aerial appliance that was ordered on the make pumps six radio message. (Source: Contemporaneous Notes: GTIRT17-00010)

01:19:13* – At this time BA Team One open the door to the kitchen again. (Source: TIC imagery:)

Opening
kitchen door.

Adj. time approx. 01:19:13



01:19:15 – SM Loft, Golf 22 Sierra, is booked Status 2, mobile to Grenfell Tower. He is approximately 3.5 miles away at his call out base which is Fulham fire station. (Source: 'Vision' and Vision: GTIRT18-00254)

01:19:19 – Alpha 213, Paddington's Turntable Ladder (TL), book Status 2, mobile to Grenfell Tower. They are riding with two firefighters, CM Daniel Harriman and Firefighter Christopher Reynolds. (Source: 'Vision' Log and StARS rota book)

01:19:27 – Echo 109 GM Richard Welch is paged as BMA informed of an eight pump fire. (Source: 'Vision' Log)

01:19:53* – Carmen Vieiro from flat 46, seventh floor comes out into the seventh floor lobby. (Source: Camera C15, CCTV)

01:19:54* – Zak Chebiouni from flat 66, 9th floor, carrying Sara Chebiouni leaves the building via the main entrance. (Source: Camera 2 and 4, CCTV)

01:19:58 – Brigade Control receive the fifth 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Call duration one minute 7 seconds, incident number 76039. (Source: 'Vision' GTIRT17-00474)

01:20* - At around this time BA Team Three, CM Stern and Firefighter Hippel ascend to the fifth floor and they confirm in their police statements that there is heavy smoke logging on this floor. They look to enter flat 26, directly above flat 16, but it is locked and they have no breaking in equipment or fire hose. They can see smoke coming from the flat. (Source: Contemporaneous Notes: GTIRT17-00019 and GTIRT17-01198 and MPS Witness Statement: GTIRT18-01111 and GTIRT18-00427)

Firefighter Badillo makes his way down to the bridgehead to liaise with WM Dowden as he believes that's where WM Dowden is located. He briefs CM Secrett at the bridgehead. CM Secrett informs Firefighter Badillo that WM Dowden is aware of the fire spread (Source: Contemporaneous Notes: GTIRT17-00009, GTIRT17-00431, GTIRT17-01215, GTIRT17-00293 and GTIRT17-00013 and MPS Witness Statement: GTIRT18-01411, GTIRT18-00917, GTIRT18-01065 and GTIRT17-01551)

01:20:21* – Lydia Liao from flat 195, 22nd floor, leaves the building via the main entrance. (Source: Camera 4, CCTV)

01:20:26* - Rashida Ali and Hayam Atmani from flat 125 on the 15th floor leave the building, via the main entrance. (Source: Camera 1 and 4, CCTV)

01:20:25* – BA Team One, open the door to the kitchen and attempt to extinguish the fire. They note a drop in temperature which is consistent with the kitchen ventilating. (Source: Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011, MPS Witness Statement: GTIRT18-01837 and GTIRT17-01434 and TIC imagery).

01:20:39* – Firefighter Archer enters the main entrance carrying a 45 mm fire hose and a branch. (Source: Camera 1 and 4, CCTV)

Mr Winton Temesgen, Hiwot Dagnachew, Biruk Henoc and Yabasirra Henoc, from flat 26, fifth floor, leave the building via the main entrance. (Source: Camera 4, CCTV)

01:20:48* – BA Team One enter the kitchen and extinguish the fire. (Source: Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011, MPS Witness Statement: GTIRT18-01837 and GTIRT17-01434 and TIC imagery)

01:20:54* – Carmen Viero is seen again on the seventh floor lobby holding something over her face indicating deteriorating conditions. (Source: Camera C15, CCTV)

01:20:57 – The table below show the resources required and mobilised to the eight pump fire:

Pre Determined Attendance for a eight pump fire	Operational Response to the incident
<ul style="list-style-type: none"> • 8 x Pumps • 1 x 135 (Pumping Appliance) • 3 x WM • 1 x FIU • 1 x FRU • 2 x CU • 3 x SM • 1 x GM (IC 7-10 pumps) Officer • 1 x Press Officer (exclusive) • 1 x DAC as MO • 1 x BA Unit (on the Operational Support Unit) • 1x Damage Control Unit (on the Operational Support Unit) 	<ul style="list-style-type: none"> • Golf 272, North Kensington's Pump • Golf 271, North Kensington's Pump Ladder • Golf 331, Kensington's Pump Ladder • Golf 362, Hammersmith's Pump • Golf 361, Hammersmith's Pump Ladder, • Alpha 212, Paddington's Pump • Alpha 211, Paddington's Pump Ladder • Golf 261, Acton's Pump Ladder • Oscar Kilo 13, WM Leaver from the Fire Investigation Team • Alpha 216, Paddington's FRU • Alpha 213, Paddington's TL • CU 7 • CU 8 • Hotel 41 Sierra (Kingston's SM) SM Andrew Walton (as SM) • Golf 22 Sierra (Chelsea's SM) SM Brett Loft (as SM) • Oscar Golf 61 SM Saunders (as SM) • Foxtrot 115 GM Patrick Goulbourne (as GM) • Oscar Golf 54 SM Gareth Cook (as the Press Officer) • Echo 6 DAC O'Loughlin • Oscar Foxtrot 67 SM Daniel Egan (as Fire Safety Officer) • Golf 25 Alpha, Ealing's Operational Support Unit (OSU) (BA Unit) • Alpha 39 Alpha, Finchley's OSU (Damage Control Unit)

(Source: 'Vision' Log).

01:21* – At around this time, Firefighter O'Beirne leaves the sixth floor and goes to the seventh floor. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

BA Team Three, CM Stern and Firefighter Hippel proceed to the sixth floor from the bridgehead. (Source: Contemporaneous Notes: GTIRT17-00019 and GTIRT17-01198 and MPS Witness Statement: GTIRT18-01111 and GTIRT18-00427)

01:21:00 - The fire has spread up the external façade to what is believed to be the ninth or tenth floor by this time. (Source: Mr Kebede's phone)

Please play Video '20170614_012100' in Appendix 3.

01:21:03* – Fatima Jafari and Maria Jafari from flat 86, 11th floor. Luke Towner and Emma O'Connor from flat 171, 20th floor leave the building via the main entrance. (Source: Camera 1, CCTV)

01:21:07 - BA Team Four, Firefighter Archer and Firefighter Abell report to the bridgehead on the second floor. They start up their BA sets and start breathing under air. They are tasked to go to fifth floor to extinguish the fire in flat 26. (Source: Contemporaneous Notes: GTIRT17-00024, GTIRT17-00014, GTIRT17-01197 and GTIRT17-00054 , MPS Witness Statement: GTIRT18-00043 and GTIRT18-00312 and BA Data)

01:21:15* – At around this time BA Team Two enter the kitchen and join BA Team One. BA Team One confirm with BA Team Two that the fire in the kitchen is out. (Source: TIC: and MPS Witness Statement: GTIRT18-00387, GTIRT18-01837, GTIRT17-01434 and GTIRT18-00321)

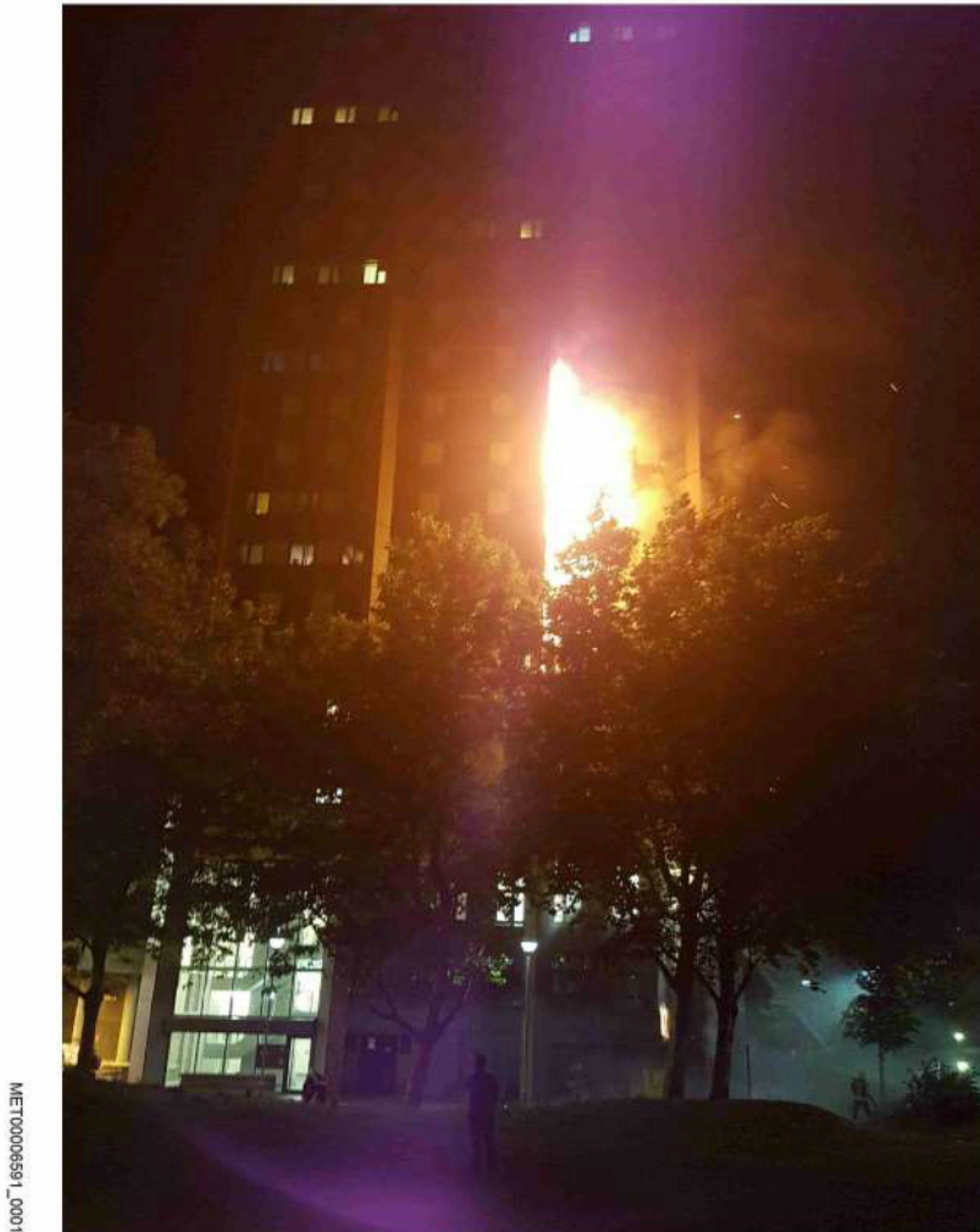
BA Team One confirm the fire is extinguished in flat 16 and they send a message to the Breathing Apparatus Entry Control Officer (BAECO) confirming the fire is out. (Source: Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011, and MPS Witness Statement: GTIRT18-01837 and GTIRT17-01434)

The image below shows the washing machine in the kitchen which is hot but no flame. (Source: Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011 and TIC imagery).

Washing machine in kitchen.



01:21:21* – The picture below shows the fire has reached the 11th floor. A covering jet in the North East corner can be seen in use. It is believed this is Ff Murphy or Ff Cornelius. Another Firefighter can be seen setting up a ground monitor. (Source: MET00006591 and Dr Lane report and Camera 2, CCTV)



01:21:24 – Brigade Control receive the sixth 999 call in relation to Grenfell Tower, CRO Yvonne Adams takes the call from an individual who is inside Grenfell Tower, flat 195, 22nd floor (believed to be Mrs Chi-Yuan Li). Call duration one minute, 34 seconds. Incident number 76042. (Source: 'Vision' GTIRT17-00477)

01:21:30* - At around this time BA Team Four, Firefighter Archer and Firefighter Abell, make their way up the stairs from the bridgehead to the fifth floor and meet Firefighter Dorgu. He takes them to flat 26 on the fifth floor and they attempt to make entry into the flat. (Source: Contemporaneous Notes: GTIRT17-00024, GTIRT17-00014, GTIRT17-01197 and GTIRT17-00054, GTIRT17-00017).

01:21:26* – BA Team One capture pictures on a TIC (below) of what appears to be hot molten droplets falling from the outside of the tower past the window, which has been burnt away. (Source: and TIC imagery)

Kitchen window failed and molten Droplets Falling Outside.



01:21:34* - Hanan Wahabi from flat 66, ninth floor leaves the building, via the main entrance. (Source: Camera 4, CCTV)

01:21:57* – A firefighter, believed to be Firefighter O'Beirne, enters the seventh floor lobby (Source: Camera C15). He goes to flat 46 and three people exit, Miss V Vieira, Mr J Vieira and Mrs C Vieira. They tell him their flat is on fire. (Source: Camera C15, CCTV, MPS Witness Statement: GTIRT18-00072 and Contemporaneous Notes: GTIRT17-00016)

01:22:00* – Member of the public (name unknown) enters the building. (Source: Camera 4, CCTV)

01:22:05* - Mohboubeh Jamalvatan from flat 10, third floor leaves the building via the main entrance. (Source: Camera 4, CCTV)

01:22:16* – Michael (Paramasivan) West from flat 45, seventh floor comes out of his flat (CCTV footage jumps to 01:22:30, he is no longer visible but his door is left open). (Source: Camera C15, CCTV)

01:22:16 – Brigade Control receive the seventh 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Incident number 76043. Call duration 36 seconds. (Source: 'Vision', GTIRT17-00478)

01:22:33 – Golf 261, Acton's Pump Ladder, book Status 2, mobile to incident, mobile to an eight pump fire Grenfell Tower. They are riding with five firefighters, WM Nathan Ashe, Firefighter Nicke Merrion, Firefighter Will Murphy, Firefighter Harvey Sanders and Firefighter Mandeep Singh. (Source: 'Vision' Log and StARS)

01:22:35* – *A Firefighter believed to be Firefighter O'Beirne leaves the seventh floor lobby (Source: Camera C15) and radios down to WM Dowden to inform him that the fire has spread to the seventh floor. He then proceeds to the eighth floor. (Source: Contemporaneous Notes: GTIRT17-00016, GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT18-00072, and GTIRT18-01065)*

01:22:36* - Hannah (Paramasivan) West from flat 45, seventh floor is seen in the lobby of the seventh floor. (Source: Camera C15, CCTV)

01:22:41* - Carmen Vieiro from flat 46 again enters the lobby of the seventh floor. It appears that she returned to the seventh floor from the stairwell. (Source: C15, CCTV)

01:22:45 – Paddington's FRU, Alpha 216, book Status 2, mobile to incident mobile to the 8 pump fire at Grenfell Tower. They are riding with five firefighters, CM Philip Wigley, Firefighter Martin Gillam, Firefighter Russell Gonzalez, Firefighter Andrew Harris and Firefighter Dean Roberts. (Source: 'Vision' Log and StARS)

01:22:47* - Michael (Paramasivan) West from flat 45, seventh floor enters the lobby carrying Thea West also from flat 45. They exit the building via the main entrance. (Source: Camera 2 and 4, CCTV)

01:22:49 – Alpha 211, Paddington's Pump Ladder, book Status 2, mobile to incident, mobile to 8 pump fire at Grenfell tower. They are riding with five firefighters, WM Steven Collins, CM Guy Tillotson, Firefighter James Cuthbert, Firefighter Steven Mills and Firefighter Graeme Shaw. (Source: 'Vision' Log and StARS)

01:22:50* - Fatima Jafari from flat 86, 11th Floor, Taleen Ahmed from flat 102, 13th Floor and Aida Michael (not believed to be resident in Grenfell Tower) leave the building via the main entrance. (Source: Camera 1 and 4, CCTV)

01:22:51* – Fire can now be seen externally at the 11th or 12th floor levels. (Source: Mr Kebede's phone)

Please play Video '20170614_012251' in Appendix 3.

01:23* – *At around this time Firefighter O'Beirne reaches the eighth floor. There is heavy smoke logging in the eighth floor lift lobby. He goes straight out and up to the ninth floor. 'He states he didn't understand why the lift lobbies were getting smokier as he was going up. He thought smoke may be coming up the lift shaft'. (Source: MPS Witness Statement: GTIRT18-00072 and Contemporaneous Notes: GTIRT17-00016)*

WM O'Keeffe contacts WM Dowden (IC1) and informs him that he requires additional BA wearers and ECBs He suggests he making pumps 10. (Source: Contemporaneous Notes: GTIRT17-00018 and GTIRT17-01522 and MPS Witness Statement: GTIRT17-01252 and GTIRT17-02889)

01:23:15 – CU 7 from Wembley book Status 2, mobile to Grenfell Tower. They are riding with two WMs, WM Harrison and WM Peckham. (Source: 'Vision' and StARS)

01:23:22 – AOM Real from Brigade Control phones Thames Water Authority (TWA) informing them of a 10 pump fire in progress at Grenfell Tower. It is believed that whilst on the phone to Thames Water that Brigade Control received the 'Assistance' message: 'Make Pumps 10'. Whilst on the phone AOM Real tells the TWA operator that it is now a 15 pump fire. Call Duration five minutes 18 seconds.(Source: Admin Call: GTIRT18-00865)

01:23:49* – Ms Rashida Ali from flat 125, 15th floor, comes back down the stairs and leaves the building via the main entrance. (Source: Camera 1, 2 and 4, CCTV)

01:23:50 - Brigade Control receive the eighth 999 call in relation to Grenfell Tower, CRO Adams takes the call from an individual who is outside Grenfell Tower. Incident number 76044, Call duration 39 seconds. (Source: GTIRT17-00479)

01:23:56* - Giti Pahlavani from flat 22, fifth floor comes down the stairs videoing on her phone and leaves the building via the main entrance. (Source: Camera 2 and 4, CCTV)

01:24* – At around this time BA Team Four, try to gain access to flat 26, fifth floor. Before this happens a family of five come out from the flat next door (flat 25), and leave the fifth floor. They are later identified as Mohammed Rassoul, Munira Mahamud, Ahmed Rassoul, Mohammad Hassan and Zahra Rassoul. BA Team Four wait to force entry into flat 26 until the family have been escorted out of the lobby. This is done by Firefighter Dorgu. (Source: Contemporaneous Notes: GTIRT17-00017, MPS Witness Statement: GTIRT18-00641, BA Data)

Firefighter O'Beirne enters the ninth floor and doesn't observe any smoke on that floor. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

01:24:00 - BA Team Four recall have difficulty gaining access to flat 26 and it takes them five minutes to gain entry. (Source: Contemporaneous Notes: GTIRT17-00014, GTIRT17-01197, GTIRT17-00054 and GTIRT17-00024, MPS Witness Statement: GTIRT18-00043 and GTIRT18-00312, BA data. Rationale, both BA sets data show a steady rise and fall in consumption rate between 01:24 and 01:29, this is consistent with the work they describe undertaking)

01:24:08 – Brigade Control receive the ninth 999 call in relation to Grenfell Tower, AOM Debbie Real takes the call from an individual who is outside Grenfell Tower. Incident number 76045, Call duration 34 seconds. (Source: 'Vision': GTIRT17-00480)

01:24:09 - Golf 271, North Kensington's Pump Ladder, sends an assistance message to Brigade Control, "**Make Pumps 10**". (Source: 'Vision' Log, Radio Message: GTIRT17-02489)

10 Pump fire operational response and notifications

Incident type	Operational response	Notification actions	
9 -12 Pumps	<ul style="list-style-type: none"> • 10 x Pumps • 1 x 135 (Pumping Appliance) • 5 x WM • 1 x FIU • 1 x FRU • 2 x CU • 6 x SM • 3 x GM • 1 x Press Officer (exclusive) • 1 x DAC (IC 11-15 pumps) • 1 x AC (MO/IC 16+ pumps) • 1 x BA Unit (on the Operational Support Unit) • 1x Damage Control Unit (on the Operational Support Unit) 	<ul style="list-style-type: none"> • Inform AC on duty type 24 AC 1 or next in sequence if not available • Order Canteen Van or inform of incident upgrade if already attending • Order Ambulance • Order Water Service Technician (unless incident is a special service) • Inform Police • Inform Environment Agency • Supervisor inform RML • Supervisor inform ORT • Supervisor inform nearest BMA • Supervisor inform Duty Radio officer • Supervisor inform Duty non uniformed Press Officer • Supervisor inform Duty Brigade Control Senior Manager • Supervisor consider diverting press line to Duty non uniformed Press Officer. • Inform AC 1 as Remote MO • Supervisor inform Respiratory Protection Equipment officer • Inform AC 2 they are now AC 1, inform AC 3 they are now AC 2 	<ul style="list-style-type: none"> • Officer of the day 1 or 2 • Duty DAC • AC 1 • Commissioner and Staff Officers as appropriate • Authority members

01:24:18* - Betty Kasote from flat 41, seventh floor leaves the building via the main entrance. (Source: Camera 1 and 4, CCTV)

01:24:27* - Joseph John, Malacki John and Leanne Jackson (Le Blanc) from flat six, second floor, Jose Vieiro, Carmen Vieiro from flat 46, seventh floor, Hannah West from flat 45, seventh floor, Catherine Handley and Mary Handley from flat 52, eighth floor leave the building via the main entrance. (Source: Camera 4, CCTV)

01:24:33 - Golf 271, North Kensington's Pump Ladder, send a radio message to Brigade Control requesting the **"attendance of the police for crowd control"**. Control confirm receipt of this radio message. (Source: 'Vision', Radio Message: GTIRT17-02491)

01:24:36* - Michael (Paramasivan) West carries Thea West out of the building via the main entrance, they are both from flat 45 on the seventh floor. (Source: Camera 4, CCTV)

01:24:53 – Echo 109 GM Welch rings the paging officer in response to the notification of a the six pump fire. This notification action is for a BMA. CRO Adams informs GM Welch that the incident has now escalated to a ten pump fire. GM Welch informs CRO Adams that he will attend and to book him Status 2, mobile to incident, from his home address in [REDACTED] (Source: Vision: GTIRT18-00259 and 'Vision')

Oscar Golf 61, SM Nicholas Saunders books Status 2, mobile to incident, from his home address in Postcode [REDACTED] (Source: Vision)

01:24:57 - Brigade Control receive the 10th 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Incident number 76046. Call duration 26 seconds. (Source: 'Vision', GTIRT17-00481)

01:24:57 – Brigade Control receive the 11th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual (believed to be Miss D Louis) who is inside Grenfell Tower, flat 96, 12th floor. Incident number 76047, Call duration one minute, 57 seconds. (Source: 'Vision' GTIRT17-00482)

01:24:58* - Srantilal Patel from flat 56,eighth floor leaves the building via the main entrance. (Source: Camera 4, CCTV)

01:25:04 – Oscar Kilo 13, WM Matthew Leaver, FIO, books Status 2, mobile to incident, from Alpha 28 Dowgate fire station. (Source: 'Vision')

01:25:06 – Golf 361, Hammersmith's Pump Ladder, book Status 3, in attendance. This is the fifth fire engine in attendance at Grenfell Tower. (Source: 'Vision')

01:25:09* - William Thompson from flat 52, eighth floor, Chiraag Patel, Kirwan Shanti Patel from flat 56, eighth floor, Amina Mohammed and Kahlid Ahmed from flat 51, eighth floor all exit the building via the main entrance. (Source: Camera 4, CCTV)

01:25:12 – Brigade Control receive the 12th 999 call in relation to Grenfell Tower, CRO Heidi Fox takes the call from an individual who is outside Grenfell Tower. Incident number 76049. Call duration 28 seconds. (Source: 'Vision', GTIRT17-00483)

01:25:14* – BA Team One capture pictures on their TIC below, which shows molten droplets falling past the kitchen window of flat 16. (Source: TIC:)

Molten dropped down outside kitchen window. Camera on 2x zoom



01:25:14 – Foxtrot 113 GM Stephen West who is the ORT shadowing officer is mobilised to attend the incident by Control. (Source: 'Vision')

01:25:16 – Brigade Control receive the 13th 999 call in relation to Grenfell Tower, Operations Manager (OM) Alex Norman takes the call from Mr Dennis Murphy who is inside Grenfell Tower, flat 111, 14th floor. Incident number 76058 ,Call duration three minutes, 57 seconds. (Source: 'Vision', GTIRT17-00492)

01:25:23* – Firefighter Badillo leaves the building via the main entrance. He props the front door open with his helmet as the door is on a timer and closes automatically. (Source: Camera 1, CCTV)

01:25:34* – An unidentified firefighter in BA briefly enters the seventh floor lobby. This is believed to be Firefighter Hippel as all other firefighters are accounted for in the building at this time. (Source: camera C15, CCTV)

01:25:36 – Brigade Control receive the 14th 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual (believed to be Mr Abdeslam Sebbar) who is inside Grenfell Tower, flat 81, 11th floor. Call duration 46 seconds. Incident number 76050. (Source: 'Vision', GTIRT17-00484)

01:25:40* - Monica Lokko from flat three, first floor mezzanine, Reshad Naqshbandi from flat eight, third Floor and Elizabeth Sobieszczak from flat 43, seventh Floor leave the building via the main entrance. (Source: Camera 4, CCTV)

01:25:41 - Alpha 216, Paddington's FRU, confirm with Control if they are required at the 10 pump fire. This is because the mobilisation has not appeared on their MDT. (Source: 'Vision' and Radio Message: GTIRT17-02494)

01:25:41 - Control tell Alpha 216, Paddington's FRU to proceed to the 10 pump fire. (Source: 'Vision' and Radio Message: GTIRT17-02493)

01:25:41 - Alpha 216, Paddington's FRU confirm they are proceeding to 10 pump fire. (Source: 'Vision' and Radio Message: GTIRT17-02492)

01:25:54 – Golf 25 Alpha, Ealing's Operational Support Unit, book Status 2, mobile to incident. Riding with one firefighter, Firefighter Phillip Birt. (Source: 'Vision' and StARS)

01:26* - *At this time Firefighter O'Beirne hears a scream or a shout. He goes to the next floor which he believes is the 10th, 11th or 12th. He stands at the door into the lift lobby area and after a few seconds a women exits the lobby on her hands and knees in a distressed state. (It is possible that this is Miss Daminina Louis from flat 96, 12th floor) Firefighter O'Beirne looks into the lobby and observes there is thick black smoke from floor to ceiling. He turns and asks her if there is anyone else in there but she has already gone down the stairs and doesn't turn back. (Source: MPS Witness Statement: GTIRT18-00072)*

By this time the fire had spread up the external façade to the 23rd floor, having travelled 19 floors in 12 minutes. (Source: MPS fire spread presentation, GTIRT18-01590)

01:26:27 – Brigade Control receive the 15th 999 call in relation to Grenfell Tower, CRO Angie Gotts takes the call from an individual who is outside Grenfell Tower. Incident number 76053. Call duration 34 seconds. (Source: 'Vision', GTIRT17-00487)

01:26:38* - Hermine Harris from flat 42, seventh floor leaves the building via the main entrance. (Source: Camera 4, CCTV)

01:26:43 – The table below show the resources required and mobilised to the 10 pump fire:

Pre Determined Attendance for a 10 pump fire	Operational Response to the incident
<ul style="list-style-type: none"> • 10 x Pumps • 1 x 135 (Pumping Appliance) • 5 x WM • 1 x FIU • 1 x FRU • 2 x CU • 6 x SM • 3 x GM • 1 x Press Officer (exclusive) • 1 x DAC (IC11-15 pumps) • 1 x AC (MO/IC16+ pumps) • 1 x BA Unit (on the Operational Support Unit) • 1x Damage Control Unit (on the Operational Support Unit) 	<ul style="list-style-type: none"> • Golf 272, North Kensington's Pump • Golf 271, North Kensington's Pump Ladder • Golf 331, Kensington's Pump Ladder • Golf 362, Hammersmith's Pump • Golf 361, Hammersmith's Pump Ladder, • Alpha 212, Paddington's Pump • Alpha 211, Paddington's Pump Ladder • Golf 261, Acton's Pump Ladder • Golf 371, Chiswick's Pump Ladder • Golf 281, Willesden's Pump Ladder • Oscar Kilo 13, WM Leaver from the Fire Investigation Team • Alpha 216, Paddington's FRU • Alpha 213, Paddington's TL • CU 7

	<ul style="list-style-type: none"> • CU 8 • Hotel 41 Sierra (Kingston's SM) SM Andrew Walton (as SM) • Golf 22 Sierra (Chelsea's SM) SM Brett Loft (as SM) • Oscar Golf 61, SM Saunders (as SM) • Alpha 40 Sierra, SM Peter Wolfenden (as SM) • Oscar Echo 69, SM Daniel Kipling (as SM) • Foxtrot 115 GM Patrick Goulbourne (as GM) • Foxtrot 113 GM Stephen West (ORT Shadowing) • Echo 109, GM Richard Welch (as BMA) • Oscar Golf 54 SM Gareth Cook (as the Press Officer) • Echo 6 DAC O'Loughlin • Oscar Foxtrot 67 SM Daniel Egan (as Fire Safety Officer) • Golf 25 Alpha, Ealing's OSU (BA Unit) • Alpha 39 Alpha, Finchley's OSU (Damage Control Unit)
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(Source: 'Vision').

