

WITNESS STATEMENT

Criminal Procedure Rules, r27.2; Criminal Justice Act 1967, s.9; Magistrates' Courts Act 1980, s.5b

Statement of: HARRISON, JAMES

Age if under 18: (if over 18 insert 'over 18')

Occupation: HEAD OF OPS, CADENT GAS

This statement (consisting of 15 page(s) each signed by me) is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false, or do not believe to be true.

Signature: J HARRISON

Date: 30/01/2018

Tick if witness evidence is visually recorded ☐ (supply witness details on rear)

I, James HARRISON make this statement in relation to the Grenfell Tower Fire which took place on 14 June 2017. Prior to this incident, I had never attended the site but I was aware that tRIIO had recently undertaken work in the building.

Background

- 1.I am the Head of Operations for the London network which is one of the four gas networks operated by Cadent Gas Ltd.
- 2.I graduated as a civil engineer in 1999. I have over 18 years of operational experience and I am a Chartered Gas Engineer. I have always had an interest in leading and management. However, before I progressed my career in management, I wanted to develop as much practical operational experience as possible to ensure that I had an in depth knowledge of the gas networks and how they operate.
- 3.My first role after I graduated was with MJ Gleeson Group (who had sponsored my University course). I then joined Transco, which was the company that operated the gas transmission and distribution systems in the UK at that time. I was accepted on to their graduate scheme which was a two year scheme during which I went through a series of postings and experienced a number of different operational roles including working as a team leader's mate in Repair; working as a technician in Repair; supporting the Emergency First Call Operatives; and working as a High Pressure Pipeline Construction assistant.
- 4.After completing my engineering graduate scheme, I started working as a network supervisor for Transco's Emergency Response and Repair team. The company's ownership changed to National

Signature: J HARRISON
2018

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Grid, and in 2017 to Cadent Gas Ltd. During this period I have managed a range of activities on the gas network including repair, replacement, maintenance and asset management and I have managed a number of gas incidents at different technical and leadership levels.

5. Work on the gas network must only be carried out by competent persons who adhere to defined industry standards and requirements. To carry out invasive work (that is to say, pressure reduction or mains isolation) on gas networks, you must be registered under the Safe Control of Operations (“SCO”) scheme. The SCO Process and Procedure provides for safe systems of work on routine and non-routine operations on gas networks. As an engineer, I obtained my SCO qualification which has been a valuable qualification providing me with a deeper understanding of operational work on the gas networks and the practical considerations which must be taken into account when the Emergency Response and Repair team are responding to an incident on the gas network.
6. Before being appointed to my current role, I held a similar position as Head of Operations for East of England’s Emergency Response and Repair team. Other senior operational leadership posts include:

National Pipelines Manager;
West Midlands Maintenance Manager; and
Central Scheduling & Dispatch Manager.

7. The practical and management operational experience have gained over the years and the knowledge I have developed from attending other incidents, put together with my team’s knowledge and experience, enabled us to respond to the Grenfell Tower incident and to make the decisions that we did on 14 June 2017.

The Emergency Response and Repair team

8. The Operations teams in Cadent all work on the gas distribution network, either responding to gas emergencies or carrying out maintenance on the network. An operational department, known as Operate and Maintain (“O&M”), operate and maintain the gas control apparatus via local teams of specialist engineers. In addition, each network has an Emergency Response and Repair (“ER&R”) capability which deals with reports of gas escapes and other emergencies across the networks alongside a planned workload. I manage the ER&R capability for Cadent across the London Network. I am accountable to Ed SYSON who is the Director of Operations for Cadent.
9. Throughout Cadent, employees are organised into four groups:

Signature: J HARRISON
2018

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- a. Field Force (which includes the Emergency Lead Engineers who are the frontline responders to gas escapes and the Repair Engineers who respond to gas escapes and carry out work on gas mains);
 - b. Staff (which includes office based support staff and operational Supervisors and Engineers);
 - c. Managers; and
 - d. Directors.
10. Within each group there are a number of grades depending on the activities and responsibilities on the role. The Staff roles increase from Level 1 to Level 7 and the Manager roles increases from Band D to Band A.
11. As the Head of Operations, I am a Band B manager. I have one Emergency Network Manager who is Nicola WILKINSON working as part of my team and two Repair Network Managers; Tony DAY covers the West of London and Tony SMITH covers the East of London. They are all Band C managers. Tony DAY attended the Grenfell Tower incident on 14 June 2017. Nicola WILKINSON was also involved in the incident and was supporting her team off site on 14 June 2017 and attended the Grenfell Tower site on 15 June 2017.
12. Cadent operates the national Gas Emergency Call Centre, which receives calls from the public and emergency services regarding gas emergencies. The Gas Emergency Call Centre is responsible for raising a job to initiate the attendance of First Call Operatives (FCO) at all incidents to initially investigate.
13. The FCOs are our frontline responders to gas escapes and are operated by the Emergency team. They are managed by the Network Supervisors (Level 6 managers). The Level 6 Network Supervisor who attended this incident at Grenfell Tower was Peter BAYNARD. He was later relieved by Ryan HILL. The Level 6 Network Supervisors report to the Network Engineers who are graded Level 7. The Level 7 Emergency Network Engineer on site during the Grenfell Tower incident was Dave EDWARDS. He was later relieved by Colin LARKIN.
14. Once the FCO has arrived at an incident, they are responsible for assessing and investigating the situation and either making it safe or, if required, requesting a Repair team to attend. A Repair team usually consists of a team leader and a 'mate' who supports the work of the team leader. The Repair teams are managed by Network Supervisors (Level 6), who report to the Network Engineers (Level 7), who are managed by the Repair Network Manager (Band C).

Signature: J HARRISON
2018

Signature witnessed by:

15. For gas escapes and incidents involving the gas network (i.e. not involving the internal pipework in a property, downstream of the emergency control valve, usually adjacent to the gas meter) a Repair team will need to make safe and effect a repair. This usually involves excavating and uncovering the gas pipes and then employing a suitable repair technique. The engineers have access to maps which indicate the location of the gas mains.

16. The Emergency team engineers and the Repair team engineers therefore have different roles and responsibilities, but they all form part of the Emergency Response and Repair team which I am responsible for.

14 June 2016

17. At around 05:30am that morning, I received a text from Tony SMITH, my Repair Network Manager for the East of London, asking me whether I had seen the news. I turned on the television and saw the footage of the Grenfell Tower. I knew that Grenfell Tower was located within our network in the West of London. I immediately called Darren ELSOM who was the Band B Manager for O&M. We operate a standby rota for managers at all levels within ER&R and O&M and the managers who are on standby can be contacted between the hours of 16:30pm and 08:00am to advise during incidents and to attend an incident if necessary. Both Darren and I cover the Band B standby rota for Operations and he was on call that morning. Darren had not been called and was unaware of the incident. However, I now understand that at that point in time, we had been asked by the London Fire Brigade ('LFB') to attend a fire incident to assist the LFB following a call to the Emergency Call Centre. After speaking with Darren, I called my Band C Managers for Emergency and Repair in the West, Nicola WILKINSON and Tony DAY. Both Nicola and Tony had been informed of the incident and confirmed that their teams had been deployed to the site.

18. Tony DAY and the Level 7 Network Engineer for Repair, Jason ALLDAY, had a meeting scheduled in Hinckley that day, but both abandoned the meeting and were making their way over to Grenfell Tower. Nicola confirmed that Dave EDWARDS, who is her Level 7 Network Engineer and Peter BAYNARD, the Level 6 Network Supervisor for Emergency were already on site. An FCO and a Repair team were also on site. Nicola explained that the team had spoken with the LFB and that they were standing by on site and awaiting further instructions from the LFB. She explained that the men could not get anywhere near the tower. I was comfortable with the decision made by Tony to muster his team and travel to site. Although at this stage they had not been requested to work, I knew that at some point during the incident they would be needed.

Signature: J HARRISON
2018

Signature witnessed by:

19. I knew from experience that the first hour of an incident from a managerial perspective is the most critical. The 'golden hour' concept is a basic rule that unless incidents are managed appropriately and expeditiously, this can lead to unnecessary complications. After I had spoken with all the key people within my team, I drew up an incident plan to assess the scale of the incident and devise a strategic and tactical response. I needed to establish exactly what the situation was, who was involved in the incident, what our involvement in the incident was, who within the business needed to be involved, what level of resources was necessary and what factors were likely to influence the incident.
20. Cadent employs a three-tier response structure to emergencies and crisis to promote a simple and clear internal management structure. The three tiers are; Strategic (Gold); Tactical (Silver); and Operational (Bronze). This response structure is widely used by the emergency services and other utilities. It is recognised that using this structure makes it easier to integrate with other agencies.
21. In response to a gas supply emergency the business will usually, depending on the scale of the incident, convene command meetings. The bronze command meetings are convened at operational level to focus on all the actions required to resolve the gas supply emergency. The silver command meetings are tactical and are convened during large or complex gas supply emergencies. The gold command meetings are strategic meetings and are normally engaged for prolonged or severe gas supply emergencies.
22. In response to the Grenfell Tower fire, I convened the bronze command teleconferences and I also attended the silver command teleconferences which were set up to help manage our response to the incident and ensure that we had appropriate support to the teams on site. The silver and bronze command teleconference meetings were held throughout the day of 14 June 2017. During this period there was liaison with the emergency services by my team on site, as discussed further below.
23. The first bronze teleconference meeting was held at 08:00am on the morning of 14 June 2017. Before the call, I spoke with our Director of Operations, Ed SYSON, to ensure that he was aware of the incident. The bronze command teleconference was attended by representatives from all key internal stakeholders within the business who could have a role to play in Cadent's incident response including operations, scheduling and dispatch, network strategy, health and safety, media and legal.
24. Nicola WILKINSON provided everyone with an incident update on the 08:00am call. She explained that the LFB had been called to the premises at 00:55am and that we had been called to assist the LFB at 03:22am that morning. Nicola advised that our FCO arrived on site at 03:48 and that our Level 6 Standby Network Supervisor, Peter BAYNARD and Level 7 Network Engineer, Dave EDWARDS

Signature: J HARRISON
2018

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had arrived on site at approximately 04:30-05:00am. Nicola explained that the LFB had asked us to remain on site and be on standby. During incidents involving a multi agency response, representatives from all agencies can be asked to attend onsite command meetings. However, Nicola confirmed that Cadent had not yet been asked to attend any of the LFB's command meetings.

25. Tony DAY was also on the call and he was at the Grenfell Tower site. The feedback from Tony was that they were not currently allowed access to the tower because of the intensity of the fire. The area was chaotic and the police had erected cordons and were keeping people away from the tower. The team's plan was to disconnect the supply of gas to the tower and thoughts were progressing as to how this would be achieved under the circumstances, whilst they waited to be given access to the site. Our engineers are equipped with portable laptops which can be used to display maps of the gas mains in the local area. Some of the gas mains have been laid in the ground since around the time of the Victorian times and it is acknowledged that some of the maps may not be 100% accurate. However, the maps provide our engineers with a good level of understanding of where the gas mains are located should work need to be carried out on the gas network. During the 08:00am call, Tony informed us that the maps of the gas mains within the vicinity of the tower had been pulled and that Jason ALLDAY was already reviewing those maps with the aim of identifying points where isolation could be carried out on the network

26. We knew that the tower had integral gas supplies. There was an acceptance at a very early stage that the supply of gas to the tower would need to be isolated to remove the potential presence of gas from the building. That was our immediate priority and it remained our priority throughout the day. Following the bronze call, I spoke with Tony DAY and we agreed that the priority was to get the gas off as quickly as possible.

27. We had been called to attend the fire by the LFB to assist and support their rescue operations. I understood that the LFB were the lead responders to the fire. They were at the core of the response as a Category 1 responder under the Civil Contingencies Act 2004 and had primacy of the incident response. Cadent's role as a Category 2 responder was to assist and support the work of the LFB. It was necessary for us to take direction from the LFB to ensure that any work we undertook did not impact on their work. When the LFB gave the direction for us to disconnect the supply of gas to the building, it was necessary for us to liaise with the LFB as we carried out our operation to ensure that we had the necessary access to the sites in order to complete our operation to disconnect the supply of

Signature: J HARRISON
2018

Signature witnessed by:

gas to the building. I am aware of Cadent's incident responsibilities and role defined in the Civil Contingencies Act 2004; this has been briefed to me during my incident management training.

The chain of command

28. I am responsible for the decisions and actions of the team on site. During the morning of 14 June 2017, I led and supported my team from off site and was in our depot in Slough. My priority was to shield my team working on the ground as much as possible so that they could get on with the job at hand and isolate the gas as quickly as possible once they had been given the direction by the LFB. I co-ordinated our tactical operational response to the incident, managing any potential impact the incident could have on the wider operation of the network by ensuring that we had enough resources and capability across the network to cover any increase in the level of calls to the Emergency Call Centre. To take account of the impact the incident was having on the congestion in the local area, all non-emergency work that was scheduled to take place that day was cancelled and re-scheduled.

29. I knew that I had capable and experienced engineers on site and did not attend the site until the afternoon of 14 June 2017. The on-site team and off site team worked collaboratively. Tony DAY provided me with regular updates throughout the morning. Jason ALLDAY was in charge of the operational incident on site. He, supported by Tony, was making the decisions and was liaising with the LFB. Jason worked closely with the LFB's senior fire officers throughout the incident, they developed a professional working relationship.