01:26:49* - Firefighter Badillo picks his helmet up at the main entrance where he earlier placed it to wedge the door open. (Source: Camera 1, CCTV)

01:26:52* – Two members of the public, Rhea Rojo from flat 91, 12th floor and Nadifa Jafari from flat 86, 11th floor, leave the lift at ground floor level and black smoke is emanating from the top of the lift car. (Source: CCTV)



01:26:54 - Brigade Control receive the 16th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual (believed to be Lulya Benwam or Helen Gebremeskel) who is inside Grenfell Tower, flat 186, 21st floor. Incident number 76052 ,Call duration one minute, 20 seconds. (Source: 'Vision', GTIRT17-00486)

01:26:56 – Alpha 212, Paddington's Pump, book Status 3, in attendance. This is the sixth fire engine in attendance at Grenfell Tower. (Source: 'Vision').

01:26:56* - Firefighter Badillo meets Ms Urbano at the main entrance and Ms Urbano hands him a set of keys to flat 176, 20th floor. In his statement Firefighter Badillo states Ms Urbano tells him that her sister Jessica is still in their flat on the 20th floor and he tells her he will go and get her. (Source: Camera 1, CCTV, Contemporaneous Notes: GTIRT17-00009 and GTIRT17-00431 and MPS Witness Statement: GTIRT18-01411 and GTIRT18-00917)

01:26:58 – Brigade Control receive the 17th 999 call in relation to Grenfell Tower, CRO Fox takes the call from an individual (*believed to be Roy Smith, Katarzyna Dabrowska, Kristina Smith or Georgina Smith*) who are inside Grenfell Tower, flat 95, 12th floor. Incident number 76062 , Call duration two minutes and 10 seconds. (Source: 'Vision', GTIRT17-00495)

01:27:01 – BA Team One, Firefighter Brown's Low Pressure Warning Whistle (LPWW) actuates, which informs him that he is low on air. Firefighter Brown continues to try and put the fire out on the outside of the building by hanging out of the window whilst being held by CM Batterbee. (Source: BA Data, Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460 and GTIRT17-00011 and MPS Witness Statement: GTIRT18-01837 and GTIRT17-01434)

01:27:02 –Golf 271, North Kensington's Pump Ladder, sends an assistance message to Brigade Control, '**Make Aerial Ladder Platforms Two**'. (Source: Radio Message: GTIRT17-02495 and 'Vision')

Brigade Control receive the 18th 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Call duration 25 seconds. Incident number 76051. (Source: 'Vision', GTIRT17-00485).

01:27:03 - SM Oliff who is the nominated Officer of the Day (Officer of the Day 1) contacts the paging officer to acknowledge receipt of the eight pump fire. He confirms that Control are located at Stratford and states he will proceed to Control. (Source: Admin Call: GTIRT18-00251 and 'Vision')

01:27:05* - Rhea Rojo from flat 91,12th floor and Gavin Lavine (not listed as a resident) leave the building via the main entrance. (Source: Camera 4, CCTV)

01:27:06 - Brigade Control confirm they have received the assistance message 'Make Aerial Ladder Platforms (ALP) Two'. (Source: Radio Message: GTIRT17-02496 and 'Vision')

01:27:10* – CM Sephton from BA Team Six, removes his BA tally from the Body Guard and starts his BA set up before entering Grenfell Tower. (Source: BA data and Camera 4, CCTV)

01:27:13 - Brigade Control request best approach road for officers. Hotel 41 Sierra, SM Walton is having difficulty finding a route to the incident due to the amount of road closures in the area (Source: Vision: GTIRT17-02498, Contemporaneous Notes: GTIRT17-00004, GTIRT17-00278, GTIRT17-01137, GTIRT17-01138 and GTIRT17-01139, MPS Witness Statement: GTIRT18-01000)

G271, North Kensington's Pump Ladder, advise that Bomore Road is the best approach road to the incident. (Source: 'Vision' and Radio Message: GTIRT17-02497)

01:27:16* - Mesrob Kassemjdian and Rita Tankrian from flat 141, 17th floor leave the building via the main entrance. (Source: Camera 4, CCTV)

01:27:17* - CM Secrett comes down the stairwell into the main lobby. (Source: Camera 4, CCTV)

01:27:23* – As CM Secrett exits the building as he passes Firefighter Badillo they speak to each other, CM Secrett leaves the building, via the main entrance and Firefighter Badillo heads towards the lift lobby. (Source: Camera 3 and 4, CCTV)

01:27:26 - Golf 271, North Kensington's Pump Ladder, send an assistance message to Brigade Control '**Make Pumps 15**'. (Source: 'Vision': GTIRT17-02499)

13+ pumps operational response and notification actions

Incident type	Operational response	Notification actions	
13 + Pumps	<ul style="list-style-type: none"> • 13 + Pumps • 1 x 135 (Pumping Appliance) • 5 x WM • 1 x FIU • 1 x FRU • 2 x CU • 6 x SM • 3 x GM • 1 x Press Officer (exclusive) • 1 x DAC (IC11-15 pumps) • 1 x AC (MO/IC16+ pumps) • 1 x BA Unit (on the Operational Support Unit) • 1x Damage Control Unit (on the Operational Support Unit) 	<ul style="list-style-type: none"> • Inform AC on duty type 24 AC 1 or next in sequence if not available • Order Canteen Van or inform of incident upgrade if already attending • Order Ambulance • Order Water Service Technician (unless incident is a special service) • Inform Police • Inform Environment Agency • Supervisor inform RML • Supervisor inform ORT • Supervisor inform nearest BMA • Supervisor inform Duty Radio officer • Supervisor inform Duty non uniformed Press Officer • Supervisor inform Duty Brigade Control Senior Manager • Supervisor consider diverting press line to Duty non uniformed Press Officer. • Inform AC 1 as Remote MO • Supervisor inform Respiratory Protection Equipment officer • Inform AC 2 they are now AC 1, inform AC 3 they are now AC 2 	<ul style="list-style-type: none"> • Officer of the day 1 or 2 • Duty DAC • AC 1 • Commissioner and Staff Officers as appropriate • Authority members

01:27:28* - Quang Van HO from flat 76, 10th floor leaves the building, via the main entrance. (Source: Camera 4, CCTV)

01:27:31* – Firefighter Badillo enters the lift lobby at ground floor level with the keys given to him by Ms Urbano (believed to be for flat 176, 20th floor). (Source: Camera C18, CCTV, Contemporaneous Notes: GTIRT17-00009 and GTIRT17-00431 and MPS Witness Statement: GTIRT18-01411 and GTIRT18-00917)

01:27:35 - Brigade Control confirm with Golf 271, North Kensington's Pump Ladder, the make up 'assistance' message 'Make Pumps 15' has been received. (Source: 'Vision' and Radio Message: GTIRT17-02500)

01:27:42* – *Firefighter Badillo enters the lift on the ground floor and from his statements his intention is to travel to the 20th floor to rescue Jessica Urbano from flat 176. (Source: Camera C18 and 5, CCTV, Contemporaneous Notes: GTIRT17-00009 and GTIRT17-00431 and MPS Witness Statement: GTIRT18-01411 and GTIRT18-00917)*

01:27:46 – Brigade Control receive the 19th, 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual from an unknown location. Incident number 76055. Call duration 46 seconds. (Source: 'Vision', GTIRT17-00489)

01:27:50* - Zahra Razoul Mahmoud, Manira Mahmoud, Mahammed Mahmoud from flat 25, fifth floor and Hoang Khanh Quang from flat 76, tenth floor leave the building via the main entrance. (Source: Camera 4, CCTV)

01:27:56* - Sabah Abdulla from flat 143, 17th floor, Fied Bayam, Nadia Yousef from flat 121, 15th floor, Hafsa Khalloud, Zaid Khalloud, Youssef Khalloud Nusaybah Khalloud and Mouna El-Ogbanu from flat 85, 11th floor come down the stairs with LFB personnel at the rear and exit into the foyer. (Source: Camera 2, CCTV)

01:28* – *At around this time Firefighter Badillo is travelling in the lift to the 20th floor. He states that the lift stops at the 15th floor, where the doors open and the lift car fills full of black smoke. He is not wearing BA. Firefighter Badillo manages to find his way through the lift lobby door and into the stairwell. He then descends the stairs. (Source: Contemporaneous Notes: GTIRT17-00009 and GTIRT17-00431 and MPS Witness Statement: GTIRT18-01411 and GTIRT18-00917)*

BA Team One, CM Batterbee and Firefighter Brown, withdraw from flat 16 due to the continuing actuation of Firefighter Brown's LPWW. BA Team Two, Firefighter O'Hanlon and Firefighter Barton, continue fighting the fire on the external facade from inside the flat. BA Team Two state the window and frame in the kitchen had failed which meant the area was ventilated. They notice the external window surround is on fire and reach out of the opening as far as they can to extinguish it and try to see how high the fire has spread. (Source: Contemporaneous Notes: GTIRT17-00027, GTIRT17-00012, GTIRT17-00458, GTIRT17-00460, GTIRT17-00011 and GTIRT17-00025 and MPS Witness Statement: GTIRT18-00387, GTIRT18-01837, GTIRT17-01434 and GTIRT18-00321)

Firefighter O'Beirne is on the stairwell between the 10th and 14th floors. Firefighter O'Beirne meets two adult males of [REDACTED] appearance. One of whom states his dad is bedbound and still in the flat on the 16th floor. Firefighter O'Beirne radios this information to the bridgehead but does not recall

receiving confirmation that the radio message has been received. (It is now known that this was Sam Daniels, from flat 135, 16th floor). (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

BA Team Three, Firefighter Hippel and CM Stern intercept the message from Firefighter O'Beirne, they believe they are on the fifth or sixth floor. (Source: Contemporaneous Notes: GTIRT17-00016, GTIRT17-01198 and GTIRT17-00019 and MPS Witness Statement: GTIRT18-00072, GTIRT18-01111 and GTIRT18-00427).

BA Team Four, Firefighter Archer and Firefighter Abell, enter flat 26 on the fifth floor. The smoke is thick, black and down to ground. The lift lobby then fills full of smoke which then goes into the stairwell as the fire hose is propping the lift lobby door open. The temperature in the flat is said to be very warm and they are unable to see the fire using the TIC. As they enter further into the flat the fire hose then becomes stuck and Firefighter Archer goes back to the stairwell to free the fire hose (Source: BA Data, Contemporaneous Notes: GTIRT17-00014, GTIRT17-01197, GTIRT17-00054 and GTIRT17-00024 and MPS Witness Statement: GTIRT18-00043 and GTIRT18-00312)

01:28:00 – Brigade Control receive the 20th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is outside Grenfell Tower. Call duration 52 seconds. Incident number 76056. (Source: 'Vision', GTIRT17-00490)

Golf 281, Willesden's Pump Ladder, book Status 2, mobile to incident. They are riding with five firefighters, WM Alexander Cardy, CM Craig Eden, Firefighter Katie Foster, Firefighter Gregory Lawson and Firefighter Tom Welch. (Source: 'Vision' and StARS)

01:28:02 – Brigade Control receive the 21st, 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Incident number 76054. Call duration 26 seconds. (Source: 'Vision', GTIRT17-00488)

01:28:04* - Nadia Yousuf and Fied Bayam from flat 121, 15th floor. Hafsa Khalloud, Mouna El-Ogbanu, Zaid Khalloud, Youssef Khalloud Nusaybah Khalloud all from flat 85, 11th Floor and Sabah Abdullah (believed to be a non resident) leave the building via the main entrance. (Source: Camera 4, CCTV)

01:28:05 – Echo 6, DAC (DAC) Andrew O'Loughlin calls Brigade Control in response to the pager message to an eight pump fire at Grenfell Tower. He is informed that it is now a 15 pump fire. DAC O'Loughlin confirms that he is enroute and to book him Status 2, mobile to incident. (Source: Admin Call: GTIRT18-00252 and 'Vision')

01:28:11* - Firefighter Dorgu runs out of the building via the main entrance. (Source: Camera 2 and 4, CCTV, MPS Witness Statement: GTIRT18-00641 and Contemporaneous Notes: GTIRT17-00017)

01:28:12 – Golf 271, North Kensington's Pump Ladder, send an 'assistance' message to Brigade Control, confirming '**Person Reported**'. *(This message means that the Incident Commander is informing Control that people are involved).* (Source: Radio Message: GTIRT17-02501 and 'Vision')

Persons Reported operational response and notification actions

Incident type	Operational response	Notification actions
Press Officer - Fire - Persons Reported	<ul style="list-style-type: none"> • Normal Predetermined Attendance for the premises/thoroughfare and Fire • 1 x WM • 1 x FIU • 1 x SM as MO • 1 x CU 	<ul style="list-style-type: none"> • Order Ambulance • Inform Police IC • Supervisor inform RML • Supervisor inform ORT • Inform Fire Safety Officer if not already attending. • Inform GM as Remote MO

01:28:14 – Brigade Control receive the 22nd, 999 call in relation to Grenfell Tower, CRO Sarah Russell takes the call from a Glasgow British Telecom operator. Incident number 76059a. Call duration 24 seconds. (Source: 'Vision', GTIRT17-00493)

CRO Russell calls the number provided by the British Telecom operator and speaks to a delivery driver who wanted to report a fire in Grenfell Tower. She confirms that the fire service is in attendance. Incident Number 76059b, Call Duration 43 seconds. (Source: 'Vision', GTIRT17-00538)

01:28:21 - Brigade Control confirm with Golf 271, North Kensington's Pump Ladder, that they have received the 'Persons Reported' message. (Source: Vision: Radio Message, GTIRT17-02502 and 'Vision')

01:28:26 - Brigade Control receive the 23rd 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is inside Grenfell Tower, flat 82, 11th floor (now known to be Ms Natasha Elcock). Call duration one minute and six seconds. Incident number 76057. (Source: 'Vision', GTIRT17-00491)

01:28:39* - Damiana Louis from flat 96, 12th floor leaves the building via the side entrance. (Source: Camera 2, CCTV)

01:28:41 – Oscar Echo 69 SM Daniel Kipling books Status 2, mobile to incident from his home address in [REDACTED] (Source: 'Vision' and StARS)

01:28:49* - Mustafa Abdu from flat 184, 21st floor and Joao Dias from flat 104, 13th floor leave the building via the main entrance. (Source: Camera 4, CCTV)

01:29:00* – The main entrance door is still automatically closing causing access issues for firefighters. (Source: Camera 1 and 4, CCTV)

01:29* – At around this time WM Watson meets WM Dowden and discusses the incident resourcing. They agree the incident requires 20 fire engines and two FRUs. WM Dowden confirms that a bridgehead has been established on the second floor and asks WM Watson to establish a staging area on the ground floor. (Source: Camera 4, CCTV, Contemporaneous Notes: GTIRT17-

01215, GTIRT17-00293 and GTIRT17-00031 and MPS Witness Statement: GTIRT18-01065 and GTIRT18-00073)

BA Team One report back to the BAECF at the bridgehead and replace their tallies into their BA sets and brief WM O'Keeffe as to what they have seen in flat16 and the extent of the external fire travel observed. (Source: Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460, GTIRT17-00011, GTIRT17-00018 and GTIRT17-01522 and MPS Witness Statement: GTIRT18-01837, GTIRT17-01434, GTIRT17-01252 and GTIRT17-02889)

Firefighter O'Beirne and the two residents one of whom is now known to be Sam Daniels are between the ninth and 14th floors. (Source: Contemporaneous Notes: GTIRT17-00016 and MPS Witness Statement: GTIRT18-00072)

BA Team Three, CM Stern and Firefighter Hippel are ascending the stairs towards Firefighter O'Beirne, Mr Daniels and the other resident. (Source: Contemporaneous Notes: GTIRT17-00016, GTIRT17-01198, GTIRT17-00019 and MPS Witness Statement: GTIRT18-00072, GTIRT18-00427, GTIRT18-01111.

WM Dowden notices a large amount of debris falling from the tower and orders the crew working the covering jet (Firefighter Murphy and Firefighter Cornelius) to move back to a safe area. The firefighters move back and at this point WM Dowden realises that the jet is having no effect on suppressing the fire and he orders the crew to turn off the covering jet and report to the bridgehead wearing BA. (Source: MPS Witness Statement: GTIRT18-01065)

01:29:03 - Echo 6, DAC O'Loughlin is booked Status 2, mobile to the incident, from his home address in [REDACTED] (Source: 'Vision' and StARS)

01:29:05 – CRO Fox calls the London Ambulance Service (LAS) and asks for their attendance at Grenfell Tower. She gives the address and provides the postcode as W11 1TG. The Ambulance Service operator confirms if this is The Parade on St John's Hill and asks if "this is a new build". CRO Fox answered no. The LAS operator appears to be having difficulty with finding Grenfell Tower. Whilst on the phone the '**make pumps 20**' radio message is intercepted and CRO Fox passes this onto the LAS as a '25 pump fire'. The LAS reference is given as 247. It is believed that the LAS controller heard SW11 instead of W11 which caused the confusion. (Source: Admin Call: GTIRT18-00869)

01:29:11 - Golf 271, North Kensington's Pump Ladder, send an 'Assistance' message to Brigade Control requesting "**Make Pumps 20 and Two Fire Rescue Units**". (Source: Radio Message: GTIRT17-02503 and 'Vision')

01:29:28* - Sepideh Minaei Moghaddam and Sepehr Wastfaleh from flat four, first floor mezzanine, leave the building via the main entrance. (Camera 4, CCTV)

01:29:33 - Brigade Control confirm make pumps 20 and two FRUs. (Source: Radio Message: GTIRT17-02504 and 'Vision')

01:29:34 – Brigade Control receive the 24th, 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Incident number 76061. Call duration 26 seconds. (Source: 'Vision', GTIRT17-00494)

01:29:38 - Brigade Control receive the 25th, 999 call in relation to Grenfell Tower, CRO Adams takes the call from an individual who is outside Grenfell Tower. Incident number 76065. Call duration 60 seconds. (Source: 'Vision', GTIRT17-00498)

01:29:41 – Bravo Charlie 02 Senior Operations Manager (SOM) Joanne Smith who is the Duty Brigade Control Senior Manager is paged and notified of the incident. (Source: Vision and 'Vision')

01:29:48 – Brigade Control receive the 26th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is outside Grenfell Tower. Incident number 76064. Call duration 20 seconds. (Source: 'Vision', GTIRT17-00497)

Brigade Control receive the 27th 999 call in relation to Grenfell Tower, CRO Russell takes the call from Portadown British Telecom operator. Incident number 76096a .Call Duration 21 seconds. (Source: 'Vision', GTIRT17-00527)

01:29:51* – A team of three firefighters in BA arrive at the main entrance, these are CM Sephton, Firefighter Broderick and Firefighter Brodrick. The door is closed and they can't gain access into the building. (Source: Camera 1 and 4, CCTV)

01:30:00 – Brigade Control receive the 28th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual (believed to be an El-Gwahry family member) who is inside Grenfell Tower, flat 205, 23rd floor. Incident number 76063 .Call duration two minutes and 37 seconds. (Source: 'Vision', GTIRT17-00496)

01:30* – CCTV footage from the on site camera shows that the fire has reached the roof. The flames appear to involve the outside of flats on the North East corner of Grenfell Tower. (Source: Camera CH01, CCTV, GTIRT18-00274)



01:30* – At around this time, BA Team Three, CM Stern and Firefighter Hippel meet Firefighter O'Beirne, Sam Daniels and another resident (believed to be Hamed Wahbi from Flat 66, Ninth floor) in the stairwell. Firefighter O'Beirne states he believes they are between the ninth and 10th floors. Firefighter Hippel and CM Stern claim they meet the others on or around the sixth floor whilst Sam Daniels records in his police statement they were on the 11th floor or possibly the 14th floor, he also comments that it is confusing due to the refurbishment. (Source: Contemporaneous Notes: GTIRT17-00016, GTIRT17-01198 and GTIRT17-00019 and MPS Witness Statement: GTIRT18-00072, GTIRT18-00427 and GTIRT18-01111)

01:30:02 – Brigade Control receive the 29th 999 call in relation to Grenfell Tower, OM Norman takes the call from an individual who is inside Grenfell Tower, flat 175, 20th floor. Incident number 76079. Call duration 40 seconds. (Source: 'Vision', GTIRT17-00512)

01:30:05 - Golf 371, Chiswick's Pump Ladder book Status 2, mobile to incident. Golf 371, Chiswick's Pump Ladder is riding with five firefighters, WM Alan Moore, Firefighter Tristan Daoud, Firefighter Agnel Fernandes, Firefighter Stephen O'Donoghue and Firefighter Vincent Williams. (Source: 'Vision' and StARS)

01:30:08 – This is the 30th call. After taking the call from the British Telecom operator (call received at **01:29:48**), CRO Russell calls the mobile number. CRO Russell establishes that the caller is a

young girl whose name is Jessica. She is on the 23rd floor in flat 201. Incident Number 76096b, Call Duration 55 minutes. (Source Vision and 'Vision': GTIRT17-00570)

At the beginning of the shift CRO Sarah Russell is allocated to a radio position in the control room. She is scheduled to monitor the radio channel for all Brigade resources South of the river Thames. In her MPS witness statement she says that she could see that the "number of calls began stacking up". She asked her colleague CRO Sharon Darby if she could manage both the North and South radio channels in order that she could assist with the high volume of 999 emergency calls being received. This is not an uncommon practice during busy periods.

01:30:08 – Control receive the 31st 999 call in relation to Grenfell Tower. CRO Fox takes the call from an individual inside the Grenfell Tower, on the 22nd floor. Incident number 076066, Call Duration 33 seconds. (Source, Vision and 'Vision': GTIRT17-00499)

01:30:11* - Sepideh Minaei Moghaddam and Sepehr Wastfaleh from flat 4, first floor mezzanine, Marlon Mangoba and Nida Mangoba, flat 116, 14th floor leave the building via the main entrance. (Source: Camera 4, CCTV)

01:30:14 – Brigade Control receive the 32nd 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Incident number 076069. Call duration 38 seconds. (Source: 'Vision', GTIRT17-00502)

01:30:25* - Firefighter Dorgu, now wearing BA, enters the main lobby with a 45 mm fire hose. A further four BA wearers enter the main lobby (one of which is CM Sephton), they are carrying an enforcer, two branches, two 45 mm fire hoses and a Halligan tool. (Source: Source Camera 1 and 4, CCTV)

01:30:29 - Golf 371, Chiswick's Pump Ladder contact Control and inform them there is no ordering on the appliance MDT. (Source: Radio Message: GTIRT17-02505)

01:30:30* – At around this time BA Team Three climb to the 16th floor, having spoken to Firefighter O'Beirne and Sam Daniels. (Source: Contemporaneous Notes: GTIRT17-01198 and GTIRT17-00019 and MPS Witness Statement: GTIRT18-00427 and GTIRT18-01111)

01:30:33 - The table below show the resources required and mobilised to the 20 pump fire:

Pre Determined Attendance for a 20 pump fire	Operational Response to the incident
<ul style="list-style-type: none"> 20 x Pumps 1 x 135 (Pumping Appliance) 5 x WM 1 x FIU 	<ul style="list-style-type: none"> Golf 272, North Kensington's Pump Golf 271, North Kensington's Pump Ladder Golf 331, Kensington's Pump Ladder Golf 362, Hammersmith's Pump

<ul style="list-style-type: none"> • 1 x FRU • 2 x CU • 6 x SM • 3 x GM • 1 x Press Officer (exclusive) • 1 x DAC (IC11-15 pumps) • 1 x AC (MO/IC16+ pumps) • 1 x BA Unit (on the Operational Support Unit) • 1x Damage Control Unit (on the Operational Support Unit) 	<ul style="list-style-type: none"> • Golf 361, Hammersmith's Pump Ladder, • Alpha 212, Paddington's Pump • Alpha 211, Paddington's Pump Ladder • Golf 261, Acton's Pump Ladder • Golf 371, Chiswick's Pump Ladder • Golf 281, Willesden's Pump Ladder • Golf 341 Chelsea's Pump Ladder • Golf 351, Fulham's Pump Ladder • Golf 291, Park Royal's Pump Ladder • Alpha 411, West Hampstead's Pump Ladder • Alpha 231, Euston's Pump Ladder • Alpha 241, Soho's Pump Ladder • Alpha 242, Soho's Pump, • Hotel 271, Battersea's Pump Ladder • Golf 251, Ealing's Pump Ladder • Hotel 331, Wandsworth's Pump Ladder • Oscar Kilo 13, WM Leaver from the Fire Investigation Team • Alpha 213, Paddington's TL • Alpha 245, Soho's Aerial Ladder Platform • Alpha 216, Paddington's FRU • CU 7 • CU 8 • Hotel 41 Sierra (Kingston's SM) SM Andrew Walton (as SM) • Golf 22 Sierra (Chelsea's SM) SM Brett Loft (as SM) • Oscar Golf 61, SM Saunders (as SM) • Alpha 40 Sierra, SM Peter Wolfenden (as SM) • Oscar Echo 69, SM Daniel Kipling (as SM) • Hotel 33 Sierra, SM Jacqueline McConochie (as SM) • Foxtrot 115 GM Patrick Goulbourne (as GM) • Foxtrot 113 GM Stephen West (ORT Shadowing) • Echo 109 GM Richard Welch (as BMA) • Foxtrot 118 GM Thomas Goodall (as GM) • Echo 63 GM David O'Neill (as GM) • Oscar Golf 54 SM Gareth Cook (as the Press Officer) • Echo 6 DAC O'Loughlin (as DAC)
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	<ul style="list-style-type: none"> • Oscar Foxtrot 67 SM Daniel Egan (as Fire Safety Officer) • Golf 25 Alpha, Ealing's OSU (BA Unit) • Alpha 39 Alpha, Finchley's OSU (Damage Control Unit)
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01:30:36* - WM Watson enters main entrance carrying one length of 45 mm fire hose. (Source: Camera 4, CCTV)

01:30:36 – The duty press officer, Catherine Allen, is contacted by Brigade Control by pager. (Source: 'Vision')

01:30:36* - Daniel Miller and Corinne Jones from flat 145, 17th floor, exit the building. (Source: Camera 2 and 4, CCTV)

01:30:38 – Brigade Control receive the 33rd 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is inside Grenfell Tower, flat unknown, 22nd floor. Incident number 076068. Call duration one minute and 22 seconds. (Source: 'Vision', GTIRT17-00501)

01:30:39 - Brigade Control to Golf 371, Chiswick's Pump Ladder reference no ordering on MDT. They will send it again. They are sending a radio message to control to say the ordering to the 10 pump fire has not been received on the Mobile Data Terminal. (Source: Radio Message: GTIRT17-02506)

01:30:41* - Genaro Batoan and Elisa Rabaya from flat 146, 17th floor leave the building. (Source: Camera 2 and 4, CCTV)

CM Secrett enters the main entrance carrying two lengths of 70mm fire hose. (Source: Camera 4, CCTV)

01:30:47 – Brigade Control receive the 34th 999 call in relation to Grenfell Tower, CRO Adams takes the call from an individual who is outside Grenfell Tower. Incident number 076067. Call duration 23 seconds. (Source: 'Vision', GTIRT17-00500)

01:30:48 – CU 8, Fulham's CU book Status 3, in attendance, at Grenfell Tower. This is the 1st CU in attendance. (Source: 'Vision')

01:30:56* - Team of four firefighters enter (CM Gallagher, Firefighter Bettinson, Firefighter Wolfenden and Firefighter Campbell) through the main entrance. They have three lengths of 45 mm fire hose between them. (Source: Camera 4, CCTV)

01:31* - *At around this time BA Team Three, CM Stern and Firefighter Hippel get to the 16th floor. There are four conflicting statements around these actions. CM Stern and Firefighter Hippel state that Sam Daniels and Firefighter O'Beirne are with them on the 16th floor. Sam Daniels and Firefighter O'Beirne state they don't go up with them to the 16th floor, but they wait in the stairwell mezzanine between the 9th and 10th floors with the other resident until BA Team Three return to them. (Source: MPS Witness Statements of firefighters: GTIRT18-00072, GTIRT17-01198, GTIRT17-00019)*

Firefighter Badillo arrives at the bottom of the stairs and is talking to a BA Team that are waiting to go upstairs. (Source, Camera 2, CCTV)

01:31:13* - Virgillio Castro from flat 146, 17th floor leaves the building. (Source: Camera 4, CCTV)

01:31:14 – Brigade Control receive the 35th 999 call in relation to Grenfell Tower, CRO Fox takes the call from an individual who is outside Grenfell Tower. Incident number 76070. Call duration 44 seconds. (Source: 'Vision', GTIRT17-00503)

01:31:18* - Firefighter Badillo leaves the building via the main entrance having returned from the 15th floor. (Source: Contemporaneous Notes: GTIRT17-00009 and GTIRT17-00431, MPS Witness Statement: GTIRT18-01411 and GTIRT18-00917 and Camera 4 CCTV)

01:31:20* – At around this time Firefighter Badillo, after exiting the building, locates WM Dowden to explain about the conditions higher up the building. WM Dowden says to Firefighter Badillo that he has just made pumps 20 and Firefighter Badillo says that isn't enough and according to Firefighter Badillo's statement, WM Dowden says to him, "go on then" pointing at the Pump Ladder. This is not corroborated by WM Dowden. Firefighter Badillo proceeds to Golf 271, North Kensington's Pump Ladder, and Makes Pumps 25. He does not wait for an acknowledgement from Control. (Source: Camera 4, CCTV and Contemporaneous Notes: GTIRT17-00009, GTIRT17-00431, GTIRT17-01215 and GTIRT17-00293. MPS Witness Statement: GTIRT18-01411, GTIRT18-00917 and GTIRT18-01065)

01:31:29 – Alpha 211, Paddington's Pump Ladder, Paddington's second fire engine books Status 3, in attendance, at Grenfell Tower. This is the seventh fire engine in attendance. (Source: 'Vision')

01:31:30 - Golf 271, North Kensington's Pump Ladder, send an 'assistance' message to Brigade Control, requesting, '**Make Pumps 25**' See table for 13+ pumps for operational response and notification actions. (Source: 'Vision' and Radio Message: GTIRT17-02507).

01:31:31 - Golf 351, Fulham's Pump Ladder book Status 2, mobile to incident at Grenfell Tower. Golf 351, Fulham's Pump Ladder are riding with five firefighters, WM Glynn Williams, CM Christopher Batcheldor, Firefighter David Hill, Firefighter Abdul Malik and Firefighter Neil Saunders. (Source: 'Vision' and StARS)

01:31:51* – Rose Lewis, Octina Lewis, Theodore Charles from flat five, third floor, Saeda Ahmed, Shahid Ahmed from flat 156, 18th floor, Haymanot Gashaw, Richard Fletcher, Lily Fletcher, Sophia Fletcher from flat 131, 16th floor exit the building. (Source: Camera 4, CCTV)

01:31:58 - Alpha 40 Sierra, SM Peter Wolfenden books Status 2, mobile to incident at Grenfell Tower from his home address. (Source: 'Vision')

01:32* - *At around this time, prior to the arrival of Alpha 213, Paddington's TL, CM Davies and Firefighter Broderick reverse Golf 331, Kensington's Pump Ladder, and Golf 362, Hammersmith's Pump, out of Grenfell Road to ensure access for Alpha 213.* (Source: MPS Witness Statement: GTIRT17-00022, GTIRT18-00972)

01:32:04 – Brigade Control receive the 36th 999 call in relation to Grenfell Tower, CRO Adams takes the call from British Telecom operator in Nottingham. Incident number 76074a , Call duration 6 seconds. (Source: 'Vision', GTIRT17-00507)

01:32:07 – Alpha 213, Paddington's TL, book Status 3, in attendance. This is the first aerial in attendance. (Source: 'Vision')

01:32:08 – Golf 22 Sierra, SM Loft books Status 3, in attendance at Grenfell Tower. He is the first SM in attendance. (Source: 'Vision')

01:32:08 - Alpha 411, West Hampstead's Pump Ladder, book Status 2, mobile to incident. Alpha 411, West Hampstead's Pump Ladder are riding with four firefighters, Firefighter Luke Cook, Firefighter Brian Flanagan, Firefighter Anthony Nelson and CM Gregory Yeoman. (Source: 'Vision' and StARS)

01:32:10* – CM Batterbee and Firefighter Brown, BA Team One leave the building via the main entrance. (Source: Camera 2 and 4, CCTV)

01:32:10 – Brigade Control receive the 37th 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is inside Grenfell Tower, flat unknown, 23rd floor. Incident number 143550, Call duration four minutes and one second. (Source: 'Vision', GTIRT17-01735)

01:32:10* –*At around this time BA Team One, CM Batterbee and Firefighter Brown leave the building. They brief WM Dowden on what they have done and witnessed. (Source: Contemporaneous Notes: GTIRT17-00012, GTIRT17-00458, GTIRT17-00460, GTIRT17-00011, GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT18-01837, GTIRT17-01434 and GTIRT18-01065)*

01:32:11* - CM Batterbee and Firefighter Brown are both manually logged off the ECB at this point by the BAECO having already collected their BA tallies and left the building without shutting down their BA sets. (Source: BA Data)

01:32:13 - Hotel 271, Battersea's Pump Ladder, book Status 2, mobile to incident. Hotel 271 are riding with six firefighters, WM Stewart Brown, Firefighter Ricky Nuttall, Firefighter Nicolas Sanchez, Firefighter Michael Smith, Firefighter Leon Whitley and Firefighter Adam Yamin. (Source: 'Vision' and StARS)

01:32:25* - Firefighter Campbell is at the entrance of the building and meets three individuals (now known to be Meron Mekonnen, Liya Yohannes and Yohanna Yohannes from flat 163, 19th floor) who ask him where should they go. Firefighter Campbell states he asks them, "is this all of you". They say "yes". He then tells them not to go back in. They then leave the area and head towards the leisure centre. (Source: Camera 1 and 4, CCTV).

Firefighter Campbell then drops two lengths of fire hose in the main lobby by a wall, whilst there he overhears WM O'Keeffe on the fireground radio stating that he needs more branches. Firefighter Campbell immediately goes outside and attempts to get some fire hose from the closest fire engine to the tower, but he states there was none available on that particular fire engine. Firefighter Campbell is unsure at what point he meets CM Gallagher but they then proceed to check the fire lift. One set of lift doors are open and the lift is full of smoke. (Source: Camera 4, CCTV and MPS Witness Statement: GTIRT18-00967 and GTIRT18-02051)

01:32:32 – Brigade Control receive the 38th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is outside Grenfell Tower. Incident number 076072. Call duration 33 seconds. (Source: 'Vision', GTIRT17-00505)

01:32:35 – Brigade Control receive the 39th 999 call in relation to Grenfell Tower. CRO Duddy takes the call from an individual who is outside Grenfell Tower. Incident number 076071. Call duration 19 seconds. (Source: 'Vision', GTIRT17-00504)

01:32:39 – Alpha 241, Soho's Pump Ladder, book Status 2, mobile to incident. Alpha 241 are riding with five firefighters, WM Stuart Beale, Firefighter Oliver Desforjes, Firefighter Adam Johnson, Firefighter Jonathon Saunders and Firefighter Laurence Stavelly. (Source: 'Vision' and StARS)

01:32:46 – Hotel 331, Wandsworth's Pump Ladder book Status 2, mobile to incident. Hotel 331 are riding with six firefighters, Firefighter Zade Alassad, Firefighter Scott Bell, Firefighter Margaret Errington, CM Richard McShee, WM Jonathon Parker and Firefighter John Wright. (Source: 'Vision' and StARS)

01:32:47 – Brigade Control receive the 40th 999 call in relation to Grenfell Tower, CRO Fox takes the call from an individual who is outside Grenfell Tower. Incident number 076073. Call duration 24 seconds. (Source: 'Vision', GTIRT17-00506)

01:32:51 – Brigade Control receive the 41st 999 call in relation to Grenfell Tower, OM Norman takes the call from an individual who is outside Grenfell Tower. Incident number 143549. Call duration one minute and four seconds. (Source: 'Vision', GTIRT17-01734)

01:33* - At around this time Golf 22 Sierra, SM Loft meets WM Dowden outside (believed to be outside the East elevation) They discuss the merits of SM Loft taking over the incident and after a short discussion SM Loft and WM Dowden agree that the FSG calls take priority and that SM Loft will not take command but manage the FSG calls. (Source: Camera 2, CCTV and MPS Witness Statement: GTIRT18-02094, GTIRT18-01065)

01:33:00* – The main entrance door is still not secure in the open position. The automatic closing mechanism is still in operation and hampers firefighters entry into the building. (Source: Camera 1 and 4, CCTV)

01:33:01 – Brigade Control receive the 42nd 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is inside Grenfell Tower, flat 82, 11th floor. Call duration 47 seconds. Incident number 076076. (Source: 'Vision', GTIRT17-00509)

01:33:03 – Golf 251 Ealing's Pump Ladder book Status 2, mobile to incident. Golf 251, Ealing's Pump Ladder, are riding with five firefighters, WM Marc Aston-O'Donovan, Firefighter Richard Barker, Firefighter Neil Green, Firefighter David Maskell and Firefighter Anthony Quann. (Source: 'Vision' and StARS)

01:33:12 – Brigade Control receive the 43rd 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is inside Grenfell Tower, flat unknown, 11th floor. Call duration 32 seconds. Incident number 076075. (Source: 'Vision', GTIRT17-00508)

01:33:12 – Brigade Control receive the 44th 999 call in relation to Grenfell Tower, CRO Jones takes the call from an individual who is outside Grenfell Tower. Call duration 49 seconds. Incident number 076078. (Source: 'Vision', GTIRT17-00511).

01:33:14* - Firefighter Murphy and Firefighter Cornelius are seen entering the main lobby, wearing BA. (Source: Camera 4, CCTV)

01:33:30* – At around this time BA Team Three, CM Stern and Firefighter Hippel, enter the 16th floor lobby. CM Stern crawls in and feels the leg of someone standing up. He pulls them to the ground and assists the person to the stairwell (It was confirmed at a later date that the person is Edward Daffern from flat 134, 16th floor). Once at the stairwell Edward Daffern is able to self evacuate. BA Team Three then proceed to enter what is believed to be flat 136, on the 16th floor. The flat is heavily smoke logged and very hot. They have no water and are low on air so decide to withdraw. They knock on the other flat doors on the 16th floor but get no reply. CM Stern statement states that he thought the person that they found is the person they went looking for. (Source: MPS Evidence from Mr Daffern's Statement, GTIRT18-02500)

01:33:34 – The LPWW actuates on Firefighter O'Hanlon's BA set (BA Team Two). (Source: BA data and Firefighter O'Hanlon's Contemporaneous Notes: GTIRT17-00025)

01:33:35* - Firefighter Badillo enters the main lobby with Firefighter Murray. (Source: Camera 4, CCTV).

Alpha 245 Soho's Aerial Ladder Platform (ALP) book Status 2, mobile to incident. Alpha 245 is riding with two firefighters, CM Christopher Frost and Firefighter Jason King. (Source: 'Vision' and StARS)

01:33:40 – Alpha 231 Euston's Pump Ladder book Status 2, mobile to incident. Alpha 231 are riding with 5 firefighters: Firefighter Jessamine Bate, Firefighter Chris Cheeseman, WM Jaydn Kearsarge, Firefighter Niki Mitchell and Firefighter Michael Pole. (Source: 'Vision' and StARS)

01:33:40* - Firefighter Campbell wedges open the main entrance door, preventing it from closing making access for Firefighters easier. (Source: Camera 1 and 4, CCTV)

01:33:50 - The table below show the resources required and mobilised to the 25 pump fire:

Pre Determined Attendance for a 25 pump fire	Operational Response to the incident
<ul style="list-style-type: none"> • 25 x Pumps • 1 x 135 (Pumping Appliance) • 5 x WM • 1 x FIU • 1 x FRU • 2 x CU • 6 x SM • 3 x GM • 1 x Press Officer (exclusive) • 1 x DAC (IC11-15 pumps) • 1 x AC (MO/IC16+ pumps) 	<ul style="list-style-type: none"> • Golf 272, North Kensington's Pump • Golf 271, North Kensington's Pump Ladder • Golf 331, Kensington's Pump Ladder • Golf 362, Hammersmith's Pump • Golf 361, Hammersmith's Pump Ladder, • Alpha 212, Paddington's Pump • Golf 331, Kensington's Pump Ladder, • Alpha 211, Paddington's Pump Ladder • Golf 261, Acton's Pump Ladder • Golf 371, Chiswick's Pump Ladder • Golf 281, Willesden's Pump Ladder

<ul style="list-style-type: none"> • 1 x BA Unit (on the Operational Support Unit) • 1x Damage Control Unit (on the Operational Support Unit) 	<ul style="list-style-type: none"> • Golf 341 Chelsea's Pump Ladder • Golf 351, Fulham's Pump Ladder • Golf 291, Park Royal's Pump Ladder • Alpha 411, West Hampstead's Pump Ladder • Alpha 231, Euston's Pump Ladder • Alpha 241, Soho's Pump Ladder • Alpha 242, Soho's Pump, • Hotel 271, Battersea's Pump Ladder • Golf 251, Ealing's Pump Ladder • Hotel 331, Wandsworth's Pump Ladder • Alpha 412, West Hampstead's Pump • Hotel 421, Richmond's Pump Ladder • Hotel 221, Lambeth's Pump Ladder • Hotel 222, Lambeth's Pump • Golf 301, Wembley's Pump Ladder • Oscar Kilo 13, WM Leaver from the Fire Investigation Team • Alpha 213, Paddington's TL • Alpha 245, Soho's Aerial Ladder Platform • Alpha 216, Paddington's FRU • Golf 346, Chelsea's FRU • CU 7 • CU 8 • Hotel 41 Sierra (Kingston's SM) SM Andrew Walton (as SM) • Golf 22 Sierra (Chelsea's SM) SM Brett Loft (as SM) • Oscar Golf 61, SM Saunders (as SM) • Alpha 40 Sierra, SM Peter Wolfenden (as SM) • Oscar Echo 69, SM Daniel Kipling (as SM) • Hotel 33 Sierra, SM Jacqueline McConochie (as SM) • Foxtrot 115 GM Patrick Goulbourne (as GM) • Foxtrot 113 GM Stephen West (GM) (ORT Shadowing) • Echo 109 GM Richard Welch (BMA) • Foxtrot 118 GM Thomas Goodall (as GM) • Echo 63 GM David O'Neill (as GM) • Oscar Golf 54 SM Gareth Cook (as the Press Officer) • Echo 6 DAC O'Loughlin
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	<ul style="list-style-type: none"> • Oscar Foxtrot 67 SM Daniel Egan (as Fire Safety Officer) • Golf 25 Alpha, Ealing's OSU (BA Unit) • Alpha 39 Alpha, Finchley's OSU (Damage Control Unit)
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(Source: 'Vision').

01:33:52 - Echo 63, GM David O'Neill, books Status 2, mobile to incident, from his home address. (Source: 'Vision')

01:33:53 – Golf 341, Chelsea's Pump Ladder, book Status 2, mobile to incident. Golf 341 are riding with five firefighters: Firefighter Russell Butler, WM Louisa De Silvo, Firefighter Nicholas Ferguson, Firefighter Robert Petty and Firefighter Ana Repas. (Source: 'Vision' and StARS)

01:33:55 – Brigade Control receive the 44th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is inside Grenfell Tower, flat unknown, 18th floor. Call duration one minute and 21 seconds. Incident number 143545. (Source: 'Vision', GTIRT17-01730)

01:33:58 - BA Team Five, CM Secrett, Firefighter Dorgu and Firefighter Badillo, remove their BA tallies and go under air. They tell WM O'Keeffe they are going to the 20th floor to rescue a girl (now known to be Jessica Urbano). This is following Firefighter Badillo's earlier attempt to get to flat 176. Firefighter Badillo still has the keys to the flat. (Source: BA Data and MPS Witness Statement: GTIRT18-01411, GTIRT18-00917, GTIRT18-00641 and GTIRT17-01551)

01:34:04* – Three firefighters go up stairs, it is believed they are going to the bridgehead. A CM waits at the bottom of the stairs. (Source: Camera 2, CCTV)

01:34:06* - Walaa Khodeir Lujain Khodeir from flat 64, 11th floor and Reem Dedrich flat 123, 15th floor leave the building. (Source: Camera 4, CCTV)

01:34:18 – Brigade Control receive the 45th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 27 seconds. Incident number 076077. (Source: 'Vision', GTIRT17-00510)

01:34:18 - Foxtrot 113, GM Steve West books Status 2, mobile to incident, from his home address. (Source: 'Vision')

01:34:30* - WM Watson in the main foyer opens the fire panel door and looks at it but he doesn't appear to attempt to operate the system controls. (Source: Camera 3 and 4, CCTV)

01:34:30* – Madison Rylee, Wesley Ignacio, Madylyn Ignacio and Erlinde Ignacio from flat 62, ninth floor leave the building. (Source: Camera 4, CCTV)

01:34:40* - CM Gallagher tries the fire lift. (Source: Camera 5, CCTV)

01:34:46* - CM Tillotson and a Firefighter enter the main lobby carrying two 45 mm fire hoses using the carrying straps from the FIRE bag which Paddington have on trial. (Source: Camera 4, CCTV)

01:34:50 – Brigade Control receive the 46th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual (believed to be Mr Hashim or Ms N Jemal) who is inside Grenfell Tower,

flat 192, 22nd floor. Call duration one minute and 27 seconds. Incident number 076080. (Source: 'Vision', GTIRT17-00513)

01:34:55 – Brigade Control call up Golf 271, North Kensington's Pump Ladder, to send them a 'priority' message, but get no response. (Source: Radio Message : GTIRT17-02513 and 'Vision')

01:34:59 - Firefighter Hippel from BA Team Three presses his withdrawal button on his BA set which is immediately responded to by the BAECO by pressing the corresponding button on the ECB. (This is to inform the ECB that they are on their way out). (Source: BA Data and Contemporaneous Notes: GTIRT17-01198, MPS Witness Statement: GTIRT18-00427)

01:35:00* – A male wearing a baseball cap leaves the lift at second floor level and BA Team Five can be seen in the lift lobby. (Source: C18 Camera, CCTV)

01:35:07* – Firefighter Abell helps set up a ground monitor and a water supply but it is not immediately charged outside the East elevation. (Source: Camera 2, CCTV, Contemporaneous Notes: GTIRT17-00014, GTIRT17-01197 and GTIRT17-00054 and MPS Witness Statement: GTIRT18-00043)

01:35:09 – Brigade Control receive the 47th 999 call in relation to Grenfell Tower, CRO Fox takes the call from an individual from an unknown location. Call duration 54 seconds. Incident number 76084 (Source: 'Vision', GTIRT17-00516)

01:35:10 – Golf 291, Park Royal's Pump Ladder book Status 2, mobile to incident. Golf 291 is riding with five firefighters: Firefighter Simon Grant, Firefighter Gary Moore, Firefighter James Power, WM Phillip Turcsi and Firefighter Joe Worley. (Source: 'Vision' and StARS)

01:35:13* - Edward Daffern flat 135, 16th floor comes down the stairs and exits into foyer and speaks to Firefighter Raymond Keane and then leaves the building via the main entrance. (Source: Camera 2 and 4, CCTV)

01:35:17 – Alpha 412, West Hampstead's Pump, book Status 2, mobile to incident. Alpha 412, West Hampstead's Pump is riding with four firefighters, Firefighter Carl Clarke, Firefighter Stephen Dounias, CM Martin Hoare and Firefighter Matthew Tanner. (Source: 'Vision' and StARS)

01:35:18 – Alpha 216, Paddington's FRU, book Status 3, in attendance at Grenfell Tower. Alpha 216, Paddington's FRU is the First FRU in attendance. (Source: 'Vision')

01:35:22 – Brigade Control try to contact Golf 271, North Kensington's Pump Ladder, with a 'priority' message, there is no reply from Golf 271, North Kensington's Pump Ladder. (Source: Radio Message: GTIRT17-02514 and 'Vision')

01:35:24 –OM Norman rings the team leader WM Daniel Meyrick on CU 8 who had booked in attendance at the incident at 01:30:48. She says she needs crews to go and check some flats. The CU says they are in the process of setting up. WM Meyrick he also asks if the message has already been sent by radio. OM Norman says she doesn't know. Then she says that's the 18th floor, referring to the question about Radio Message. She says "oh my god there are so many". She says "its going to be every floor."