30. The absolute priority that day was the Repair team's task to isolate the supply of gas. However, the Emergency team had a presence on site throughout the day and played an important role in the incident. Dave EDWARDS was the most senior member of the emergency team on site and he ensured that all FCOs were ready to standby and support the work of the Repair team. He was the first network engineer to attend the site and he dealt with the immediate response to the incident. The Emergency team had more involvement on the 15 June 2017. Excluding Grenfell Tower, approximately 300 properties were impacted by the isolation of the gas supply and the Emergency team was responsible for ensuring that the other properties and customers in the local area who had lost their supply of gas because of the isolation were safe and had alternative cooking equipment where required.

The decision to isolate the gas

31. The team on site reviewed the plans of the mains in the area around Grenfell Tower to understand exactly how the network was integrated and where the gas mains, valves and governors were located

Signature: J HARRISON
2018

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so that they could identify the quickest method of disconnecting the supply of gas to the building, whilst maintaining the safety of our teams. Throughout the day I had contact with Jason and Tony over the telephone and was involved in the decision to isolate the gas. The information from site was that the scale and intensity of the incident and fire prevented the teams from approaching the building to access any service isolation valves and Jason therefore needed to identify a way of isolating the mains within the network to guarantee isolation. Jason and Tony are both highly experienced engineers and understand how the gas network operates. I had absolute confidence in them that they would know what options were available, and the implications of each option.

32. I was aware that Jason and Tony had identified three locations where they believed the Repair teams could excavate the mains and isolate the supply of gas by cutting and capping the gas mains. The first isolation point was on a 12" main on Station Walk. The second potential isolation point was on a 4" main which was on Testerton Walk and the third potential isolation point was at the top of Grenfell Road where they proposed to isolate a 180mm main. In order to disconnect the supply of gas to the building, it was necessary to isolate the mains at all three locations. Until the mains at all three points had been isolated, there would still be a supply of gas to the building.
33. As soon as they had identified from the plans the three proposed isolation points, Jason went to speak with the LFB and asked for permission to access the three relevant areas where he proposed to carry out the excavations to isolate the gas mains. Two of the proposed isolation sites were within the inner-safety cordon and it was necessary to pass through these cordons to gain access to the sites. Jason, accompanied by Peter BAYNARD, walked around the site to identify where the isolation sites were and decided on the best way to implement the operational plan. Jason wanted to ensure that he could get his teams and machinery to the isolation sites and that they could work safely in those areas to carry out the excavation and isolation of the mains.
34. Jason told me that he had discussed the isolation points with the LFB incident command officer and obtained their permission to carry out the excavations at the three identified locations. They supported our plan to isolate at the three separate locations. It was important that, as Category 2 responders, we co-operated with the LFB and did not make any decisions in isolation. Had the men started excavating the ground without having first sought the approval of the LFB, they could have dug a hole in the road which was the only point of access for the ambulances and fire engines, or our machines could have been blocking the fire officers' way in and out of the tower. It was imperative that we worked with the

Signature: J HARRISON
2018

Signature witnessed by:

emergency services and assisted their emergency efforts. All the team understood the importance of this.

35. Jason and Tony knew that the option of cutting and capping the gas mains at the three identified points was the most effective way of isolating the gas supply to the building under the circumstances. There was no opportunity to isolate the gas either within the building or near the building by operating the service isolation valve (which is located outside a building and can cut the supply of gas to the building) because of the activity at the base of Grenfell Tower. However, Jason knew that in order to be able to disconnect the supply of gas as quickly as possible, the teams needed to cut the mains on the network as close to the building as possible. Had the Repair teams excavated further away from the tower and cut the gas mains further downstream of the network, it would have been necessary to cut the mains at several more locations to ensure that all supply of gas to the building was isolated because of the way the network is configured. This would have taken more time and added to the complexity of the operation which we could not risk doing.
36. Disconnecting the supply of gas by isolating the governors was also not a viable option. The governors are pressure reduction stations. When gas is transported around the country, it is transported at high pressure. It is then fed into local distribution zones and distributed to customers via a series of pressure tiers. The governors take gas from the medium pressure system to the low pressure system for supply to properties. The supply of low pressure gas to an area can be isolated by shutting the supplying governor or governors. A small village may be fed by a single governor and that governor could be turned off, cutting the whole supply of gas to that village. However, the gas network in London where Grenfell Tower is located is configured differently to a small village and has a number of governors to ensure continuity of supply to gas customers, it is a complex network. The governors within the network operate on demand and therefore if one governor was turned off, the neighbouring governors within the network would identify the loss of residual gas and would compensate for this and maintain the supply of gas by pushing more gas into the network. It would therefore have been necessary to turn off several governors in the network to guarantee isolation. This would have required engineering and possibly excavation work to be carried out at these sites which would have added to the complexity of the operation and it would undoubtedly have taken more time to disconnect the supply of gas.
37. I concluded that gas demand on the day would have been low given the weather was hot and humid and therefore few gas appliances would have been used. The fire was likely to have been one of the