The information passed to CU 8 is summarised below.

Flat Number	Floor number	Number of people	Remarks
111	14	1 person	Smoke coming in to the premises
175	20	5 people	Smoke coming in to the premises
Not given	18		
Not given	23	2 Adults and 8 children	Smoke going in to the flat

(Source: Admin Call: GTIRT18-00507 and 'Vision')

01:35:25 – Brigade Control receive the 48th 999 call in relation to Grenfell Tower, CRO Adams takes the call from an individual who is outside Grenfell Tower. Call duration 25 seconds. Incident number 076082. (Source: 'Vision', GTIRT17-00514)

01:35:27 - Duty Radio Engineer is paged by Brigade Control. (Source: 'Vision')

01:35:27* - Nagawa Nalukwago from flat 71, 10th floor and Sid Ali Atmani from flat 125, 15th floor leave the building. (Source: Camera 4, CCTV)

01:35:31 – Golf 261 Acton's Pump Ladder, book Status 3, in attendance at Grenfell Tower. This is the eighth fire engine in attendance. (Source: 'Vision')

01:35:36 – Brigade Control send a radio message to Golf 271, North Kensington's Pump Ladder, stating that persons on 22nd floor have smoke coming into their flat, but Brigade Control get no response. (Source: Radio Message: GTIRT17-02515 and 'Vision')

01:35:36 – The Pre alarm sounds on set worn by Firefighter Dorgu which indicates he has stood still for 30 seconds. It is possible that this occurs whilst travelling in the lift to the 20th Floor. (Source: BA Data)

01:35:38* - One firefighter enters the main lobby carrying two 45 mm fire hoses using carrying straps. (Source: Camera 4, CCTV)

01:35:46 - BA Team Two, Firefighter O'Hanlon and Firefighter Barton, report to ECB and close down. (Source: BA Data)

01:35:54 – Golf 301, Wembley's Pump Ladder, book Status 2, mobile to incident. Golf 301, Wembley's Pump Ladder are riding with four firefighters, Firefighter Enrico Beltrami, Firefighter William Boulton, WM Peter Clark and Firefighter Dilleish Devani. (Source: 'Vision' and StARS)

01:35:54 – Golf 261 Acton's Pump Ladder interrupt the CRO attempting to pass the radio message to Golf 271, North Kensington's Pump Ladder, saying they will take the 'priority' message on behalf of Golf 271, North Kensington's Pump Ladder, who have not responded. The CRO passes FSG call information to Golf 261 Acton's Pump Ladder saying they have a caller on the 18th floor with thick smoke in their flat, individuals on the 22nd floor with smoke in their flat and a further call to fire on the 20th floor. In flat 82 people are also trapped. Golf 261 Acton's Pump Ladder are still on there way to

the incident and they state that they will pass on the information to Golf 271, North Kensington's Pump Ladder, when they arrive.

During the phone conversation that OM Norman had at 01:35:24 with CU 8, the CRO can be heard sending the information to Golf 261 Acton's Pump Ladder above. There have now been two methods by which the FSG Calls information has been passed to the incident ground. (Source: Radio Message: GTIRT17-02516 and 'Vision')

01:35:55 – Hotel 221, Lambeth's Pump Ladder, book Status 2, mobile to incident. Hotel 221, Lambeth's Pump Ladder are riding with Firefighter Elliot Juggins, Firefighter Steven Page, WM Paul Sadler and Firefighter Michael Worman. (Source: 'Vision' and StARS)

01:36* – *At around this time CM Stern, Firefighter Hippel, Firefighter O'Beirne, Sam Daniels and Hamed Wahbi start to make their way down the stairs to exit the building. (Source: CM Stern Contemporaneous Notes: GTIRT17-00016, GTIRT17-01198 and GTIRT17-00019 and MPS Witness Statement: GTIRT18-00072, GTIRT18-00427 and GTIRT18-01111)*

CM Wigley Alpha 216, Paddington's FRU (arrived 01:35) approaches WM Dowden. WM Dowden instructs CM Wigley to get a line operations system working from the roof to allow water to be put on the fire from above. He states he wants a drencher type system to put the fire out from the outside. (Source: Contemporaneous Notes: GTIRT17-01215 and GTIRT17-00293 and MPS Witness Statement: GTIRT18-01067, GTIRT18-01065)

BA Team Five. CM Secrett, Firefighter Badillo and Firefighter Dorgu, get into the lift on the second floor and press the buttons to proceed to the 20th floor. (Source: C18 Camera, CCTV)

Please play video clip 'CCTV 27' in Appendix 3.

Alpha 213, Paddington's TL arrives outside the East elevation as the fire is spreading laterally to the South Eastern and North Eastern corners of the building. (Source: Camera 2, CCTV)

01:36:00 – Below is a summary of the FSG calls that Brigade Control have received by this time:

Time of Call	Flat Number	Floor number	Number of people	Remarks
01:21:24	195	22		Smell of smoke
01:25:16	111	14	1	Trapped by smoke
01:26:58	95	12	1	Caller says "we" but numbers not recorded by control
01:28:26	82	11		1 adult 2 children
01:29:48	201	23	11	Girl gives her name as Jessica
01:30:00		23		
01:30:02	175	20	6	Smoke coming into the flat
01:30:08		22	1	Male caller
01:30:38		22	1	Female caller who says she is in someone else's flat. No total

				number of people asks for
01:32:10		Top flat	8 *	*Caller is young person says there are 8 kids and a lot of adults
01:33:01	82	11	1 adult and 1 child	
01:33:55		18	4	
01:34:50	192	22	1	

01:36:04 – Brigade Control receive the 49th 999 call in relation to Grenfell Tower, CRO Jones takes the call from an individual who is outside Grenfell Tower. Call duration 27 seconds. Incident number 076083. (Source: 'Vision', GTIRT17-00471)

01:36:13 – Alpha 242, Soho's Pump book Status 2, mobile to incident. Alpha 242 are riding with four firefighters, Firefighter Mitchell, Firefighter Orchard, CM Percy and Firefighter Roots. (Source: 'Vision' and StARS)

01:36:14 - BA Team Two report to ECB and close down. They also brief WM O'Keeffe on observations and actions. (Source: BA Data, Contemporaneous Notes: GTIRT17-00027, GTIRT17-00025, GTIRT17-00018 and GTIRT17-01522 and MPS Witness Statement: GTIRT18-00387, GTIRT17-00025, GTIRT17-01252 and GTIRT17-02889)

01:36:15 – Brigade Control receive the 50th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from a British Telecom operator. Call duration 13 seconds. Incident number 076087a. (Source: 'Vision' GTIRT17-00518). CRO Gotts makes an outbound call to an individual who is outside Grenfell Tower. Incident Number 076087a , Call Duration 13 seconds, Incident number 076087b. Call duration 42 seconds. (Source: 'Vision', GTIRT17-00518, GTIRT17-00555)

01:36:23 - The North West Fire Control Centre receive the 51st 999 call in relation to Grenfell Tower, A North West Fire CRO takes the call from an individual who is inside Grenfell Tower, flat Nine, Third floor. Call duration 30 minutes and 33 seconds. Incident number 76639. (Source: 'Vision', GTIRT17-00567)

01:36:27 - Golf 261 Acton's Pump Ladder send a radio message to Brigade Control confirming receipt of FSG Calls information on the 18th, 20th and 22nd floor. (Source: Radio Message: GTIRT17-02518 and 'Vision')

01:36:32 – Brigade Control receive the 52nd 999 call in relation to Grenfell Tower, CRO Jones takes the call from an individual who is outside Grenfell Tower. Call duration 54 seconds. Incident number 076085. (Source: 'Vision', GTIRT17-00517)

01:36:44 – Golf 346, Chelsea's FRU, book Status 2, mobile to incident. Golf 346, Chelsea's FRU is riding with five firefighters, CM Raoul Codd, Firefighter Ernest Okoh, Firefighter Tom Reddington, Firefighter Alan Sime and Firefighter Nikki Upton. (Source: 'Vision' and StARS)

01:36:44 - Brigade Control contacts Golf 261 Acton's Pump Ladder to confirm FSG Call information (FSG Call 1) by repeating the information. (Source: Radio Message: GTIRT17-02519 and 'Vision')

01:36:48* - WM Mark Kentfield from CU 8 is seen entering the main lobby and speaks to WM Watson and then goes back outside. (Source: Camera 4, CCTV)

01:36:52 – Hotel 421, Richmond's Pump Ladder, book Status 2, mobile to incident. Hotel 421, Richmond's Pump Ladder are riding with six firefighters, WM James Berry, Firefighter Robert Dwyer, Firefighter Simon Fairbrother, CM Andrew Fulker, Firefighter Christopher Perez and Firefighter Simon Wigley. (Source: 'Vision' and StARS)

01:37:08 – Foxtrot 118, GM Thomas Goodall book Status 2, mobile to incident. (Source: 'Vision')

01:37:09 – Brigade Control receive the 53rd 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 26 seconds. Incident number 076088. (Source: 'Vision', GTIRT17-00520)

Brigade Control receive the 54th 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Call duration 41 seconds. Incident number 076091. (Source: 'Vision', GTIRT17-00523)

01:37:12* – BA Team Five exit the lift at this time, it is not confirmed which floor but the Firefighters believe it to be around the sixth, seventh or eighth floor level, this was unexpected as they thought they were going to the 20th floor. Thick black smoke enters the lift. They state they leave the lobby and make their way to the stairs and start to climb. They don't pass anyone on their way up the stairs to the 20th Floor. (Source: Camera 18, CCTV, Contemporaneous Notes: GTIRT17-00009, GTIRT17-00431, GTIRT17-00017 and GTIRT17-00013 and MPS Witness Statement: GTIRT18-01411, GTIRT18-00917, GTIRT18-00641 and GTIRT17-01551).

01:37:18 – Brigade Control receive the 55th 999 call in relation to Grenfell Tower, CRO Fox takes the call from an individual who is outside Grenfell Tower. Call duration 21 seconds. Incident number 76092. (Source: 'Vision', GTIRT17-00524)

Brigade Control receive the 56th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from the LAS. Call duration 53 seconds. Incident number 76093. (Source: 'Vision', GTIRT17-00525)

01:37:22 – Brigade Control receive the 57th 999 call in relation to Grenfell Tower, CRO Adams takes the call from an individual who is outside Grenfell Tower. Call duration 29 seconds. Incident number 76090. (Source: 'Vision', GTIRT17-00522)

01:37:23 – Hotel 222, Lambeth's Pump, book Status 2, mobile to incident. Hotel 222, Lambeth's Pump are riding with four firefighters, Firefighter Gemma Bloxham, CM Richard Evans, Firefighter Peter Herrera and CM Benjamin McAlonen. (Source: 'Vision' and StARS)

01:37:26 – North West Fire Control receive the 58th, 999 call. A CRO from the North West Fire Control takes the call. The call is from the British Telecom Operator in Glasgow. Incident Number 76640, Call Duration 25 seconds. (Source: Vision and 'Vision': GTIRT17-00519)

01:37:33 – Brigade Control receive the 59th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 20 seconds. Incident number 76089. (Source: 'Vision', GTIRT17-00521)

01:37:37 – Golf 261 Acton's Pump Ladder confirm with Brigade Control that they have received the FSG information and states they will pass the information onto the Incident Commander. They also

advise that they have just arrived and the transfer of information may take some time. (Source: Radio Message: GTIRT17-02520 and 'Vision')

01:37:47* – A member of public, enters the main entrance and starts talking to Firefighter's (he is subsequently identified as Jordy Norbis). It is believed from statements that he is explaining that people are going to jump around the back. All the Firefighter's leave the lobby and move towards the West elevation to investigate. (Source: Camera 4, CCTV)

01:37:50 – Brigade Control receive the 60th 999 call in relation to Grenfell Tower, OM Norman takes the call from an individual who is outside Grenfell Tower. Call duration 47 seconds. Incident number 76094. (Source: 'Vision', GTIRT17-00526)

01:37:58 – Brigade Control receive the 61st 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is inside Grenfell Tower, flat unknown, 14th floor. Call duration one minute 13 seconds. Incident number 143561. (Source: 'Vision', GTIRT17-01746)

01:38:00 – BA Team Six, CM Sephton, Firefighter Broderick and Firefighter Brodrick, report to the bridgehead on the second floor and start breathing under air. They are tasked to go to and relief BA Team Four in flat 26 on the fifth floor and continue to extinguish the fire. BA and telemetry data shows that CM Sephton and Firefighter Brodrick do not log onto the ECB.(Source: BA Data, Contemporaneous Notes: GTIRT17-00022, GTIRT17-00032 and GTIRT17-00030 and MPS Witness Statement: GTIRT18-01440, GTIRT17-01363 and GTIRT18-010).

01:38* – Between 01:19 – 01:38 the following residents have either been rescued, assisted out or self evacuated from Grenfell Tower. (Source: GTIRT18-01141 and GTIRT18-01051).

1. Zak Cebiouni (Flat 66) (9 th floor)
2. Sara Chebiouni (Flat 66) (9 th floor)
3. Maria Jafari (Flat 103) (13 th floor)
4. Fatima Jafari (Flat 103) (13 th floor)
5. Ramiro Urbano (Flat 176)(20 th floor) It is believed that he was in Flat 36.
6. Oscar Gonzalez (Unknown)
7. Leanne Jackson (Le Blanc) (Flat 6) (2 nd Floor Walkway)
8. Mahammed Mahmoud (Unknown)
9. <i>Unidentified female?</i> (Unknown)
10. Joseph John (Flat 6)(2 nd Floor Walkway)
11. Hannan Wahabi (Flat 66) (9 th floor)
12. Sabah Abdulla (Flat 143) (17 th floor)
13. Fied Bayam (Flat 121) (15 th Floor)
14. Gavin Lavine (Unknown)
15. Sepideh Minaei Moghaddam (Flat 5) (1 st Floor)
16. Sepehr Wastfaleh (Flat 4) (1 st Floor)

17. Monica Lokko (Flat 3) (1 st Floor)
18. Reshad Naqshbandi (Flat 8) (2 nd Floor)
19. Malacki John (Flat 6)(2 nd Floor)
20. Mohboubah Jamalvatan (Flat 10)(3 rd Floor)
21. Winton Temesgen (Flat 26) (5 th Floor)
22. Hiwot Dagnachew (Flat 26) (5 th Floor)
23. Biruk Henoc (Flat 26) (5 th Floor)
24. Giti Pahlavani (Flat 22)(5 th Floor)
25. Henock Yabsirra (Flat 26) (5 th Floor)
26. Manira Mahmoud (Flat 25) (5 th Floor)
27. Zahra Razoul Mahmoud (Flat 25) (5 th Floor)
28. Betty Kasote (Flat 41)(7 th Floor)
29. Jose Vieiro (Flat 46)(7 th Floor)
30. Carmen Vieiro (Flat 46)(7 th Floor)
31. Hannah West, (Flat 45) (7 th Floor)
32. Michael Paramasivan (West) (Flat 45) (7 th Floor)
33. Thea West (Flat 45) (7 th Floor)
34. Elizabeth Sobieszczak (Flat 43) (7 th Floor)
35. Catherine Hanley (Flat 52) (8 th Floor)
36. Mary Hanley (Flat 52) (8 th Floor)
37. Srantilal Patel (Flat 56) (8 th Floor)
38. William Thompson (Flat 52) (8 th Floor)
39. Chiraag Patel (Flat 56) (8 th Floor)
40. Kirwan Shanti Patel (Flat 56) (8 th Floor)
41. Amina Mohammed (Flat 51) (8 th Floor)
42. Kahlid Ahmed (Flat 51) (8 th Floor)
43. Madison Ignacio (Flat 62) (9 th Floor)
44. Wesley Ignacio (Flat 62) (9 th Floor)
45. Madylyn Ignacio (Flat 62) (9 th Floor)
46. Walaa Khodeir Lujain Khodeir (Flat 64) (9 th Floor) – not exact name match
47. Erlinde Ignacio (Flat 62) (9th Floor)
48. Quang Van HO (Flat 76) (10 th Floor)
49. Hoang Khanh Quang (Flat 76) (10 th Floor)
50. Nagawa Nalukwago (flat 71, 10 th floor)

51. Hafsa Khalloud (Flat 85) (11 th Floor)
52. Zaid Khalloud (Flat 85) (11 th Floor)
53. Youssef Khalloud (Flat 85) (11 th Floor)
54. Nusaybah Khalloud (Flat 85) (11 th Floor)
55. Mouna El-Ogbanu (Flat 85) (11 th Floor)
56. Damiana Louis (Flat 96) (12 th Floor)
57. Rhea Rojo (Flat 91) (12 th Floor)
58. Aida Michael (Flat 102)(13 th Floor)
59. Taleen Ahmed (Flat 102)(13 th Floor)
60. Joao Dias (Flat 104) (13 th floor)
61. Marlon MANGOBA (Flat 116) (14 th Floor)
62. Marlon MANGOBA (JNR) (Flat 116) (14 th Floor)
63. Nida MANGOBA (Flat 116) (14 th Floor)
64. Rasheeda Ali (Flat 125) (15 th Floor)
65. Nadia Yousef (flat 121) (15 th Floor)
66. Hayam Atmani (Flat 125) (15 th Floor)
67. Sid Ali Atmani (Flat 125 15 th Floor)
68. Reem Dedrich (Flat 123) (15 th Floor)
69. Edward DaFfern (Flat 134) (16 th Floor)
70. Hamed Wahbi (Flat 136) (16 th Floor)
71. Samual Daniels (Flat 135) (16 th Floor)
72. Mesrob Kassemjdjian (Flat 141) (17 th Floor)
73. Rita Tankrian (Flat 141) (17 th Floor)
74. Genaro Batoan (Flat 146) (17 th Floor)
75. Elisa Rabaya (Flat 146) (17 th Floor)
76. Virgillio Castro (Flat 146) (17 th Floor)
77. Meron Mekonnen (Flat 163) (19 th Floor)
78. Liya Yohannes (Flat 163) (19 th Floor)
79. Yohanna Yohannas (Flat 163) (19 th Floor)
80. Luke Towner (Flat 171) (20 th Floor)
81. Emma O'Connor (Flat 171) (20 th Floor)
82. Mustafa Abdu (Flat 184) (21 st Floor)
83. Lydia Liao (Flat 195) (22 nd Floor)

01:38:02 – Brigade Control receive the 62nd 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is inside Grenfell Tower, flat 142, 17th floor. Call duration 56 seconds. Incident number 143551. (Source: 'Vision', GTIRT17-01736)

01:38:16 – Brigade Control receive the 63rd 999 call in relation to Grenfell Tower, CRO Fox takes the call from an individual who is inside Grenfell Tower, flat 205, 23rd floor. Call duration one minute and 31 seconds. Incident number 76099. (Source: 'Vision', GTIRT17-00530)

01:38:17 – Brigade Control mobilise the additional resources for FSG. CU two, Islington's CU (FSG CU), Alpha 431, Kentish Town's Pump Ladder, (FSG WM), Hotel 27 Sierra SM Nicholas Myatt (FSG SM) are mobilised. (Source: 'Vision')

01:38:18 – Brigade Control receive the 64th 999 call in relation to Grenfell Tower, CRO Adams takes the call from an individual (believed to be Ms Zainab Deen) who is inside Grenfell Tower, flat unknown, 14th floor. Call duration four minutes and 20 seconds. Incident number 76113. (Source: 'Vision', GTIRT17-00546)

01:38:25 – Oscar Golf 54, SM Cook books Status 3, in attendance at Grenfell Tower. He is the second SM in attendance. His role is press officer. (Source: 'Vision')

01:38:30* - *At around this time Firefighter Archer from BA Team Four, is on the stairwell between fourth and fifth floors trying to pull the fire hose up for Firefighter Abell. He meets BA Team Six, CM Sephton, Firefighter Broderick and Firefighter Brodrick who have been briefed at the bridgehead to go and extinguish the fire in flat 26. Firefighter Archer briefs BA team Six and explains that they are nearing time of whistle, Firefighter Archer goes and gets Firefighter Abell and they handover the TIC and the 45 mm fire hose to BA Team Six. (Source: Contemporaneous Notes GTIRT17-00024 and, GTIRT17-00054 and MPS Witness Statement GTIRT18-00043 and GTIRT18-00312)*

01:38:37 – Brigade Control receive the 65th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual (believed to be Mr Ray Smith) who is inside Grenfell Tower, flat 95, 12th floor. Call duration one minute and 19 seconds. Incident number 76100 (Source: 'Vision', GTIRT17-00531)

01:38:38 – Brigade Control receive the 66th 999 call in relation to Grenfell Tower, OM Norman takes the call from an individual who is outside Grenfell Tower. Call duration 38 seconds. Incident number 76097. (Source: 'Vision', GTIRT17-00528)

Brigade Control receive the 67th 999 call in relation to Grenfell Tower, CRO Jones takes the call from an individual (believed to be a Gomes' family member) who is inside Grenfell Tower, flat 183, 21st floor. Call duration 59 minutes and 40 seconds. Incident number 143560. (Source: 'Vision', GTIRT17-01745)

01:38:40 - BA Team Three, CM Stern and Firefighter Hippel return to the bridgehead and close down. (Source: BA Data)

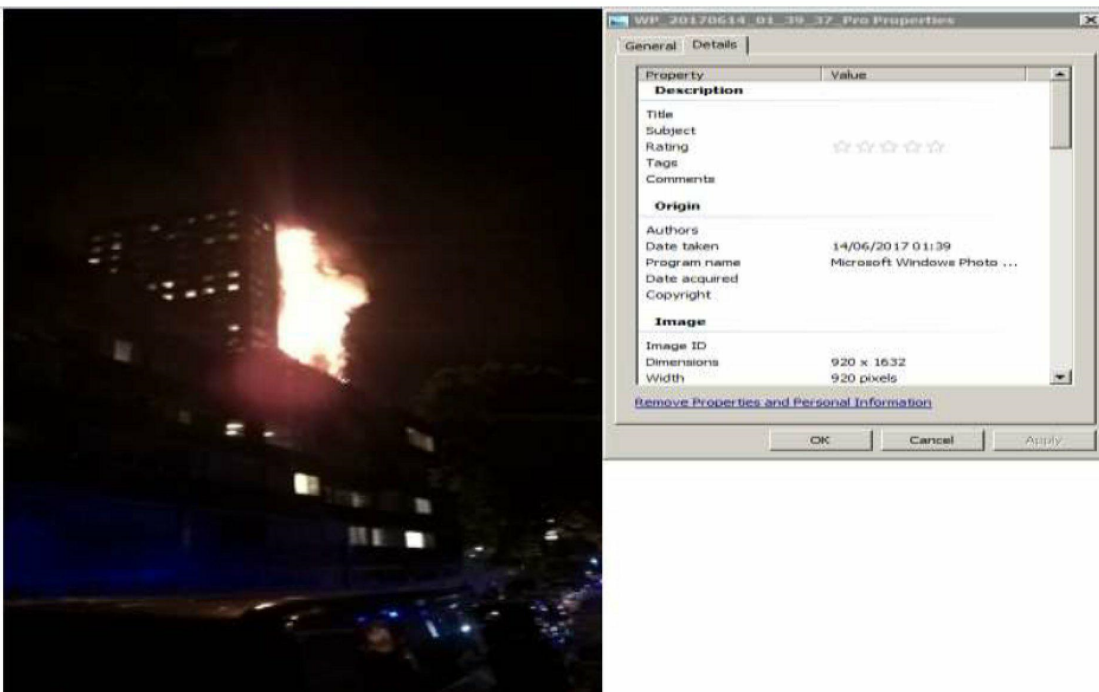
01:38:40* - Samuel Daniels from flat 135, 16th floor leaves the building. (Source: Camera 4, CCTV)

01:38:49* – Hamed Whabi from flat 66, ninth floor leaves the building. (Source: Camera 4, CCTV)

01:38:50* - SM Loft approaches the main door and talks to WM Paul Watson. Neither state what they discuss. (Source: Camera 1 and 4, CCTV, GTIRT18-02094 and GTIRT18-00073)

01:38:51 – Bravo Mike 8, AC (AC) Andy Roe responds to paging and speaks to the Officer of the Watch (OOW) at Brigade Control. He is told that the incident is now a '25 pump fire' and there are persons reported. The OOW confirms the incident escalated in quick succession six, eight, 10, 15, 20, 25 pump progression and there are individuals trapped in flats. AC Roe is informed the incident involves a residential block of flats with 20 floors, 25m by 25m, 75% alight, high rise procedures in place but could not tell him who was in charge at the time. Control confirm Echo 6, DAC O'Loughlin is Status 2, mobile to incident, Pat Goulbourne GM is Status 2 and ORT Matt Cook and Steve West are Status 2. AC Roe confirms he is Status 2, mobile to incident. (Source: Vision: GTIRT18-00253 and 'Vision')

01:39:00 – The picture below is taken by SM Cook on his mobile phone. He sends it to AC Roe. SM Cook is the designated Press Officer for this incident. (Source: Image library and Contemporaneous Notes: GTIRT17-00006)



At this time Firefighter Badillo's breathing rate peaks and now starts to slow down which could indicate he has reached the 20th floor, he states he waits for the rest of the team to catch up. (Source: BA Data and MPS Witness Statement GTIRT18-00917)

At around this time BA Team Four make their way to the bridgehead on the second floor, where WM O'Keeffe is in charge. (Source: Contemporaneous Notes: GTIRT17-00014, GTIRT17-01197, GTIRT17-00054 and GTIRT17-00024)

01:39:08 – SOM Smith calls Brigade Control for an update. She is told by AOM Real that it is "going absolute crazy" and they are taking lots of FSG calls. SOM Smith asks if there are any long FSG calls where people are on the line. She is advised OM Norman is on the line to someone. SOM Smith also checks if the 'Vision' system is coping and instructs AOM Real to prioritise the FSG calls over the Resource Management Log (RML) notifications and confirms she will be attending Stratford. (Source: Admin Call: GTIRT18-00878)

01:39:13 – Golf 341 Chelsea's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. Golf 341 Chelsea's Pump Ladder are the 9th fire engine in attendance. (Source: 'Vision')

01:39:15 – Brigade Control receive the 68th 999 call in relation to Grenfell Tower, OM Norman takes the call from an individual (believed to be Hesham Rahman) who is inside Grenfell Tower, flat 204, 23rd floor. Call duration three minutes and 33 seconds. Incident number 76130. (Source: 'Vision', GTIRT17-00563)

01:39:20 – Brigade Control receive the 69th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 12 seconds. Incident number 76098. (Source: 'Vision', GTIRT17-00529)

01:39:21 – Golf 371, Chiswick's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. This is the 10th fire engine in attendance. (Source: 'Vision')

01:39:55 - Alpha 431, Kentish Town's Pump Ladder, book Status 2, mobile to incident. Alpha 431, Kentish Town's Pump Ladder is riding with five firefighters, Firefighter Anthony Mawusi-Doe, WM Matthew Gregory, Firefighter Tyrone Jackdeo, Firefighter Sunil Patel and Firefighter Ferguson Portuphy. (Source: 'Vision' and StARS)

01:40* – *At around this time whilst waiting at the bridgehead, CM Tillotson is tasked by WM O'Keeffe to retrieve the BA Tallies of two BA wearers who were sent to the fifth floor as they had not handed in their BA tallies in at the BAECF. BA data shows the two wearers were CM Sephton and Firefighter Broderick from Golf 36, Hammersmith. (Source: BA Data and MPS Witness Statement: GTIRT18-00064)*

Firefighter Campbell is outside Grenfell Tower wearing his BA set which is not started up. WM Steve Collins asks him to get a ground monitor set up. Firefighter Campbell runs to a fire engine and gets a ground monitor and then goes back to the lobby area and pairs up with Firefighter Steven Mills. (Source: Contemporaneous Notes: GTIRT17-00034 and MPS Witness Statement: GTIRT18-00967 and GTIRT18-02051)

On arrival Firefighter Daoud(Golf 371) states that he hears someone shout 'everyone in BA'. Firefighter Daoud rigs in his BA on. (Source: MPS Witness Statement: GTIRT18-00393)

Firefighter O'Donoghue (Golf 371) is instructed by CM Davies (Golf 362) to turn on the hydrant. Once this is done WM Moore (Golf 371) tells Firefighter O'Donoghue to rig in BA. He joins Firefighter Daoud, they collect a Sledge Hammer, a TIC and some fire hose. They then head to the tower. (Source: MPS Witness Statement: GTIRT18-00393 and GTIRT18-00046)

01:40:00* - T Yilman, A Abraham, Abraham Abebe leave flat 44 on the seventh floor. (Source: Camera C15, CCTV).

CM Stern exits the building. (Source: Camera 4, CCTV)

01:40:01 – Golf 281, Willesden's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. This is the 11th fire engine in attendance. (Source: 'Vision')

01:40:02 – BA Team Four close down their BA sets and are logged off the ECB. (Source: BA Data)

01:40:12 – Hotel 41 Sierra, SM Walton, books Status 3, in attendance, at Grenfell Tower. He is the third SM in attendance (Source: 'Vision'). SM Walton is informed by a CU officer believed to be WM Meyrick that he is the first SM in attendance. SM Walton believes he was in fact the second but in reality he was the third as both SM Loft and SM Cook had already booked in attendance. SM Walton believes he will be in charge of the incident after receiving this information. (Source: 'Vision' and MPS Witness Statement: GTIRT18-01000)

Brigade Control receive the 70th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 29 seconds. Incident number 76101. (Source: 'Vision', GTIRT17-00532)

01:40:17 – Brigade Control receive the 71st 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual (believed to be Dennis Murphy) who is inside Grenfell Tower, flat 111, 14th floor. Call duration two minutes and 35 seconds. Incident number 76114. (Source: 'Vision', GTIRT17-00547)

01:40:20 - CU 2, Islington's CU book Status 2, mobile to incident. CU 2 is riding with two WMs, WM Delaney and WM Johnson. (Source: 'Vision' and StARS)

01:40:22* – *Two firefighters believed to be BA Team Two, Firefighter O'Hanlon and Firefighter Barton exit the building and go to their fire engine and change their BA cylinders on their Standard Duration Breathing Apparatus (SDBA) sets. (Source: Contemporaneous Notes: GTIRT17-00027 and GTIRT17-00025 and MPS Witness Statement: GTIRT18-00387 and GTIRT18-00321)*

01:40:33* - Tyroshondre Petralias and Rukayetu Mamudu from flat two, first floor leave the building. (Source: Camera 4, CCTV).

01:40:39 – Firefighter Dorgu's breathing rates slow at this point, which is consistent with him stopping at the 20th floor, he states he is with Firefighter Badillo and CM Secrett. (Source: BA Data)

01:40:40 - Brigade Control receive the 72nd 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 20 seconds. Incident number 76102. (Source: 'Vision', GTIRT17-00533)

01:40:44 – The motion pre-alert sounds on Firefighter Dorgu's BA set indicating he has been stationary for 30 seconds. (Source: BA data)

The pre alarm sounds on the BA set worn by Firefighter Badillo, indicating he has been stood still for 30 seconds. (Source: BA Data)

01:40:44 – Brigade Control receive the 73rd 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is outside Grenfell Tower. Call duration one minute and 30 seconds. Incident number 76106. (Source: 'Vision', GTIRT17-00537)

01:40:46* – Abraham Abebe from flat 44, seventh floor enters the seventh floor lobby carrying Abem Abraham. The lobby is smoky with visibility at about three metres. Turufat Yima Girma, Mr Abede's partner, also enters the seventh floor lobby. (Source: Camera C15, CCTV)

01:40:50 - Control call G271, North Kensington's Pump Ladder, with a 'priority' message. G271, North Kensington's Pump Ladder, do not respond. (Source, Radio Message: GTIRT17-02523)

01:40:58 - Brigade Control receive the 74th 999 call in relation to Grenfell Tower, CRO Fox takes the call from a British Telecom operator. Call duration 16 seconds. Incident number 76105a. (Source: 'Vision', GTIRT17-00536)

01:40:58 – Brigade Control make an outbound call in relation to Grenfell Tower, CRO Fox makes the call to an individual who is outside Grenfell Tower. Call duration 44 seconds. Incident number 76105b. (Source: 'Vision', GTIRT17-00587)

01:41:00 – The North West Fire Control centre (Fire Services' in the North West Control Room) receive the 75th 999 call in relation to Grenfell Tower. A CRO from North West Control takes the call from a British Telecom operator in Glasgow. Call duration 36 seconds. Incident Number 1706004390. (Source, Vision: GTIRT18-02452)

01:41:18 – The North West Fire Control centre (Fire Services' in the North West Control Room) receive the 76th 999 call in relation to Grenfell Tower. A CRO takes the call from an individual (believed to be Deborah Lamprell) who is inside Grenfell Tower, flat 201, 23rd floor. Call duration 40 minutes and 41 seconds. Incident number 76642. (Source: 'Vision', GTIRT17-00534)

*It should be noted that this call and the call with Jessica Urbano at **01:29:48** (Incident number 76096b, Source: 'Vision', GTIRT17-00570) are taking place simultaneously and both Deborah Lamprell and Jessica Urbano are in the same bedroom in the same flat.*

01:41:21 – Brigade Control receive the 77th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual (believed to be Miss W Supareogsanond) who is inside Grenfell Tower, flat 73, 10th floor. Call duration one minute and 58 seconds. Incident number 76104. (Source: 'Vision', GTIRT17-00535)

01:41:24 – Brigade Manager 8 (Bravo Mike 8), AC Andrew Roe, books Status 2, mobile to incident. (Source: 'Vision')

01:41:50* - WM Watson is seen in the main lobby on his own, which shows that at this time we have no firefighters in BA available to him to deploy to the bridgehead. There are 10 fire engines, one CU, one FRU and one TL in attendance. (Source: Camera 3 and 4, CCTV)

01:41:57* - Leroy (Barnaby) Augustus and Petra Doulova from flat 174, 20th Floor leave the building. (Source: Camera 4, CCTV)

01:42* – At around this time CM Tillotson returns to the bridgehead with the two missing BA tallies and gives them to the BAECO. (Source: BA Data and MPS Witness Statement: GTIRT18-00064)

01:42:04* – At around this time CU 7, Wembley's CU book Status 3, in attendance at Grenfell Tower. They are the second CU in attendance. (Source: estimated time using GPS Data)

01:42:05 – The North West Fire Control centre (Fire Services' in the North West Control Room) receive the 78th 999 call in relation to Grenfell Tower. A CRO takes the call from an individual who is outside Grenfell Tower. Incident number 76641. Call duration Two minutes, 53 seconds. (Source: 'Vision', GTIRT17-00553)

01:42:08 – Brigade Control receive the 79th 999 call in relation to Grenfell Tower, CRO Fox takes the call from an individual who is outside Grenfell Tower. Call duration 18 seconds. Incident number 76108. (Source: 'Vision', GTIRT17-00539)

01:42:09 - At around this time BA Team Seven, CM Tillotson, CM Gallagher, Firefighter Bettinson, Firefighter Wolfenden and Firefighter Felton report to the bridgehead and are tasked to undertake search and rescue on the fourth floor. (Source: BA Data, Contemporaneous Notes: GTIRT17-00042, GTIRT17-00037, GTIRT17-00036, GTIRT17-00035 and GTIRT17-00028 and MPS Witness Statement: GTIRT18-00064, GTIRT18-00929, GTIRT17-02925, GTIRT18-01002 and GTIRT18-01110)

01:42:14 – Brigade Control receive the 80th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is outside Grenfell Tower. Call duration 49 seconds. Incident number 76109. (Source: 'Vision', GTIRT17-00541)

01:42:29 – Golf 25 Alpha, Ealing's OSU, Ealing's OSU book Status 3, in attendance, at Grenfell Tower. This is the first OSU in attendance. (Source: 'Vision')

01:42:30* - Firefighter Abell and Firefighter Archer return to the lobby after their BA wear. (Source: Camera 2, 3 and 4, CCTV)

01:42:34* - Jordy Norbis enters the main lobby carrying a large Firefighters axe. He has a discussion with WM Watson and explains that he believes there are people at the rear of the building who are threatening to jump. According to WM Watsons statement, he asks Mr Norbis who he is. Mr Norbis tells WM Watson that he is an American firefighter. WM Watson comments in his statement that it didn't matter that he was an American firefighter. He states he tells Mr Norbis to show Firefighter Murray around the back to corroborate Mr Norbis' information. Firefighter Murray returns and explains that Mr Norbis is right. WM Watson then tells Firefighter Murray to go and get a loudhailer and reassure the residents. (Source: Camera 4, CCTV and MPS Witness Statement: GTIRT18-00073)

01:42:38* – At around this time Hotel 331, Wandsworth's Pump Ladder arrive at Grenfell Tower. This is the 12th fire engine in attendance. (Source: approximate time from GPS Data)

01:42:39* – Alpha 213, Paddington's TL, is pitched outside the South elevation. This was only possible because WM Dowden had previously tasked CM Davis to secure a separate hydrant to connect to a fire engine that would only supply water to Alpha 213. (Source: Camera 4, CCTV and MPS Witness Statement: GTIRT18-01065, GTIRT18-00972)

01:42:40* - Firefighter O'Beirne enters the main lobby carrying a BA ECB and makes his way up the stairs. According to his statement he was heading to the bridgehead on the second floor. (Source: Camera 4 and 2, CCTV, MPS Witness Statement: GTIRT18-00072)

01:43:00 – The Essex County Fire and Rescue Service Control Room receive the 81st 999 call in relation to Grenfell Tower A CRO takes the call from an individual who is outside Grenfell Tower. Call duration 54 seconds. Incident number 13559. (Source: 'Vision', GTIRT17-00540)

01:43:04 - Brigade Control receive the 82nd 999 call in relation to Grenfell Tower, CRO Fox takes the call from an individual who is outside Grenfell Tower. Call duration 18 seconds. Incident number 76111. (Source: 'Vision', GTIRT17-00543)

01:43:07- CU 8, WM Meyrick contacts Brigade Control by radio and offers to take the FSG Calls information on behalf of Golf 271, North Kensington's Pump Ladder, who are not responding to the priority call from Control. (Source: Radio Message: GTIRT17-02524)

01:43:13 – CRO Darby contacts CU 8 and passes the following information about fire survival calls they have recently been received. (Source: Radio Message: GTIRT17-02525 and 'Vision')

Flat Number	Floor number	Number of people	Remarks
Not given	10	Not given	People stuck
205	23	7	Unable to leave property
Not given	12	Not given	Unable to leave property
Not given	14	Not given	Smoke coming in to flats
142	17	5 people	Smoke coming in to flat
95	12	Not given	Smoke coming in to flat
Not given	18	Not given	Thick smoke outside flat

(Source: Radio Message: GTIRT17-02525).

At this stage Brigade Control has received FSG calls and information about people throughout the building from various sources. Other calls have been taken by other emergency service control rooms and agencies. (Source: Radio Message and 'Vision').

The table below summarises the FSG call information between 01:36:23 – 01:41:21:

Time of Call	Flat Number	Floor number	Number of people	Remarks
01:36:23	9	3	5	1 x Wheelchair user
01:37:58		14	1 Adult and 1 Baby	No flat number obtained
01:38:02	142	17	5 people	Smoke coming in the flat
01:38:16	205	23	7 people	
01:38:18	115	14	1 adult 1 baby	
01:38:37	95	12	1 adult	
01:38:38	182	21		
01:38:51	204	23	1 adult	
01:40:17	111	14		
01:41:18	161*	23	1 adult female	This is a call taken by NWFC and the caller is identified by herself as Debbie. *161 is not on the 23 rd floor but it

				becomes clear that Debbie is from 161 but has moved up the building
01:41:21	73	10	1 adult	Caller told to stay where they are and wait for someone to come and get them

01:43:14 – The North West Fire Control centre (Fire Services' in the North West Control Room) receive the 83rd 999 call in relation to Grenfell Tower. A CRO takes the call from an individual who is inside Grenfell Tower, flat 175, 20th floor. Call duration seven minutes and 54 seconds. Incident number 76644. (Source: 'Vision', GTIRT17-00476)

01:43:18* - Firefighter Archer and Firefighter Abell leave through the main entrance going outside. Firefighter Archer's helmet is completely blackened indicating severe heat and smoke within the area of the building they had been in. (Source: Camera 2, 3 and 4, CCTV)

01:43:19 – Brigade Control receive the 84th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual (believed to be Natasha Elcock) who is inside Grenfell Tower, flat 82, 11th floor. Call duration one minute and 21 seconds. Incident number 76117. (Source: 'Vision', GTIRT17-00550)

01:43:22 – Brigade Control receive the 85th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 16 seconds. Incident number 76110. (Source: 'Vision', GTIRT17-00542)

01:43:31 - Radio Workshops duty engineer contacts Brigade Control and confirms receipt of the pager message. (Source: Control Call: GTIRT18-00880 and 'Vision')

01:43:40* - Firefighter Merrion and Firefighter Sanders enter the main lobby wearing BA and proceed to the bridgehead. (Source: Camera 4, CCTV)

01:43:44 – Brigade Control receive the 86th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 59 seconds. Incident number 76115. (Source: 'Vision', GTIRT17-00548)

01:43:46 – Brigade Control receive the 87th 999 call in relation to Grenfell Tower, CRO Fox takes the call from MPS. Call duration 59 seconds. Incident number 76116. (Source: 'Vision', GTIRT17-00549)

01:43:48 – Brigade Control receive the 88th 999 call in relation to Grenfell Tower. A CRO takes the call from The North West Fire Control centre. Call duration 29 seconds. Incident number 76643. (Source: 'Vision', GTIRT17-01830)

01:44* – *At around this time BA Team Seven reach the sixth floor and start banging on doors and shouting to get people out. They meet a couple, possibly with a boy. CM Gallagher and Firefighter Felton escort the residents to the main lobby. (The members of the public are believed to be A Shah and J Shah, however Paul Menacer and Kerry O'Hara from the sixth floor also leave the building*

around this time, this is from Camera 2 and 4, CCTV footage). (Source: Contemporaneous Notes: GTIRT17-00037, GTIRT17-00028, MPS Witness Statement: GTIRT18-00929, GTIRT18-01110 and Camera 2 and 4, CCTV)

01:44:00* - CM Stern enters the main lobby. (Source: Camera 4, CCTV)

01:44:19 – CU 8 contact Brigade Control to confirm the latest FSG Calls information (FSG Calls 2). – "Okay. just to confirm that's the 10th floor, the 23rd floor, the 12th floor, the 14th floor and the 17th Floor. The only flat numbers you've given me are on the 17th floor is 142 and that's five people and the 12th floor is flat 95, no further information than that apart from heavy smoke logging. over." (Source: Radio Message: GTIRT17-02526 and 'Vision')

01:44:22* - Aimen Mawia (address unknown) leaves the building. (Source: Camera 4, CCTV)

01:44:27* - Paul Menacer from flat 33, sixth floor leaves the building. (Source: Camera 4, CCTV)

01:44:33 – Brigade Control receive the 89th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual (believed to be Mr R Smith) who is inside Grenfell Tower, flat 95, 12th floor. Call duration 3 minutes, 33 seconds. Incident number 76118. (Source: 'Vision', GTIRT17-00551)

01:44:34 – Hotel 271, Battersea's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. This is the 13th fire engine in attendance. (Source: 'Vision')

01:44:40* - CM Stern meets Mary Brennan (unknown address) in the ground floor lobby and escorts her out. (Source: Camera 4, CCTV)

01:44:45* - Sharon Haley from flat 24, fifth floor and Kenny Smith from flat 13, fourth floor leave the building. (Source: Camera 4, CCTV)

01:44:48 – Brigade Control phone GM Patrick Goulbourne to check if he has received and ordering for the attendance at Grenfell. The call is not answered.. (Source: Vision: GTIRT18-00257)

01:45:00 – The North West Fire Control centre (Fire Services' in the North West Control Room) receive the 90th 999 call in relation to Grenfell Tower. A CRO from North West Control takes the call from a British Telecom operator in Glasgow. Call duration 29 seconds. Incident Number 014500. (Source, Vision: GTIRT17-01772)

01:45:00 – The North West Fire Control centre (Fire Services' in the North West Control Room) generate the 91st call in relation to Grenfell Tower. The CRO makes an outbound call to an individual which goes to voicemail. Call duration 26 seconds. Incident number 014500. (Source: NWFC Vision: GTIRT18-02453)

01:45:01 – Alpha 411, West Hampstead's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. This is the 14th fire engine in attendance. (Source: 'Vision')

01:45:02 – Brigade Control receive the 92nd 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is outside Grenfell Tower. Call duration 19 seconds. Incident number 76119. (Source: 'Vision', GTIRT17-00552)

01:45:04 – Alpha 231, Euston's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. This is the 15th fire engine in attendance. (Source: 'Vision')

01:45:08* - Kerry O'Hara from flat 34, sixth floor leaves the building (Source: Camera 4, CCTV).

01:45:13 - At around this time BA Team Eight, Firefighter Shaw and Firefighter Cuthbert report to the bridgehead, they receive their briefing and remove their BA tallies. They have no firefighting media but are told to go to the fifth and sixth floor for search and rescue. (Source: BA Data, Contemporaneous Notes: GTIRT17-00044 and GTIRT17-00043 and MPS Witness Statement: GTIRT18-01534 and GTIRT18-01844)

01:45:15* - CM Stern exits the building via main lobby. (Source: Camera 4, CCTV)

01:45:23 – GM Pat Goulbourne answers a phone call from Brigade Control. The CRO asks him if he has received an ordering on his pager. He advises he hasn't and checks his pager. He notes he has received a message and confirms the address. Control confirm it is now a 25 pump fire, persons reported, multiple FSG Calls. GM Goulbourne says he is actually not on duty which is why he hadn't noted the pager message. He says he will attend anyway and books Status 2, mobile to incident. Very little information is passed during the conversation except that Control are taking a large number of FSG calls. (Source: Vision: GTIRT18-00258 and 'Vision')

01:45:24* – WM Ashe enters the main lobby via main entrance door. (Source: Camera 4, CCTV)

01:45:27 – Golf 351, Fulham's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. This is the 16th fire engine in attendance. (Source: 'Vision')

01:45:47* - WM Watson and WM Ashe proceed upstairs. (Source: Camera 2, CCTV)

01:45:51 – Brigade Control receive the 93rd 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Call duration one minute and one second. Incident number 76122. (Source: 'Vision', GTIRT17-00557)

01:45:52 – The North West Fire Control centre receive the 94th 999 call in relation to Grenfell Tower, a CRO from North West Control takes the call from an individual who is outside Grenfell Tower. Call duration one minute and four seconds. Incident number 76645. (Source: 'Vision', GTIRT17-00545)

01:45:53 - Between 01:45:53 and 01:47:14 the pre alarm actuates on all of BA Team Five. This indicates that this team of firefighters are not moving for a period of over 30 seconds. It is believed that the team have finished the search of flat 176 and are discussing where they think Jessica Urbano has gone. (Source: BA Data, Contemporaneous Notes: GTIRT17-00009, GTIRT17-00431, GTIRT17-00017 and GTIRT17-00013 and MPS Witness Statement: GTIRT18-01411, GTIRT18-00917, GTIRT18-00641 and GTIRT17-01551)

01:45:53* - BA Team 13, consisting of CM Wigley, Firefighter Harris, Firefighter Gonzalez, Firefighter Gillam and Firefighter Roberts, are Alpha 216, Paddington's FRU crew. They are wearing Extended Duration Breathing Apparatus (EDBA) and are the first Firefighters to enter Grenfell Tower in (EDBA). They enter the main lobby carrying line operations equipment. They are also carrying two lengths of 45 mm fire hose, and a branch. They are seen making their way upstairs. They have been tasked by WM Dowden to get to the roof and attempt to extinguish the fire using fire hose. (Source: Camera 4 and 2, CCTV, Contemporaneous Notes: GTIRT17-00052, GTIRT17-00053, and GTIRT17-00051 and MPS Witness Statement: GTIRT18-01067, GTIRT17-02917, GTIRT17-01393, and GTIRT18-00414)

01:45:53* – A firefighter enters the lobby on the seventh floor. It is believed to be Firefighter Bettinson as there are a set of diamonds on the helmet indicating a probationary firefighter. Firefighter Bettinson is the only probationer wearing BA at this time in the building. (Source: Camera C15, CCTV)

01:46:00* - Firefighter Murray enters the main entrance wearing BA and carrying a loud hailer. From his statement he has been at the West elevation telling people not to jump and to get out if they can. (Source: Camera 4, CCTV and MPS Witness Statement: GTIRT18-01066)

01:46* – *At around this time WM Ashe informs WM Dowden that debris is falling from the North face of Grenfell Tower. (Source: MPS Witness Statement: GTIRT18-01412)*

01:46:05 – Brigade Control receive the 95th 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Call duration 34 seconds. Incident number 76120. (Source: 'Vision', GTIRT17-00554)

01:46:05 - Brigade Control send a 'priority' message to CU 8 (FSG Call 3) detailing the information provided below. (Source: Vision: GTIRT17-02527 and 'Vision')

Flat Number	Floor number	Number of people	Remarks
	23	11	All in bedroom
96	12		Fire started in flat
	16		Persons trapped (information received from the police)
	17		Persons trapped (information received from the police)

01:46:10 - Hotel 27 Sierra, SM Nicholas Myatt book Status 2, mobile to incident, from his home address [REDACTED] (Source: 'Vision')

01:46:18 – Brigade Control receive the 96th 999 call in relation to Grenfell Tower, CRO Adams takes the call from an individual who is inside Grenfell Tower, flat 133, 16th floor. Call duration two minutes and 31 seconds. Incident number 76126. (Source: 'Vision', GTIRT17-00560)

01:46:23* – At around this time Alpha 241, Soho's Pump Ladder, is in attendance. This is the 17th fire engine in attendance. (Source: approximate time from GPS Data)

01:46:34 – CU 8 sends a radio message to Brigade Control requesting that the FSG Calls information be passed to them again. (Source: Radio Message GTIRT17-02528 and 'Vision')

01:46:35* - Abraham Abebe is escorted from flat 44, seventh floor by Firefighter Bettinson. (Source: Camera C15, CCTV).

01:46:36* – In the seventh floor lobby CM Tillotson can be seen by the lift doors. CM Tillotson appears with Firefighter Bettinson, identified by the diamonds on his helmet. (Source: Camera C15, CCTV and BA Data)

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01:46:39 – Control repeat FSG Call 3 radio message. This is the same as at **01:46:05**. (Source: Radio Message GTIRT17-02529 and 'Vision')

01:46:49* - John Beadle from flat 13, fourth floor leaves the building. (He was seen entering the building at 00:56:01, Source: Camera 3 and 4, CCTV)

01:46:50* – At around this time Alpha 412, West Hampstead's Pump is in attendance at Grenfell Tower. This is the 18th fire engine in attendance. (Source: approximate time using GPS Data)

01:46:52 - Foxtrot 115, GM Goulbourne is booked Status 2, mobile to incident, by Brigade Control. (Source: 'Vision')

01:47:00 - The Essex County Fire and Rescue Service Control Room receive the 97th 999 call in relation to Grenfell Tower, A CRO from Essex takes the call from an individual who is outside Grenfell Tower. Call duration one minute and 17 seconds. Incident number 76636. (Source: 'Vision', GTIRT17-00556)

01:47:05 – Alpha 242, Soho's Pump, book Status 3, in attendance, at Grenfell Tower. This is the 19th fire engine in attendance. (Source: 'Vision')

Firefighter Orchard was the driver of Alpha 242 when they arrive the other firefighters were already rigged in BA so they jumped off and headed to the tower. Firefighter Orchard then puts on her PPE and then gets rigged in her BA set. She then makes her way to the holding area. (Source: GTIRT18-00647)

01:47:06 - CU 8 sends a radio message to Brigade Control requesting the number of people in the flats that were referenced in the previous FSG radio message (FSG Call 3) and ask that Control repeat the FSG radio message again. (Source: Radio Message: GTIRT17-02530 and 'Vision')

01:47:13 – Brigade Control repeat FSG Call 3 back to CU 8. (Source: Radio Message: GTIRT17-02531 and 'Vision')

01:47:28 – CU 8 confirm with Brigade Control that they have received all the information. (Source: Radio Message: GTIRT17-02532 and 'Vision')

North West Fire Control generate the 98th call. This is a call back by the North West Fire Control believed to be to the call that was abandoned and referenced at **01:45:00**. Incident Number 014728. Linked to GTIRT17-01772. (Source, NWFC Vision: GTIRT17-00594)

01:47:33 – Golf 346, Chelsea's FRU book Status 3, in attendance, at Grenfell Tower. This is the second FRU in attendance. (Source: 'Vision')

01:47:44 – OM Norman rings CU 8 and passes over a request for the flats below to be checked. (Source: Vision: GTIRT18-00508)

Flat Number	Floor number	Number of people	Remarks
161*	23	10	FSG being given. *flat 161 is not on the 23 rd floor. This information relates to a call taken

			by the NWFC and the caller states initially that she is from 161.
204	23	1	
14		1	In the call Alex says that this caller disappeared. However in the call taken at 01:37:58 Peter Duddy doesn't ask the caller what flat she is in. The caller also says she has a baby with her.
9		2 adults 3 children	Wheelchair user
175	20	5	

01:47:49 – Brigade Control receive the 99th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is inside Grenfell Tower, flat unknown, 10th floor. Call duration two minutes and 24 seconds. Incident number 7613.1 (Source: 'Vision', GTIRT17-00564)

01:47:52* - Abelina Shah and Josefine Shah from flat 32, sixth floor leave the building. (Source: Camera 4, CCTV)

01:48:00 – The Essex County Fire and Rescue Service Control Room receive the 100th 999 call in relation to Grenfell Tower, a CRO from Essex takes the call from an individual who is inside Grenfell Tower, flat 193, 22nd floor. Call duration one minute and 12 seconds. Incident number 76637. (Source: 'Vision', GTIRT17-00558)

01:48:00* – At around this time BA Team Five enter the 20th floor lobby. Visibility is poor and they cannot see the door numbers. They locate flat 176 and the door is open. Firefighter Badillo and CM Secrett search the flat twice in an effort to locate Jessica Urbano. They don't find anyone and they surmise that as the door was open she may have already left. They leave the flat and meet Firefighter Dorgu who attempts to contact the BAECO with an update but cannot get through on the radio. (Source: Contemporaneous Notes: GTIRT17-00009, GTIRT17-00431, GTIRT17-00017 and GTIRT17-00013 and MPS Witness Statement: GTIRT18-01411, GTIRT18-00917, GTIRT18-00641 and GTIRT17-01551)

01:48:23 – Brigade Control receive the 101st 999 call in relation to Grenfell Tower, CRO Fox takes the call from Surrey Police Contact Centre in relation to Dennis Murphy, flat 111, 14th floor. Call duration one minute and 39 seconds. Incident number 76127. (Source: 'Vision', GTIRT17-00561)

Brigade Control receive the 102nd 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual (believed to be Zainab Deen) who is inside Grenfell Tower, flat 115, 14th floor. Call duration four minutes and 50 seconds. Incident number 76134. (Source: 'Vision', GTIRT17-00568)

01:48:30* - Turufat Yilman Girma, Abraham Abebe and Abem Abraham from flat 44, seventh Floor leave the building. (Source: Camera 4, CCTV)

01:48:32 - Thames Water Authority contact Control and confirm they are attending the incident at Grenfell Tower. (Source: Vision GTIRT18-00882)

01:48:44* – At around this time H222, Lambeth's Pump arrives at Grenfell Tower. This is the 20th fire engine in attendance. (Source: approximate time using GPS Data)

01:48:44 – Brigade Control receive the 103rd 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 24 seconds. Incident number 76125. (Source: 'Vision', GTIRT17-00559)

01:48:53* – At around this time Hotel 221, Lambeth's Pump Ladder fire engine arrives at Grenfell Tower. This is the 21st fire engine in attendance. (Source: approximate time using GPS Data)

01:48:56* - Suriya Nana and Tania Allcorn From flat 35, sixth Floor, leave the building. (Source: Camera 4, CCTV)

01:49* – *At around this time Firefighter O'Hanlon and Firefighter Barton enter the tower and proceed to the bridgehead. (Source: Contemporaneous Notes: GTIRT17-00027 and GTIRT17-00025 and MPS Witness Statement: GTIRT18-00387 and GTIRT18-00321)*

01:49:13 - Bravo Charlie 04, SOM Adam Crinion is paged about the 25 pump fire at Grenfell Tower. (Source: 'Vision')

01:49:31* – SM Loft enters the building via the main entrance. He goes to the lift lobby and photographs the lift and flat number plaque to assist him in identifying the floors that flats are located on (Source: Camera 4 and 5, CCTV)

01:49:32* - Luca (Lukic) Branislav from flat 84, 11th floor, Clarita Ghavimi from flat 75, 10th floor and Miriam Lovsin (address unknown) leave the building. (Source: Camera 4, CCTV).

01:49:44 – Golf 291, Park Royal's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. This is the 22nd fire engine in attendance. (Source: 'Vision').

01:50* - At about this time BA Team 21, firefighter Malik and Firefighter Hill, reported to the BAECF at the Bridgehead, they state they were queuing along with approximately 30 other Firefighters. They are tasked to go and get more equipment from outside. Firefighter Hill and Firefighter Malik make approximately four trips to the fire engines, collecting fire hoses and other equipment. They leave the equipment by a tree outside Grenfell Tower. (Source: MPS Witness Statement: GTIRT18-00426 and GTIRT18-00070)

BA Team 24, Firefighter Bloxham and Firefighter Evans are tasked with rigging in BA, they then report to the holding area outside Grenfell Tower. They were then informed by an officer not to enter the building unless they have breaking in equipment. (Source: MPS Witness Statement: GTIRT18-01038 and GTIRT18-00926)

01:50:03 – Brigade Control receive the 104th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual (believed to be Anthony Disson) who is inside Grenfell Tower, flat 192, 22nd floor. Call duration one minute and 24 seconds. Incident number 76129. (Source: 'Vision', GTIRT17-00562)

01:50:09* - WM De Silvo from Golf 341 Chelsea's Pump Ladder Chelsea enters building. (Source: Camera 4, CCTV)

01:50:36* – SM Loft leaves the building via the main entrance, putting his mobile phone in his leggings pocket. (Source: Camera 3, 4 and 1, CCTV)

01:50:49 – CRO Adams telephones the CU believed to be CU 8 and WM Meyrick answers the phone. CRO Adams relays the following FSG Calls information; flat 133, Floor 16 and flat 182, 21st floor.

CU request an idea of priority from Control who confirm the following;

flat 133 not too panicked, smoke coming in, told to block door. flat 182, can't stop smoke coming through front door so has moved to living room. CU ask if Control can prioritise calls based on smoke density going forward. (Source: Vision: GTIRT18-00506)

Flat Number	Floor number	Number of people	Remarks
133	16	Unknown	Smoke coming in
182	21	Unknown	Can't stop smoke coming through the front door so have gone into the living room.

01:50:57 - BA Team Nine report to ECB and receive their briefing. Firefighter Sanders and Firefighter Merrion are tasked with going to flat 112, 14th Floor. It is believed they are told to team up with BA Team 10, Firefighter Cornelius and Firefighter Murphy. (Source: BA Data, Contemporaneous Notes: GTIRT17-00048, GTIRT17-00459, GTIRT17-00049 and GTIRT17-00419 and MPS Witness Statement GTIRT18-01134 and GTIRT18-00651)

01:51:00 - BA Team 10 report to ECB and receive their briefing. Firefighter Cornelius and Firefighter Murphy are tasked to go to flat 111, 14th Floor. They are told to go up with BA Team Nine. (Source: BA Data, Contemporaneous Notes: GTIRT17-00020 and GTIRT17-00021 and MPS Witness Statement: GTIRT18-01416 and GTIRT18-00993)

01:51:36 – Hotel 34 Sierra, SM Mulholland, books Status 3, in attendance, at Grenfell Tower. He is the first officer from ORT in attendance. (Source: 'Vision': GTIRT17-02535)

01:51:46 – BA Team 11, Firefighter Campbell and Firefighter Mills report to the bridgehead. They then report to the ECB, remove BA tallies and start breathing under air. They are tasked with going to flat 175, 20th Floor (Belkadi and Hamdan family) in response to a FSG call. (Source: Contemporaneous Notes: GTIRT17-00046 and GTIRT17-00034 and MPS Witness Statement GTIRT18-00967, GTIRT18-02051 and GTIRT18-00402)

01:51:47 – Oscar Golf 61, SM Saunders books Status 3, in attendance, at Grenfell Tower. He is the fourth SM in attendance. (Source: 'Vision')

01:52:09 - The North West Fire Control Centre receive the 105th 999 call in relation to Grenfell Tower, a CRO from North West Control takes the call from a British Telecom operator. Call duration 39 seconds. Incident number 143565. (Source: 'Vision', GTIRT17-01607)

01:52:11 – Brigade Control send a 'priority' message to CU 8, no response. (Source: Radio Message GTIRT17-02537 and 'Vision')

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01:52:13 – Brigade Control receive the 106th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is outside Grenfell Tower. Call duration 19 seconds. Incident number 76132. (Source: 'Vision', GTIRT17-00565)

01:52:26 - Brigade Control send a second 'priority' message to CU 8, no response. (Source: Radio Message GTIRT17-02538 and 'Vision')

01:52:30* – 12 firefighters carrying various pieces of equipment enter the main entrance. (Source: Camera 4, CCTV)

01:52:41 - Brigade Control send a third 'priority' message to CU 8, no response. (Source: Radio Message GTIRT17-02539 and 'Vision')

01:52:53* – At around this time Alpha 245, Soho's Aerial Ladder Platform, arrives in attendance at Grenfell Tower. This is the second Aerial in attendance. (Source: approximate time using GPS Data)

01:52:54 – Brigade Control send a fourth 'priority' message to CU 8 and receive no response. (Source: Radio Message GTIRT17-02540 and 'Vision')

01:52:56 – The LAS phone Brigade Control and inform them they are making this a significant incident. (Source: Admin Call: GTIRT18-00886 and 'Vision')

01:52:59 - Bravo Charlie 04, SOM Adam Crinion responds to pager message and is informed of 25 pump fire at Grenfell Tower. (Source: 'Vision': GTIRT18-00885)

01:53* – *The following image was taken by an individual and show's the North Elevation at this time. (Source: MPS external fire spread report: GTIRT18-01590)*



BA Team Eight, Firefighter Shaw and Firefighter Cuthbert, enter the fourth floor and start a right hand search. They meet two males in a flat located in the far corner (believed to be flat 15? Confirm is this

correct). Which Ff is it? The BA set pre alarm goes off at 02:01:15 indicating this may mean they are in the flat talking. Advice was given to stay in the flat as it was free from smoke whilst the stairwell is heavily smoke logged. They subsequently knock on all the flats on that floor and then proceed up to the fifth floor. (Source: BA Data, Contemporaneous Notes: GTIRT17-00043, GTIRT17-00044 and MPS Witness Statement: GTIRT18-01844, GTIRT18-01534)

BA Team 11, Firefighter Campbell and Firefighter Mills, are ascending the stairs between the third and fifth floors. While ascending the stairs they have to stop four or five times due to the congestion caused by approx. seven or eight firefighters passing them. (Source: Contemporaneous Notes: GTIRT17-00034, GTIRT17-00046 and MPS Witness Statement: GTIRT18-00967 and GTIRT18-02051, GTIRT18-00402)

At around this time Firefighter Daoud and Firefighter O'Donoghue drop off their equipment near the holding area. They note there are at least 20 BA wearers. (Source: MPS Witness Statements: GTIRT18-00393 and GTIRT18-00046)

01:53:02 - CU 8 respond to Brigade Control. This is in relation to the 'priority' message Brigade Control are trying to send. (Source: Radio Message GTIRT17-02541 and 'Vision')

01:53:05 – Brigade Control send a radio message to CU 8 containing the following FSG Calls information (FSG Call 4). – "Charlie Uniform eight. We're being advised that people on the tenth floor are asking to leave their flats. Are you able to go and check them? Further traffic, we've got information received from Surrey Police. Caller on the 14th floor in flat 111 (Dennis Murphy) is in the bathroom with smoke entering the room and he's having difficulty breathing". (Source: Radio Message GTIRT17-02542 and 'Vision')

01:53:11 – The North West Fire Control Centre receive the 107th 999 call in relation to Grenfell Tower, a CRO from North West Control takes the call from an individual who is outside Grenfell Tower. Call duration 50 seconds. Incident number 76646. (Source: 'Vision', GTIRT17-00566)

01:53:31 – CU 8 send a radio message to Brigade Control to confirm the floor number of flat 111, Control confirm it is the 14th floor. (Source: Radio Message GTIRT17-02543 and 'Vision')

01:53:40 – CU 8 send a confirmation message via the radio to Brigade Control, "flat 111 on the 14th received". (Source, Radio Message: GTIRT17- 02544)

01:53:40* - A firefighter enters the main lobby carrying an ECB. (Source: Camera 4, CCTV)

01:53:44 – Control reply back to CU 8 "And People on the 10th floor are asking to leave their flats". (Source, Radio Message: GTIRT17- 02545)

01:53:45* - BA Team 12, Firefighter Foster and Firefighter Lawson report to the bridgehead. They are instructed by WM O'Keeffe to get as far up the building as they can before they put their facemasks on to conserve air. They are instructed to go to the 18th floor to respond to FSG call on that floor but they are not given a specific flat number. (Source: BA Data, Contemporaneous Notes: GTIRT17-00062 and GTIRT17-00061 and MPS Witness Statement: GTIRT18-00927 and GTIRT18-00068)

01:53:54 – CU 8 confirm receipt of the last two FSG messages. (Source: Radio Message GTIRT17-02546 and 'Vision')

01:53:57 - Bravo Charlie 02, Duty Brigade Control Senior Manager Joanne Smith is informed of the '25 pump fire' at Grenfell Tower. (Source: 'Vision')

01:54:03 – The duty Press Officer, Catherine Allum, is informed of the incident. (Source: 'Vision')

01:54:04 – Foxtrot 4, DAC Fenton books Status 2, mobile to Brigade Coordination Centre (BCC) which is in the same building as Brigade Control at Stratford. (Source: 'Vision')

01:54:14 – Brigade Control receive the 108th 999 call in relation to Grenfell Tower, CRO Duddy takes the call from an individual who is inside Grenfell Tower, flat 95, 12th floor. Call duration 40 minutes. Incident number 76135. (Source: 'Vision', GIRT17-00569)

01:54:23 – Brigade Control receive the 109th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual who is inside Grenfell Tower, flat 205, 23rd floor. Call duration one minute and 19 seconds. Incident number 76137. (Source: 'Vision', GTIRT17-00571)

01:54:27 – Golf 301, Wembley's Pump Ladder, book Status 3, in attendance, at Grenfell Tower. This is the 23rd fire engine in attendance. (Source: 'Vision')

01:54:31 – North West Fire Control generate the 110th call. This is a call back by the North West Fire Control believed to be to the call that was abandoned and referenced at **01:52:09**. The call goes to EE voicemail with no number. The CRO does not leave a message. Linked to GTIRT17-01607. (Source, NWFC Vision: GTIRT18-02335)

01:54:32 – Brigade Control call up CU 8 with FSG information. (Source: Radio Message and 'Vision')

01:54:44 – Brigade Control send a radio message to CU 8 with further FSG information, **"Charlie Uniform 8, we've got a caller in flat 115 on the 14th floor with a young baby and it's heavily smoke-logged, over"**. (Source: Radio Message GTIRT17-02547 and 'Vision')

01:54:55 – CU 8 confirm receipt of the FSG information for flat 115, 14th floor. (Source: Radio Message GTIRT17-02550 and 'Vision')

01:54:30* – *Echo 6, DAC O'Loughlin arrives at Grenfell Tower although he does not book in with Control on the radio or phone as both were busy and he doesn't want to interrupt the FSG calls. He noted the time on his phone when he arrived and put this in his MPS Witness Statement. DAC O'Loughlin is the first DAC in attendance. (Source: MPS Witness Statement: GTIRT18-01266)*

01:55:00* - SM Cook enters the main entrance wearing a press liaison surcoat. (Source: Camera 4, CCTV)

01:55:17* - *Echo 109, GM Welch is booked Status 2, mobile to incident, from his home address in [REDACTED] It is believed that he booked this whilst already enroute due to the heavy telephone traffic being received by Brigade Control. He is shown Status 3, in attendance, two minutes later at 01:57. (Source: 'Vision')*

01:55:25* – *Hotel 421, Richmond's Pump Ladder, arrives at Grenfell Tower. This is the 24th fire engine in attendance. (Source: approximate time of arrival using GPS Data)*

01:55:29* - LPWW on CM Secrett's BA set, this actuates whilst he is in flat 175. He notes the temperature suddenly soars to being unbearable in both the flat and the lobby outside the flat. (Source: Contemporaneous Notes: GTIRT17-00013 and MPS Witness Statement: GTIRT17-01551)

Hard data obtained from the BA bodyguard system shows the LPWW sounds at 01:55:29 and the team log off the ECB at 01:58:18. (Source: BA Data, Contemporaneous Notes: GTIRT17-00013 and MPS Witness Statement: GTIRT17-01551)

01:55:30* – A nine metre ladder can be seen outside on the floor of the South elevation. Firefighter Abell and other unidentified firefighters move this to the walkway area and it is then hauled aloft onto the walkway above. (Source: Camera C31, this is underneath Grenfell Walk, CCTV)

01:55:31 – Control contact CU 8 and pass on information from the Metropolitan Police Air Support unit. They pass on information that the police helicopter is above the flats and can the fire brigade monitor radio channel [REDACTED] and speak to the helicopter direct and they also said they had further information to pass to the CU. (Source, Radio Message: GTIRT17- 02551)

01:55:40 – BA Team Nine, Firefighter Merrion and Firefighter Sanders are climbing the stairs to the 14th Floor. The stairwell is congested and another Firefighter bumps into Firefighter Merrion causing his Automatic Distress Signal Unit (ADSU) is actuated. This then needs to be reset or a Firefighter Emergency will need to be implemented. BA Team Nine then make their way back to the bridgehead. The BAECO can then reset it. (Source: BA Data, MPS Witness Statement: GTIRT18-00651 and GTIRT18-00945)

01:55:50* - WM Glynn Williams, CM Christopher Batcheldor, Firefighter David Hill, Firefighter Abdul Malik and Firefighter Neil Saunders enter the main entrance, all wearing BA. (Source: Camera 4, CCTV)

01:56:00* – A BA Team from Wandsworth (Firefighter Bell, Firefighter Wright and Firefighter Alasad) enter the main entrance in BA and carrying a second set bag. (Source: Camera 4, CCTV)

01:56* – At around this time WM Dowden instructs WM Berry from Hotel 421, Richmond's Pump Ladder to take his appliance to the North elevation to attempt to prevent further fire spread. He later found out that Hotel 421, Richmond's Pump Ladder was taken to the West face as there was no vehicle access to the North elevation and utilised their 13.5 metre ladder to effect rescues. (Source: MPS Witness Statement: GTIRT18-01065, GTIRT18-01428)

01:56:09* – BA Team 13, CM Wigley, Firefighter Harris, Firefighter Gillam, Firefighter Gonzalez and Firefighter Roberts are the first EDBA crew to report to the bridgehead. They are told (believed to be by WM O'Keeffe) to get as high as possible before starting up. Firefighter Gillam states that in front of them were BA Team 11, Firefighters Mills and Firefighter Campbell. BA Team 13 ascend to the fourth floor but they decide that the smoke is too thick to continue without their facemasks on. At this point they put their facemasks on and start to breathe under air. It is believed that they may have returned to the bridgehead to start their EDBA set up, but this has not been corroborated. (Source: BA Data, Contemporaneous Notes: GTIRT17-00052, GTIRT17-00053 and GTIRT17-00051 and MPS Witness Statement: GTIRT18-01067, GTIRT17-02917, GTIRT17-01393 and GTIRT18-00414)

01:56:20 – CU 8 acknowledge receipt and say they are ready for the further information. (Source, Radio Message: GTIRT17- 02552)

Brigade Control receive the 111th 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual (believed to be Mr Burton) who is inside Grenfell Tower, flat 165, 19th floor. Call duration one minute and 20 seconds. Incident number 76138. (Source: 'Vision', GTIRT17-00572)

01:56:23 – Brigade Control call up CU 8 and relay the following radio message, "flat 95 on the 12th Floor has flames coming in the window, over." (Source: Radio Message GTIRT17-02553 and 'Vision')

01:56:27 - Echo 61, GM Matthew Cook from the ORT books Status 2, mobile to incident, from his address [REDACTED] (Source: 'Vision')

01:57* - *At around this time that SM Walton meets WM Dowden. They discuss that SM Loft is carrying out the FSG coordinator role. Whilst WM Dowden remained in charge. SM Walton states he thought it was a 15 pump fire but WM Dowden informs him it is now a 25 pump fire. WM Dowden informs SM Walton the original fire that started in flat 16 on the fourth floor has been extinguished but that the fire has travelled into the external cladding. He also confirms they have water and it doesn't appear to be an issue. He takes the IC tabard off WM Dowden and puts it on. He radios the CU with the message that he is now IC but does not get a reply from the CU. The subsequent required a radio message to be sent to Control informing them that SM Walton is now the Incident Commander, this is not sent.*

SM Walton details WM Dowden to go to the bridgehead and see what the current situation is regarding BA wearers and FSG calls. SM Walton also wants know if the fire is getting back into the building. if it is, he is going to declare a major incident.

As WM Dowden completes his hand over to SM Walton, DAC O'Loughlin arrives at their position. (Source: Contemporaneous Notes: GTIRT17-01215 and GTIRT17-00293, GTIRT17-00004, GTIRT17-00278, GTIRT17-01137, GTIRT17-01138 and GTIRT17-01139 and MPS Witness Statement: GTIRT18-01065 and GTIRT18-01000).

01:57:07 – Oscar Kilo 13, WM Leaver, FIO, books Status 3, in attendance at Grenfell Tower. He is the first Fire Investigator in attendance. (Source: 'Vision')

01:57:15 - BA Team Five return to ECB and close down; final pressures - CM Secrett 71 bar, Firefighter Badillo 117 bar and Firefighter Dorgu 129 bar. (Source: BA Data)

01:57:16 – Brigade Control receive the 112th 99 call in relation to Grenfell Tower, CRO Fox takes the call, from an individual who is outside Grenfell Tower, in relation to and individual in flat 203, 23rd floor. Call duration one minute and 13 seconds. Incident number 76140. (Source: 'Vision', GTIRT17-00574)

01:57:21 – Echo 109, GM Welch books Status 3, in attendance at Grenfell Tower. He is the first GM in attendance. (Source: 'Vision')

01:57:21 SOM Joanne Smith calls Brigade Control by telephone and speaks to AOM May and asks for an update. AOM May explains that it is quite difficult to get a handle on things because it is so busy but says they are taking a lot of FSG calls. SOM Smith asks if callers are staying on the line and AOM May says he knows of at least one. She reports she is at the Elephant and Castle and enroute. (Source: Vision and MPS Witness Statement: GTIRT17-02934, GTIRT17-01956)

01:57:24 – BA Team 12, Firefighter Foster and Firefighter Lawson go under air at this time, it is believed they are around the fourth floor level as the smoke becomes too thick to continue without BA. (Source: BA Data, Contemporaneous Notes: GTIRT17-00062, GTIRT17-00061 and MPS Witness Statement: GTIRT18-00927, GTIRT18-00068)

01:57:33 - BA Team Six return to ECB and close down their BA sets. CM Sephton draws a plan of flat 26 on a Forward Information Board when he returns to the bridgehead and also draws the plan on the wall. (Source: BA Data, Contemporaneous Notes: GTIRT17-00022, GTIRT17-00032 and GTIRT17-00030 and MPS Witness Statement: GTIRT18-01440, GTIRT17-01363 and GTIRT18-01036)

01:57:33* – Golf 251, Ealing's Pump Ladder, arrives at Grenfell Tower. This is the 25th fire engine in attendance. (Source: approximate time using GPS Data)

01:57:34 – Brigade Control send a radio message to CU 8 with the following information, "Charlie Uniform eight, the caller in flat 205 on the 23rd floor reports that the fire is coming right up to their flat, over". (Source: Radio Message: GTIRT17-02558 and 'Vision')

01:57:45 – Brigade Control receive the 113th 999 call in relation to Grenfell Tower, CRO Gotts takes the call from an individual (believed to be Mr Aboud) who is inside Grenfell Tower, flat 92, 12th floor. Call duration two minutes and 14 seconds. Incident number 76141. (Source: 'Vision', GTIRT17-00575)

01:57:56 – Brigade Control receive the 114th 999 call in relation to Grenfell Tower, CRO Howson takes the call from an individual who is outside Grenfell Tower. Call duration 19 seconds. Incident number 76139. (Source: 'Vision', GTIRT17-00573)

01:58* – Between 01:39 – 01:58 the following residents have either been rescued, assisted out or self evacuated from Grenfell Tower. (Source: GTIRT18-01141 and GTIRT18-01051)

1. Tyroshondre Petralias (Flat 2) (1 st Floor)
2. Rukayetu Mamudu (Flat 2) (1 st Floor)
3. Kenny Smith (Flat 13) (4 th Floor)
4. John Beadle (Flat 13) (4 th Floor)
5. Sharon Haley (Flat 24) (5 th floor)
6. Paul Menacer (Flat 33) (6 th Floor)
7. Kerry O'Hara (Flat 34) (6 th Floor)
8. Abelina Shah (Flat 32) (6 th Floor)
9. Saraya Nana-Tower (Flat 35) (6 th Floor)
10. Tania Allcorn (Flat 35) (6 th Floor)
11. Josefine Shah (Flat 32, 6th floor)
12. Turufat Yilman Girma (Flat 44) (7th Floor)
13. Abraham Abebe (Flat 44) (7th Floor)
14. Abem Abraham (Flat 44) (7th Floor)
15. Clarita Ghavimi from (Flat 75) (10th Floor)
16. Luca (Lukic) Branislav (Flat 84) (11th Floor)

17. Leroy (Barnaby) Augustus (flat 174) (20th floor)
18. Petra Doulova (flat 174) (20th floor)
19. Miriam Lovsin (Unknown)
20. Aimen Mawia (Unknown)

01:58:00* – Firefighter Daoud and Firefighter Donoghue from Chiswick, Golf 371, Chiswick's Pump Ladder, enter the main entrance and proceed to make an entry into the community room on the ground floor level. (Source: Camera 4, CCTV)

01:58:04 - Oscar Kilo 15, the second FIU book Status 2, mobile to incident. There are two WMs riding this investigation unit, WM Reed and WM Girling. (Source: 'Vision')

01:58:28* - BA Team Seven, CM Tillotson, CM Gallagher, Firefighter Bettinson, Firefighter Wolfenden, and Firefighter Felton, reach the ninth floor and Firefighter Bettinson and Firefighter Wolfenden go to flat 65 and enter. Inside is a woman and female child (Mrs S Laci and Miss C Laci). In order to talk to the Laci family CM Tillotson and CM Gallagher enter the flat and remove their facemasks so they can talk to them more easily and inform them they cannot take the family out due to heavy smoke logging. CM Tillotson, Firefighter Felton and CM Gallagher return to bridgehead and get two BA sets from two firefighters who were waiting to be committed, their intention is to provide respiratory protection for the Mrs Laci and her daughter. (Source: Contemporaneous Notes: GTIRT17-00042, GTIRT17-00037, GTIRT17-00036, GTIRT17-00035 and GTIRT17-00028 and MPS Witness Statement: GTIRT18-00064, GTIRT18-00929, GTIRT17-02925, GTIRT18-01002 and GTIRT18-01110)

01:58:39 – Oscar Foxtrot 67, SM Egan, books Status 3, in attendance at Grenfell Tower. He is the fifth SM in attendance. (Source: 'Vision')

01:58:45 – CU 2, Islington's CU book Status 3, in attendance at Grenfell Tower. This is the third CU in attendance. (Source: 'Vision')

01:58:57 – Brigade Control calls up CU 8. (Source: Radio Message GTIRT17-02612 and 'Vision')

01:58:59* – At around this time BA Team Nine, Firefighter Merrion & Firefighter Sanders are ascending to the 14th floor responding to a FSG Call. When they are between the fifth and eighth floors, Firefighter Merrion's ADSU motion alarm actuates accidentally. This has been actuated by another firefighter who has bumped into him as they ascended due to the poor visibility. Firefighter Merrion and Firefighter Saunders have to return to BAECF to have the alarm reset. Once reset they head back up the stairs to the 14th floor. (Source: BA Data, Contemporaneous Notes: GTIRT17-00048 and GTIRT17-00459, GTIRT17-00049 and GTIRT17-00419 and MPS Witness Statement: GTIRT18-00651 and GTIRT18-01134)

01:59:00* – WM Williams removes his BA set and takes it outside. (Source: Camera 4 and 1, CCTV)

01:59:05 – Brigade Control call up CU 8 and send them a radio message. **"Charlie Uniform eight, a further call. We have 11 persons and a baby, who are trapped in flat 201. That's flat 201. That's 11 persons and a baby, over"**. (Source: Radio Message GTIRT17-02613 and 'Vision')

01:59:20 – CU 8 confirm they have received the radio message in relation to flat 201 and ask what floor flat 201 is on. (Source: Radio Message GTIRT17-02614 and 'Vision')

01:59:49* - BA Team 14, CM Eden and Firefighter Welch are briefed by WM O'Keeffe at the bridgehead. They are tasked to go to the 20th floor, assess the situation and inform the bridgehead. Firefighter Welch has one length of fire hose, a branch and a Halligan tool. CM Eden took one length of fire hose and a thermal image camera. (Source: BA Data, Contemporaneous Notes: GTIRT17-00065 and GTIRT17-00063 and MPS Witness Statement: GTIRT18-00309 and GTIRT18-00099)

02:00* – At around this time Firefighter Murphy from BA Team 10 meets Firefighter Badillo from BA Team Five on the seventh floor. Firefighter Murphy says it is difficult to identify floor numbers so Firefighter Badillo shows him where they are located but acknowledges the difficulty. The BA data shows a reduced breathing rate at this time for both wearers, consistent with these actions. (Source: BA Data, Contemporaneous Notes: GTIRT17-00009, GTIRT17-00431 and GTIRT17-00021 and MPS: GTIRT18-01411, GTIRT18-00917 and GTIRT18-00993 Witness Statement)

02:00:00* - Two firefighters wearing BA with FRU helmet markings appear on the seventh floor and both then leave. The only two firefighters in the building at the time that have FRU markings on their helmets and match the timings are Firefighter Cuthbert and Firefighter Shaw, who go to fifth to seventh floors for search and rescue. (Source: Camera C15, CCTV and BA Data)

02:00:06 – Control reply that it is the 23rd floor, then also pass on information about another call from a person trapped in flat 203 on the 23rd floor. (Source, Radio Message: GTIRT18-02615)

8 Appendix 1: Glossary


8.1 Glossary of abbreviations



AC	Assistant Commissioner
ADSU	Automatic Distress Signal Unit
ALP	Aerial Ladder Platform
AOM	Assistant Operations Manager
BA	Breathing Apparatus
BAECO	Breathing Apparatus Entry Control Officer
BAECP	Breathing Apparatus Entry Control Point
BCC	Brigade Coordination Centre
BSR	Bereaved, Survivors and Residents
BMA	Bulk Media Advisor
BWV	Body Worn Video
CCTV	Closed Circuit Television
CM	Crew Manager
CRO	Control Room Operator
CU	Command Unit
DAC	Deputy Assistant Commissioner
DRM	Dry Riser Main
ECB	Entry Control Board
EDBA	Extended Duration Breathing Apparatus
FIO	Fire Investigation Officer
FIU	Fire Investigation Unit
FRU	Fire Rescue Unit
FSG	Fire Survival Guidance
GM	Group Manager
GPS	Global Positioning System
GTI	Grenfell Tower Inquiry





GTIRT	Grenfell Tower Investigation and Review Team
HART	Hazardous Area Response Team (London Ambulance Service)
HMEPO	Hazardous Materials Environment Protection Officer
HP	Hydraulic Platform
IC	Incident Commander
IEC	Immediate Emergency Care Pack.
JESIP	Joint Emergency Services Interoperability Principles
LAS	London Ambulance Service
LESLP	London Emergency Services Liaison Panel
LFB	London Fire Brigade
LPM	Litres per Minute
LPWW	Low Pressure Warning Whistle
MDT	Mobile Data Terminal
mm	Millimetre
MO	Monitoring Officer
MPIR	Metropolitan Police Incident Room
MPS	Metropolitan Police Service
OM	Operations Manager
OOW	Officer Of The Watch
ORT	Operational Review Team
OSU	Operational Support Unit
PDA	Pre Determined Attendance
PEG	Protective Equipment Group
POM	Principal Operations Manager
PPE	Personal Protective Equipment
PPV	Positive Pressure Ventilation
RML	Resource Management Logistics
RPE	Respiratory Protective Equipment


SAI	Senior Accident Investigator
SDBA	Standard Duration Breathing Apparatus
SM	Station Manager
SOM	Senior Operations Manager
StARs	Staff attendance Recording System
TIC	Thermal Image Camera
TL	Turntable Ladder
USAR	Urban Search And Rescue
WM	Watch Manger

8.2 Glossary of terms with descriptions and images


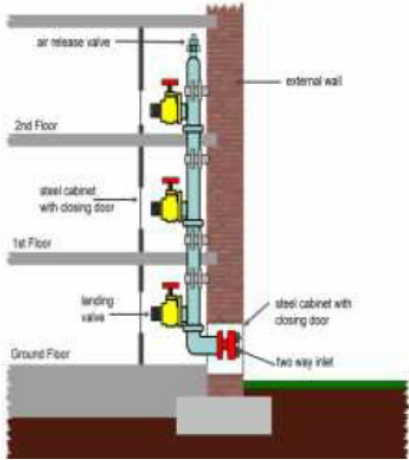
Term	Description	Image
'Airwave' Radio, handheld and Main Scheme	The LFB use a digital radio system to communicate with fire engines and senior officers. The radios operate by accessing a communications network managed by Airwave Solutions Limited. The Motorola MTH800 hand-held radio is issued to senior officers and other selected key personnel. Fire engines have the same radio which is not portable and is permanently fixed on the dashboard.	
Adjusted Times	Video or camera footage times that have been adjusted by a plus(+) or a minus(-) to reflect the correct time relating to GMT (Greenwich Mean Time) or BST (British Summer Time).	



<p>Aerial Ladder Platform (ALP) – London Fire Brigade</p>	<p>A vehicle-mounted ladder which can reach up to 32 metres (approximately 10 floors). It has a cage at the top which can hold 4 people. It can be operated either from the ground level or from within the cage.</p>	
<p>Aerial Ladder Platform (ALP) – Surrey Fire and Rescue Service</p>	<p>A vehicle –mounted ladder which can reach up to 42 metres high (approximately 14 floors). It has a cage at the top which can hold 4 people and can be operated either from ground level or from within the cage.</p>	
<p>Automatic Distress Signal Unit (ADSU)</p>	<p>An ADSU is automatically actuated when the wearer is still for 45 seconds. It can also be manually-operated. The alarm, is connected to each BA set to attract the attention of other BA wearers if an individual is in distress.</p>	
<p>Breathing Apparatus (BA) tally</p>	<p>A rectangular yellow plastic tally carrying a key to activate and deactivate the Automatic Distress Signal Unit (ADSU) that belongs to a Breathing Apparatus (BA) set. The BA tally bears the BA set's individual number and also records the name of the firefighter wearing it, the pressure of the air in the cylinder and the time at which the firefighter is scheduled to report back to the Breathing Apparatus Entry Control Officer (BAECO). It is inserted into a slot in the BA Entry Control Board (ECB) before the firefighter goes into a fire.</p>	 <p>BA Tally with (Designated) Radio Module Unit ID Number (160)</p>
<p>Body Worn Video (BWV)</p>	<p>This equipment is worn by MPS police officers and captures and records video footage. The BWV is</p>	



	time stamped and verified by the MPS.	
Bodyguard (BG)	Part of the BA set electronic monitoring system, indicating cylinder pressure. It has within it a low pressure warning whistle to alert the firefighter that they are running low on air.	
Branch	The nozzle at the end of any fire hose which is used to direct and control water flow onto a fire.	
Breaking in equipment	Crow's foot (CF2 Hydraulic spreading tool. This can be used to apply a controlled load to the lock of a door, often with enough force so that the lock is broken.	
Breaking in equipment	A sledge hammer is a tool with a large, flat, often metal head, attached to a handle. It allows more force to be applied to gain entry through doors and windows, etc.	
Breathing Apparatus (BA)	Breathing Apparatus is a piece of equipment comprising an airtight mask, a harness and a cylinder containing air which, when activated, allows the firefighter wearing it to breath in smoky or unbreathable air.	



Breathing Apparatus Entry Control Board (BAECB)	A computerised board which supplies two-way data communication between the firefighters wearing BA, their BA set and the ECB. The ECB gives the Entry Control Officer (ECO) real time information in relation to each firefighter who has been logged onto that particular board.	
Breathing Apparatus Entry Control Officer (BAECO)	A firefighter or officer who is responsible for managing the BA Entry Control Board. The fire officer will monitor the remaining time available to the BA wearers and will alert the officer in charge if they do not return to the BAECO in the allotted time.	
Breathing Apparatus Entry Control Point (BAECP)	BAECP is the location near to and within sight of the physical entry and exit points to buildings for firefighters wearing BA. At it is the Entry Control Board (ECB) which is controlled by an Entry Control Officer (ECO) and all firefighters tasked to wear BA must report to the BAECP before and after they go in to extinguish a fire.	
Bridgehead	A strategic location, positioned at least two floor levels below the floor which the fire is on, where the BA Entry Control Point (BAECP) is located.	
Brigade Control	See London Operations Centre	
Brigade Coordination Centre (BCC)	Provides support to and implements the actions and decisions of the duty AC and / or Gold Commander (Fire) during incidents which require a more senior level of wider control or operational management than day-to-day incidents.	




Bulk Media Advisor (BMA)	This officer is advises on tactics and provides support and technical expertise in the use of bulk firefighting media. Firefighting media is the term used to describe material used to extinguishing fires, which are predominantly water and foam. At fires where large volumes of water or foam would be required, a Bulk Media Advisor would attend. Their attendance would be triggered by the attendance of a lorry carrying many miles of fire hose or a pump capable of supplying a large volume of water.	
Call Out Base (SM or GM)	A call out base is where senior officers stay when on duty overnight and can either be privately provided within LFB-agreed boundaries or provided by the LFB at specific fire stations. The officers must inform the LOC where they are each time they are on duty and will respond to emergency incidents from there.	
Call Sign	Each fire engine, specialist appliance and senior officer is allocated an individual call sign by which they are recognised and which is used primarily over the radio for concise and precise communications either to or from the LOC.	
Closed Circuit Television (CCTV)	Cameras inside and outside the building that have recorded footage.	
Commissioner	The London Fire Commissioner is responsible for providing London's fire and rescue service, ensuring that it is effective and efficient.	


<p>Command Unit (CU)</p>	<p>Fire engine that can be used by the Incident Commander to plan their response to an incident. It can also be used to hold meetings or co-ordinate other functions needed at the incident.</p>	
<p>Contemporaneous Notes</p>	<p>As firefighters left the incident on the morning of 14th June 2017, they were directed to attend Paddington Fire Station and asked to write down their actions and recollections in the form of a contemporaneous note.</p>	
<p>Covering Jet</p>	<p>A large fire hose spraying water onto the outside of a building to protect the building or surrounding buildings or structures from spread of fire or protect firefighters carrying out rescues or specific actions.</p>	
<p>Dry Riser</p>	<p>A fixed steel pipe, normally 4" (100mm) diameter that runs vertically up a building. The inlet is where the fire hose from the fire engine is attached (normally ground floor level) so that water can be pumped via the fire hose into the pipe. This, in turn, supplies water to outlets attached to the dry riser on every or alternate floors. An outlet is where the fire hose taken into the building by firefighters is attached, and will be on a floor either on or near the floor with the fire. Outlets open like taps to supply water to extinguish a fire. The inlets and outlets are normally protected within locked cabinets.</p>	

Embedded Video	Video footage inserted into a document or presentation to enable playback on any computer.	
Extended Duration Breathing Apparatus (EDBA)	EDBA is carried on FRUs (FRU). It allows firefighters to use it for up to 45 minutes if they breathe air at a rate of 58 litres per minute. If this rate increases because the firefighter is breathing faster and/or working harder, the time available decreases as the air will be used up more quickly.	
Fire Engine	<p>An emergency vehicle used by the LFB to carry water, firefighters and fire service equipment to an incident.</p> <ul style="list-style-type: none"> • A Pump is a fire engine that can carry up to six firefighters and it carries a 9 metre ladder. • A Pump Ladder is the same as a Pump but carries a 13.5 metre ladder. 	
Fire Investigation Officer	A specially trained fire officer who attends fires in a Fire Investigation Unit (FIU) to gather evidence, investigate and establish the most likely cause for the development of a fire.	

Fire Investigation Unit (FIU)	An emergency vehicle specifically designed to carry specialist equipment used to investigate and establish the most likely cause of a fire.	
Fire Rescue Unit (FRU)	An emergency vehicle that carries specialist rescue equipment and is the only emergency vehicle to carry EDBA. It does not carry ladders or water.	
Fire Survival Guidance (FSG)	An FSG call is one received by Brigade Control where the caller believes they are unable to leave the premises due to the effects of fire and where the control officer remains on the line providing appropriate advice. The call continues until either the caller is able to leave by their own means, is rescued by the LFB or the telephone line is cleared. It should be noted that a caller may clear the line after the FSG process has commenced but that will not necessarily mean a cancellation of the response by the LFB.	
Functional Sector	A sector is the term used when an Incident Commander splits the incident into sections and designates areas of responsibility to ensure the level of command and safety.	

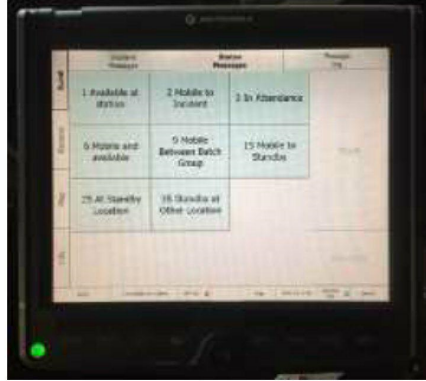
	A Functional Sector is an area of responsibility given to an officer to carry out a specific role, e.g. safety and it is their responsibility to ask for equipment and personnel needed to complete the task.	
Gold Commander (Fire)	A senior officer who acts as the Commissioner's representative at multi-agency meetings as Fire Gold and liaises closely with the Commissioner's Group, the BCC and the Continuity Management Team (CMT) to ensure that LFB priorities and needs are understood, resourced and met.	
Grenfell Tower Investigation and Review Team (GTIRT)	A dedicated team called the 'Grenfell Tower Investigation and Review Team' (GTIRT), which has full responsibility for undertaking all the work relating to the LFB's 'safety and learning' review.	
Ground Monitor	The ground monitor is a nozzle fed by fire hose that may be set up and left unattended safely on the ground supplying a jet of water.	
Halligan Bar	A tool which has been specifically designed to lever, puncture and prise and is ideally suited to force entry into outward opening door and grilles.	



Handheld Radio	Handheld ultra high frequency (UHF) fire ground radios are issued to every operational firefighter and senior officer to provide local communication between personnel at incidents.	
HART	London Ambulance Service's Hazardous Area Response Team.	
HMEPO	Hazardous Materials and Environmental Protection Officer. An LFB officer with specialist training who offers advice to Incident Commanders on how to best proceed at an incident where hazardous materials are involved.	
Hydraulic Platform (HP)	An aerial appliance that has a maximum working height of 23.5 metres. This is currently a spare appliance within the LFB fleet.	
Immediate Emergency Care (IEC)	An IEC is a package of training and equipment developed by the LFB and the London Ambulance Service to give firefighters an enhanced capability to treat casualties whilst carrying out their duties.	
In Attendance	Once a fire engine or officer has	

	been assigned by Brigade Control to attend an incident, when they arrive they must book "in attendance" (otherwise known as Status 3) either over the radio or by computer to log that they have arrived and are available at the incident.	
Incident Commander (IC)	The fire officer in charge of the incident. This will not necessarily be the most senior officer at the incident. The number of fire engines required at the incident will dictate the rank of officer required to be in charge.	
Incident Ground	The term used to define the physical area of the incident.	
JESIP	The Joint Emergency Services Interoperability Principles (JESIP) manual focuses on Police, Fire and Ambulance interoperability in the early stages of the response to a major or complex incident. It's aim is to achieve an effective and co-ordinated response to a major incident.	
Leaky Feeder	<p>Used in conjunction with a telemetry Repeater and consists of a coaxial cable, 175m in length and wound onto a drum used to roll it out.</p> <p>Normally connected to a Repeater and extended as required. An antenna is fitted at the drum end to transmit the signal.</p>	 <p>The diagram illustrates a Leaky Feeder system. It shows a black rectangular repeater unit with a vertical antenna. A white coaxial cable is connected to the unit and runs along a path. The cable is wound around a red drum. A blue arrow indicates the direction of signal transmission from the repeater, through the cable, and out of the drum's end where a small antenna is located. A firefighter in full gear is shown at the end of the cable, indicating its use in the field.</p>
LESLP	The London Emergency Services Liaison Panel (LESLP) manual is the agreed major incident procedure of the Emergency Services in London. LESLP incorporates JESIP (see	


	JESIP)	
London Operations Centre (LOC) known as Brigade Control	The London Operations Centre is at 6 Jubilee Way, London SW19 3XD. It is a purpose-built facility that hosts the LFB control room, the Resource Management Centre and the London Resilience Group.	
Low pressure warning whistle (LPWW)	An automatic alarm that sounds when the firefighter wearing BA reaches a predetermined level of air in their BA set cylinder. It indicates the wearer is low on air.	
Major Incident	This is any emergency that requires special arrangements to be implemented by one or all of the Emergency Services and will generally include the involvement, either directly or indirectly, of large numbers of people.	
Messages - Assistance/Priority Informative Stop	<ul style="list-style-type: none"> Assistance message - is sent on behalf of the IC (normally by radio) to Brigade Control to request more fire engines and/or other specialist vehicles which the Incident Commander considers are required to deal with the incident. If a message is urgent, it is prefixed by the word "Priority". Informative messages - used to provide Brigade Control or officers not in attendance at the incident with an accurate description of the incident and the progress being made. Stop message - is the final message sent on the main scheme radio to indicate the incident has ended and to provide a summary. 	

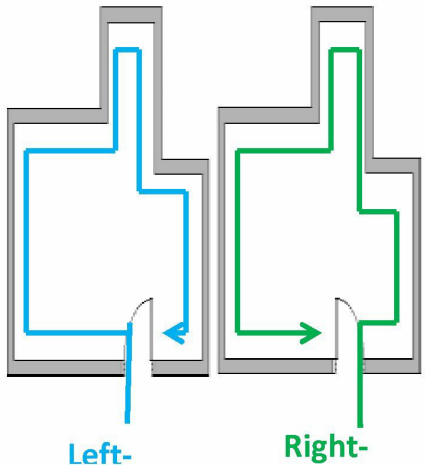
Metropolitan Police Incident Room (MPIR)	This term was used to describe the Metropolitan Police operational control room that manages resources across London during large events and incidents, both pre-planned or spontaneous. The name for this control room changed around six years ago. It is now referred to as the Special Operations Room (SOR) during pre-planned events or Pan-London Control during no notice/spontaneous events and incidents.	
Metropolitan Police Service (MPS)	Service responsible for policing across London with exception of the City of London and transport hubs. Policing in these areas are provided by City of London Police and British Transport Police respectively.	
Metropolitan Police Service Witness Statements	<p>Information provided by LFB personnel and recorded and written up by the Metropolitan Police Service (MPS) as part of their criminal investigation as formal witness statements (named Operation Northleigh).</p> <p>To be allowed in court, section 9 of the Criminal Justice Act (CJA) 1967 states that a witness statement must:</p> <ul style="list-style-type: none"> • be a formal written document of a person • be a set of facts relating to a certain event, or events • be signed by the person who makes it, to confirm that the contents of the document are true, (known as a statement of truth) • have a copy made available to 	


	other parties beforehand	
Mobile Data Terminal (MDT)	<p>The Mobile Data Terminal MDT is a vehicle-mounted fixed tablet computer, fitted with a 12" touch screen.</p> <p>MDTs are fitted to most operational vehicles, enabling crews to access incident details, messages and operational data.</p>	
Monitoring Officer (MO)	A fire officer who attends incidents to monitor the actions of the IC and provide support and guidance. The MO is normally one rank above the IC.	
North West Fire Control Centre	North West Fire Control is a public sector company set up exclusively by the Fire Services in the North West to jointly handle all 999 emergency calls and be responsible for mobilising firefighters and fire engines to incidents in Cumbria, Lancashire, Greater Manchester and Cheshire.	
Notification Action	Sent out by Brigade Control staff , notification actions comprise information regarding pre-determined attendances to incidents and are received by senior and principal LFB managers and other agencies. They are also sent to specialist tactical advisors and supporting resources.	
Officer Of The Watch (OOW)	On any given shift in Brigade Control, the officer in charge is locally referred to as the Officer of the Watch. This is not a defined role in the context of the formal management structure.	




Operational Review Team (ORT)	A team of senior officers tasked with reviewing all aspects of performance at incidents throughout the LFB.	
Operational Sector	<p>The incident ground can be split into different sections (or sectors) to allow the IC to maintain control and delegate tasks.</p> <p>The Operational Sector is an area of responsibility defined by a physical area of the incident ground. Where possible, clearly identifiable boundaries such as floors or walls should be used.</p>	
Operational Support Unit (OSU)	OSU carries a variety of additional equipment and consumable resource packs, including fuel, water, BA cylinders etc.	
Operations Commander	In order to maintain the span of control at very large and/or complex incidents and where a greater level of command is required, the IC may appoint one or more Operations Commanders to take responsibility for a number of sectors, each of which will attract its own Sector Commander.	
Pager	A small wireless <u>telecommunications</u> device that can be clipped onto a belt and that receives and displays alphanumeric messages. These are carried by senior officers, officers in charge of fire engines and specialist personnel	


	to alert them of incidents and communicate pertinent information regarding them.	
Persons reported (PR)	This is a priority message sent by the IC to inform Brigade Control that it is believed people may be involved in the fire. This will automatically prompt Brigade Control to dispatch an ambulance and an FIU if this has not already been done.	
Pre-Determined Attendance (PDA)	The pre-determined attendance is the number and type of fire engines and equipment pre-planned to be sent to deal with a particular type of incident. The Brigade Control operator selects the appropriate incident type code which then matches the relevant resources that have been pre-determined to deal with that incident type.	
Pre-Alarm	A Pre-alarm is part of the Automatic Distress Signal Unit (ADSU) function with a BA set Bodyguard Unit. If a firefighter wearing BA is stationary for more than 30 seconds, they receive a continuous warning bleep for an additional 15 seconds which is called the Pre-Alarm sequence. If the wearer moves within this time, the pre-alarm is cancelled. If they remain motionless beyond 15 seconds, the ADSU will go into full alarm and cannot be cancelled until the BA tally key is inserted into the Bodyguard unit.	
Protective Equipment Group (PEG)	LFB group who maintain all the LFB protective equipment including BA sets, ropes and fire hose.	

Radio Repeater	Radio repeaters are only used with handheld incident ground radios. These have the potential to enhance radio coverage in locations where radio signal penetration is severely limited or not usually possible due to building construction or location.	
Radio Workshop's Engineer	Radio workshop engineers are available to be mobilised to incidents and to provide technical advice and equipment to assist with radio reception issues.	
Remote Monitoring	Carried out by a senior officer who is allocated via pager to incidents of a certain size or type and monitors messages over the radio from Incident Commanders. The senior officer may subsequently attend the incident if ordered by Brigade Control or if they deem it necessary.	
Resource Management Logistics (RML)	The Resource Management Logistics cell are part of the LOC function. They are responsible for a range of activities which include Safety Event notifications, Principal Officer and Authority Member notifications, arranging delivery and movement of large items of equipment such as firefighting foam, BA equipment and contracted equipment provision e.g. cranes.	

Right and Left hand search	BA Teams when instructed to search a room or compartment, normally enter via a door. The wall upon which this door is situated becomes the start point for a search of the perimeter of the compartment. When entering, a crew will turn left and move along this wall (Left-hand search) or right and move along this wall (Right-hand search)	
Sector	Sector is the term used when an IC has sectioned an incident and designates areas of responsibility to ensure the level of command and safety.	
Sector Commander (SC)	A Sector Commander is an officer nominated to take command of a sector, whether it is an Operational Sector or a Functional Sector.	
Senior Accident Investigator (SAI)	LFB officer assigned to investigate any accident, injury or near miss that takes place at an incident or in the workplace.	
Smoke logging	When smoke has entered a compartment or area and makes it difficult or impossible to breathe or see clearly.	
Staff Attendance Recording System (StARs)	This is a computer based application used across the LFB that records information on staff attendance at work and which fire engine the individuals are allocated to.	

Standard Duration Breathing Apparatus (SDBA)	<p>SDBA is carried on all front line fire engines, except Fire Rescue Units (FRU). The BA set will give a working time of 31 minutes if the firefighter wearing it breathes at a rate of 50 litres per minute. If this rate increases because the firefighter is breathing faster and/or working harder, the time available decreases as the air will be used up more quickly.</p>	
Status	<p>Status changes can be sent via a variety of means, including the Brigade's main-scheme radio, using either voice or the MDT.</p> <p>Status Code Descriptions:</p> <p><u>Fire engines only</u> Status 1: Available at the fire station for emergency calls</p> <p><u>Fire engines and senior officers</u> Status 2: En route to the incident Status 3: In attendance at the incident</p> <p><u>Senior officers only</u> Status paging : Available by pager at a specific location within the LFB.</p>	
Tactical mode Delta	<p>Tactical mode 'Defensive' is relayed over the radio by phonetic alphabet as D=Delta. Delta "Defensive" tells Brigade Control that firefighters are holding the fire by surrounding it but without advancing on the fire.</p>	
Tactical mode Oscar	<p>Tactical mode 'Offensive' is relayed over the radio by phonetic alphabet, O=Oscar. Oscar "Offensive" tells Brigade Control that firefighters are</p>	

	attacking and advancing on the fire.	
Telemetry Repeater	<p>A Telemetry Repeater is used to restore lost signal when BA (BA) wearers go beyond the range of signal provided by the Entry Control Board (ECB).</p> <p>A Telemetry Repeater does not boost the radio signal; it stores transmissions and passes them onward to another repeater, Entry Control Board (ECB) or BA set(s).</p>	
TIC (TIC)	<p>A camera that detects heat and identifies the temperature of the items being observed by the operator. It can capture still and video images.</p>	
Turntable Ladder (TL)	<p>A vehicle with a ladder which has the capability of reaching 32 metres (approximately 10 floors). It has a detachable cage which can hold 3 people. It can be operated at ground level or from the cage.</p>	

<p>Urban Search and Rescue (USAR)</p>	<p>Specialist team within the LFB and nationally that respond to specialist incidents including building collapses or body retrieval.</p>	
<p>Ventilate / Ventilation</p>	<p>The removal from a building of the hot smoke and gases produced by a fire by replacing them with a supply of fresher air. This can happen in an uncontrolled way if part of the building's structure fails, for example, a door or a window, as a consequence of firefighting when teams enter buildings via doors and windows or as part of the Incident Commander's coordinated plan.</p>	
<p>'Vision' Mobilising System</p>	<p>The LFB Control room use the Capita Fortek 'Vision' mobilising system to record the location of the incident, and then despatch the nearest appropriate resources in response to emergency calls. The 'Vision' system displays a number of actions that control room staff need to undertake and 'Vision' records all these actions when taken, as well as a number of automated system actions. The system also supports a telephone and radio recording facility. This allows for the recording of incident updates and situational reports. This mobilising system incorporates a Global Positioning System (GPS) to ensure the nearest available appliances are sent to incidents.</p>	

9 Appendix 2: Source Data

The following table details the data sources that the Brigade has used in producing this report. The table provides a brief explanation of each information source and details whether the source data is owned by the Brigade, been supplied by Operational Northleigh (the Metropolitan Police Service's Criminal Investigation in to the Grenfell Tower fire), or has come from a publically available source. The table also details whether the time data within each data source is 'hard', 'soft' or both.

Brigade Owned Data Sources	Descriptor	Time Designation
'Vision'	This is the name of the Brigade's computer based mobilising system. It is used to support the Brigade Control functions and logs all 999 Emergency Calls, the movement of fire engines, Brigade assets and senior officers. All messages between Brigade Control, the scene of operational incidents, external agencies and members of public requesting the fire service using the 999 Emergency Call number are also logged on this system and time stamped.	Hard
Breathing Apparatus (BA) Bodyguard data	Bodyguard data is generated by an electronic gauge attached to the Brigade's BA equipment. It incorporates an electronic whistle and distress signal capability and records 'time stamped' information about the set activation and firefighter breathing rates when the BA is in use.	Hard
Breathing Apparatus (BA) Telemetry	Telemetry is a capability fitted to a BA set that transmits and records certain information relating to the use of the BA equipment. This data can be retrospectively downloaded and analysed to corroborate actions taken by firefighters. This includes when the BA apparatus set was started up, breathing rates and amount of air consumed.	Hard
Contemporaneous Notes	As firefighters left the incident on the morning of 14 th June 2017, they were directed to attend Paddington Fire Station and asked to write down their actions and recollections in the form of a contemporaneous note.	Soft
Thermal Image Cameras (TICs)	A TIC is carried on every fire engine and provides a capability whereby firefighters are able identify the temperature of the objects/environment being viewed. The TIC is able to take 'still' pictures and record video footage whilst firefighters are undertaking firefighting and search and rescue operations. The images recorded on this	Soft

	equipment are timestamped, but because the TICs are not automatically synced with an independent time source the timings cannot be taken to be accurate.	
Fire Engine Global Positioning System (GPS)	This device is fitted to all fire engines and tracks/records the position of the vehicle. The data recorded is time stamped but not completely accurate as the GPS signal is only plotted every 15 seconds.	Soft
Staff Attendance Recording System (StARS)	This is a computer based application used across the Brigade that records information on staff attendance at work and which fire engine the individuals are allocated to.	N/A
Log books (Station and BA)	All LFB stations maintain a log book which identifies personnel on duty and their allocated roles for the shift. Each BA set has a log book allocated to it which is completed by the firefighter to whom the set is allocated. It is used to record an 'acceptance' test at the start of the shift and any 'after use' test following operational or training use.	Hard
Data provided by Operational Northleigh	Descriptor	Type of evidence
Brigade witness statements (taken by Operation Northleigh)	This information is the formal witness statements provided by Brigade personnel, which have been taken by the MPS as part of their criminal investigation. (named Operation Northleigh).	Soft
Close Circuit Television (CCTV) footage	There were five CCTV cameras (C1, C2, C3, C4 and C5) on the ground floor at Grenfell Tower that captured footage covering some of the Brigade's operational response activity during the fire. There are further cameras in the fire lift (C18), seventh floor lobby (C15) and on camera on the second floor (Camera 1, Boxing Club). There are six external cameras (CH01, CH02, CH05, CH06, CH07, CH09). Internal CCTV times have been verified by the Metropolitan Police. External CCTV times have not been verified.	Soft
Police 'Body Worn Video' (BWV) footage	This equipment is worn by MPS police officers and captures and records video footage. The BWV has been verified by the MPS who have confirmed to LFB that it is correct. To obtain BST you need to add one hour as currently the BWV is set at GMT.	Hard

MPS 'Named Exit Residents List'	This is a MPS data-set of the information detailing all the Grenfell residents who left the building after the fire started.	Soft
Other Images	These are images that the MPS has collated from 'open source' information. Some of this footage has a verified time stamp.	Hard and Soft
MPS External Fire Spread Report	This report contains images recording the external spread of fire. Sources for the images include BWV, External CCTV, Media, and the National Police Air Service. Only the BWV images are verified by MPS as detailed above.	Soft
DVI Recovery Floor Plan	This presentation contains plans for every floor at Grenfell Tower and details the flat of origin for all residents, which residents safely evacuated and the location where fatalities were recovered.	Soft

10 Appendix 3: Media References

Media References (attached separately)
20170614_010536
20170614_010806
20170614_010926
20170614_011200
20170614_011532
20170614_012100
20170614_012251
CCTV-27

11 Appendix 4: GTIRT References

GTIRT References	Description of GTIRT Reference
GTIRT17-00004	Contemporaneous Notes for Andrew Walton
GTIRT17-00005	Contemporaneous Notes for Brett Loft
GTIRT17-00006	Contemporaneous Notes for Gareth Cook
GTIRT17-00009	Contemporaneous Notes for David Badillo (1)
GTIRT17-00010	Contemporaneous Notes for Daniel Bills
GTIRT17-00011	Contemporaneous Notes for Daniel Brown (1)
GTIRT17-00012	Contemporaneous Notes for Charles Batterbee (1)
GTIRT17-00013	Contemporaneous Notes for Christopher Secrett
GTIRT17-00014	Contemporaneous Notes for Thomas Abell (1)

OFFICIAL

GTIRT17-00015	Contemporaneous Notes for Alex De St Aubin
GTIRT17-00016	Contemporaneous Notes for Justin O'Beirne
GTIRT17-00017	Contemporaneous Notes for Christohper Dorgu
GTIRT17-00018	Contemporaneous Notes for Brien O'Keeffe (1)
GTIRT17-00019	Contemporaneous Notes for Jamal Stern
GTIRT17-00020	Contemporaneous Notes for Charles Cornelius
GTIRT17-00021	Contemporaneous Notes for Desmond Murphy
GTIRT17-00022	Contemporaneous Notes for Benjamin Broderick
GTIRT17-00024	Contemporaneous Notes for Wayne Archer
GTIRT17-00025	Contemporaneous Notes for John O'Hanlon
GTIRT17-00026	Contemporaneous Notes for David Davies
GTIRT17-00027	Contemporaneous Notes for Nicholas Barton
GTIRT17-00028	Contemporaneous Notes for Ben Felton
GTIRT17-00029	Contemporaneous Notes for Patrick Murray
GTIRT17-00030	Contemporaneous Notes for Matthew Sephton
GTIRT17-00031	Contemporaneous Notes for Paul Watson
GTIRT17-00032	Contemporaneous Notes for Mark Brodrick
GTIRT17-00034	Contemporaneous Notes for Geoffrey Campbell
GTIRT17-00035	Contemporaneous Notes for James Wolfenden
GTIRT17-00036	Contemporaneous Notes for Harry Bettinson
GTIRT17-00037	Contemporaneous Notes for Ben Gallagher
GTIRT17-00042	Contemporaneous Notes for Guy Tillotson
GTIRT17-00043	Contemporaneous Notes for James Cuthbert
GTIRT17-00044	Contemporaneous Notes for Graham Shaw
GTIRT17-00046	Contemporaneous Notes for Steven Mills
GTIRT17-00047	Contemporaneous Notes for Nathan Ashe
GTIRT17-00048	Contemporaneous Notes for Harvey Sanders (1)
GTIRT17-00049	Contemporaneous Notes for Nicke Merrion
GTIRT17-00051	Contemporaneous Notes for Dean Roberts
GTIRT17-00052	Contemporaneous Notes for Russell Gonzalez
GTIRT17-00053	Contemporaneous Notes for Martin Gilliam
GTIRT17-00054	Contemporaneous Notes for Thomas Abell (2)
GTIRT17-00061	Contemporaneous Notes for Greg Lawson
GTIRT17-00062	Contemporaneous Notes for Katie Foster
GTIRT17-00063	Contemporaneous Notes for Tom Welch
GTIRT17-00065	Contemporaneous Notes for Craig Eden
GTIRT17-00139	Contemporaneous Notes for James Berry
GTIRT17-00278	Contemporaneous Notes for Andrew Walton (1)
GTIRT17-00293	Contemporaneous Notes for Mike Dowden (1)
GTIRT17-00419	Contemporaneous Notes for Nicke Merrion
GTIRT17-00431	Contemporaneous Notes for David Badillo (2)
GTIRT17-00458	Contemporaneous Notes for Charles Batterbee (2)
GTIRT17-00459	Contemporaneous Notes for Harvey Sanders (2)

OFFICIAL

GTIRT17-00460	Contemporaneous Notes for Daniel Brown (2)
GTIRT17-00470	Incoming 999 Call
GTIRT17-00471	Incoming 999 Call
GTIRT17-00472	Incoming 999 Call
GTIRT17-00473	Incoming 999 Call
GTIRT17-00474	Incoming 999 Call
GTIRT17-00476	Incoming 999 Call
GTIRT17-00477	Incoming 999 Call
GTIRT17-00478	Incoming 999 Call
GTIRT17-00479	Incoming 999 Call
GTIRT17-00480	Incoming 999 Call
GTIRT17-00481	Incoming 999 Call
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GTIRT17-00508	Incoming 999 Call
GTIRT17-00509	Incoming 999 Call
GTIRT17-00510	Incoming 999 Call
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GTIRT17-00516	Incoming 999 Call
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GTIRT17-00531	Incoming 999 Call
GTIRT17-00532	Incoming 999 Call
GTIRT17-00533	Incoming 999 Call
GTIRT17-00534	Incoming 999 Call
GTIRT17-00535	Incoming 999 Call
GTIRT17-00536	Incoming 999 Call
GTIRT17-00537	Incoming 999 Call
GTIRT17-00538	Outgoing Call Back to Member of Public
GTIRT17-00539	Incoming 999 Call
GTIRT17-00540	Incoming 999 Call
GTIRT17-00541	Incoming 999 Call
GTIRT17-00542	Incoming 999 Call
GTIRT17-00543	Incoming 999 Call
GTIRT17-00545	Incoming 999 Call
GTIRT17-00546	Incoming 999 Call
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GTIRT17-00549	Incoming 999 Call
GTIRT17-00550	Incoming 999 Call
GTIRT17-00551	Incoming 999 Call
GTIRT17-00552	Incoming 999 Call
GTIRT17-00553	Incoming 999 Call
GTIRT17-00554	Incoming 999 Call
GTIRT17-00555	Incoming 999 Call
GTIRT17-00556	Incoming 999 Call
GTIRT17-00557	Incoming 999 Call
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GTIRT17-00560	Incoming 999 Call
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GTIRT17-00563	Incoming 999 Call
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GTIRT17-00571	Incoming 999 Call
GTIRT17-00572	Incoming 999 Call
GTIRT17-00573	Incoming 999 Call
GTIRT17-00574	Incoming 999 Call
GTIRT17-00575	Incoming 999 Call
GTIRT17-00587	Outgoing Call Back to Member of Public
GTIRT17-00594	Outgoing Call Back to Member of Public
GTIRT17-00908	Policy 238 - Incident Command Procedures
GTIRT17-01137	Contemporaneous Notes for Andrew Walton (2)
GTIRT17-01138	Contemporaneous Notes for Andrew Walton (3)
GTIRT17-01139	Contemporaneous Notes for Andrew Walton (4)
GTIRT17-01197	Contemporaneous Notes for Thomas Abell (3)
GTIRT17-01198	Contemporaneous Notes for Richard Hippel
GTIRT17-01215	Contemporaneous Notes for Mike Dowden (2)
GTIRT17-01252	MPS Witness Statement for Brien O'Keeffe (1)
GTIRT17-01363	MPS Witness Statement for Mark Brodrick
GTIRT17-01393	MPS Witness Statement for Russell Gonzalez
GTIRT17-01434	MPS Witness Statement for Daniel Brown
GTIRT17-01522	Contemporaneous Notes for Brien O'Keeffe (2)
GTIRT17-01551	MPS Witness Statement for Christopher Secrett
GTIRT17-01573	MPS Witness Statement for Behailu Kebede (1)
GTIRT17-01574	MPS Witness Statement for Behailu Kebede (2)
GTIRT17-01607	Incoming 999 Call
GTIRT17-01730	Incoming 999 Call
GTIRT17-01734	Incoming 999 Call
GTIRT17-01735	Incoming 999 Call
GTIRT17-01736	Incoming 999 Call
GTIRT17-01745	Incoming 999 Call
GTIRT17-01746	Incoming 999 Call
GTIRT17-01772	Outgoing Call Back to Member of Public
GTIRT17-01830	Incoming 999 Call
GTIRT17-01956	MPS Witness Statement for Joanne Smith

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GTIRT17-02474	Radio Message
GTIRT17-02475	Radio Message
GTIRT17-02476	Radio Message
GTIRT17-02477	Radio Message
GTIRT17-02478	Radio Message
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GTIRT17-02537	Radio Message
GTIRT17-02538	Radio Message
GTIRT17-02539	Radio Message
GTIRT17-02540	Radio Message
GTIRT17-02541	Radio Message
GTIRT17-02543	Radio Message
GTIRT17-02544	Radio Message
GTIRT17-02545	Radio Message
GTIRT17-02546	Radio Message
GTIRT17-02547	Radio Message
GTIRT17-02550	Radio Message
GTIRT17-02551	Radio Message
GTIRT17-02552	Radio Message
GTIRT17-02553	Radio Message
GTIRT17-02558	Radio Message
GTIRT17-02612	Radio Message
GTIRT17-02613	Radio Message
GTIRT17-02614	Radio Message
GTIRT17-02615	Radio Message
GTIRT17-02889	MPS Witness Statement for Brien O'Keeffe (2)
GTIRT17-02917	MPS Witness Statement for Andrew Harris
GTIRT17-02922	MPS Witness Statement for Gareth Cook
GTIRT17-02923	MPS Witness Statement for Gareth Cook
GTIRT17-02925	MPS Witness Statement for Harry Bettinson
GTIRT17-02934	MPS Witness Statement for Peter May
GTIRT18-00043	MPS Witness Statement for Thomas Abell
GTIRT18-00064	MPS Witness Statement for Guy Tillotson
GTIRT18-00068	MPS Witness Statement for Gregory Lawson
GTIRT18-00072	MPS Witness Statement for Justin O'Beirne
GTIRT18-00073	MPS Witness Statement for Paul Watson
GTIRT18-00099	MPS Witness Statement for Tom Welch
GTIRT18-00240	Radio Message
GTIRT18-00242	Radio Message
GTIRT18-00243	Radio Message
GTIRT18-00244	Radio Message
GTIRT18-00251	Incoming Admin Call from Station Manager Jason Oliff
GTIRT18-00252	Incoming Admin Call from Deputy Assistant Commissioner Andrew O'Loughlin
GTIRT18-00253	Radio Message
GTIRT18-00254	Incoming Admin Line Call from Station Manager Brett Loft

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GTIRT18-00255	Incoming Admin Line Call from Station Manager Andrew Walton
GTIRT18-00257	Outgoing unanswered call to Group Manager Patrick Goulbourne
GTIRT18-00258	Outgoing Admin Call to Group Manager Patrick Goulbourne
GTIRT18-00259	Incoming Admin Line Call from Group Manager Welch
GTIRT18-00274	MPS Grenfell Tower Plan - Internal and External CCTV Camera Position presentation
GTIRT18-00309	MPS Witness Statement for Craig Eden
GTIRT18-00312	MPS Witness Statement for Wayne Archer
GTIRT18-00321	MPS Witness Statement for John O'Hanlon
GTIRT18-00387	MPS Witness Statement for Nicholas Barton
GTIRT18-00402	MPS Witness Statement for Steven Mills
GTIRT18-00414	MPS Witness Statement for Dean Roberts
GTIRT18-00427	MPS Witness Statement for Richard Hippel
GTIRT18-00506	Outgoing Admin Call to Command Unit
GTIRT18-00507	Outgoing Admin Call to Watch Manager Daniel Meyrick on Unit 8
GTIRT18-00508	Outgoing Admin Call to Command Unit 8
GTIRT18-00562	SAI Witness Statement for David Badillo
GTIRT18-00568	SAI Witness Statement for Christopher Dorgu
GTIRT18-00577	SAI Witness Statement for Justin O'Beirne
GTIRT18-00583	SAI Witness Statement for Daniel Brown
GTIRT18-00641	MPS Witness Statement for Christohper Dorgu
GTIRT18-00651	MPS Witness Statement for Nicke Merrion
GTIRT18-00860	Outgoing Call to MPS
GTIRT18-00865	Outgoing Call to TWA
GTIRT18-00869	Outgoing Call to LAS
GTIRT18-00878	Incoming Admin Call from Senior Operations Manager Joanne Smith
GTIRT18-00880	Incoming Call from Radio Workshops duty engineer
GTIRT18-00882	Incoming Admin Call from TWA
GTIRT18-00885	Incoming Admin Call from SOM Adam Crinion
GTIRT18-00886	Incoming Admin Call from LAS
GTIRT18-00917	MPS Witness Statement for David Badillo (1)
GTIRT18-00927	MPS Witness Statement for Katie Foster
GTIRT18-00929	MPS Witness Statement for Ben Gallagher
GTIRT18-00945	MPS Witness Statement for Nicky Sanders
GTIRT18-00967	MPS Witness Statement for Geoffrey Campbell (1)
GTIRT18-00972	MPS Witness Statement for David Davies
GTIRT18-00993	MPS Witness Statement for Desmond Murphy
GTIRT18-01000	MPS Witness Statement for Andrew Walton
GTIRT18-01002	MPS Witness Statement for James Wolfenden
GTIRT18-01036	MPS Witness Statement for Matthew Sephton
GTIRT18-01051	MPS Grenfell Tower CCTV Named Exits spreadsheet
GTIRT18-01065	MPS Witness Statement for Mike Dowden
GTIRT18-01066	MPS Witness Statement for Patrick Murray

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GTIRT18-01067	MPS Witness Statement for Philip Wigley
GTIRT18-01110	MPS Witness Statement for Ben Felton
GTIRT18-01111	MPS Witness Statement for Jamal Stern
GTIRT18-01134	MPS Witness Statement for Harvey Sanders
GTIRT18-01136	MPS Witness Statement for Alex De St Aubin
GTIRT18-01141	MPS Grenfell Tower Residents List by Flat and Floor Number document
GTIRT18-01266	MPS Witness Statement for Andrew O'Loughlin
GTIRT18-01411	MPS Witness Statement for David Badillo (2)
GTIRT18-01412	MPS Witness Statement for Nathan Ashe
GTIRT18-01416	MPS Witness Statement for Charles Cornelius
GTIRT18-01428	MPS Witness Statement for James Berry
GTIRT18-01440	MPS Witness Statement for Benjamin Broderick
GTIRT18-01470	MPS Grenfell Tower Disaster Victim Identification Recovery Floor Plan
GTIRT18-01534	MPS Witness Statement for Graeme Shaw
GTIRT18-01590	MPS External Fire Spread Report
GTIRT18-01837	MPS Witness Statement for Charles Batterbee
GTIRT18-01844	MPS Witness Statement for James Cuthbert
GTIRT18-02051	MPS Witness Statement for Geoffrey Campbell (2)
GTIRT18-02094	MPS Witness Statement for Brett Loft
GTIRT18-02335	Incoming 999 Call
GTIRT18-02452	Incoming 999 Call
GTIRT18-02453	Outgoing call from North West Fire Control
GTIRT18-02500	Information from MPS regarding BSR Information (dated 13 February 2018)
MET00006591	Flame Spread image (Relativity Reference)