Signature: J HARRISON
2018

Signature witnessed by:

very few demand points in the network and was potentially drawing gas from further afield, against what would have been the normal direction of flow. This is known as 'back feed'. Therefore, to avoid the possibility of gas being 'back fed' into the tower, we would have had to wait for all the residual gas to leave the network and only when it had been exhausted could we confirm that the network was not 'back fed' and that there was no supply of gas to the tower. It would have taken hours for the residual gas to be expelled from the system. In addition we would still have needed to physically isolate the network. This knowledge and experience gave me confidence in our plan for network isolation.

38. We had the resources available to carry out as many excavations as would have been necessary. We had over 25 personnel on site including Emergency and Repair engineers and their 'mates', supervisors, JCB operators and supervisors and we had more resources on standby that could have been called to the site if necessary. We could have had a Repair team operating on many different isolation points if that was what was required to disconnect the supply of gas to the tower quickly. However, Jason and Tony were experienced enough to know that the alternative options would only have added more complexity to the operation and would not have achieved anything more in terms of the output.

39. The priority was to disconnect the supply of gas to the tower. At no point did I disregard options that were available to cut off the supply of gas because I wanted to avoid the loss of supply to other customers. If I could have isolated the supply of gas to that tower immediately, I would have been prepared to turn off the supply of gas to 20,000 other customers if necessary. However, that was simply not the reality of the situation.

40. Jason, Tony and I were all absolutely adamant that our isolation plan to disconnect the supply of gas by isolating the gas mains at the three identified points was the right thing to do, and I continue to support that decision today.

The operation to isolate the gas

41. Tony DAY updated the bronze command meeting again at 11:30am that morning and informed us that the team on site had agreed to cut and cap three mains in order to disconnect the supply of gas to the building and he explained where the proposed isolation points were. One of the locations was near a temporary morgue for fatalities from the tower and Tony had to agree with the emergency services the appropriateness of working there.

Signature: J HARRISON
2018

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42. Tony confirmed that our machinery, a JCB and two vacuum excavators which we use to excavate the ground, were already on site ready to commence the excavations and that our teams were ready. We had provided the LFB with an estimated timeframe and the plan was to complete the works by 20:00pm that evening, assuming of course that the operational team would have a clear run at the job.
43. The 4" main and the 180mm mains were located within the inner exclusion-safety cordon established by the emergency services and were around 30 metres from the tower. The cordons were established to keep people away from the tower due to safety concerns and concerns about the stability of the building. Tony informed us that the 180mm main at Grenfell Road was right next to the area which was being used by the emergency services as a temporary morgue. The area where the teams were excavating the 12" main near Latimer Road was referred to as the 'sterile zone'. A first aid tent had been set up and some of the casualties were taken there to be treated. The team also erected heras fencing and covered this with sheeting to form a shield so the engineers were sheltered from very distressing scene.
44. Tony confirmed on the bronze command call that all welfare arrangements were in place for the men on site. We knew that we were dealing with a serious incident and that the team would be working under very difficult circumstances. I knew that the managers were carrying out regular welfare checks on the engineers and that they were given appropriate breaks. The Emergency team supported the Repair teams throughout the day and Dave EDWARDS ensured that everyone was fed and watered and that he knew who was on site at all times. Dave asked our customer liaison officer to keep a log of everyone who was on site and what time they arrived and left. This information was also fed back to our Dispatch Centre.
45. Dave had established a muster point on site where the teams were briefed. However, the teams had to use the facilities at a Christian Centre near Latimer Road. This Christian Centre was also where the customer desk and welfare desk were set up and where those affected by the incident went to find out information about their friends and family. The team told me that they saw some upsetting scenes inside that Centre. When I attended the Centre briefly, I saw lots of distressed people. Following the incident, I arranged for counselling for those who attended site, I understand that the offer of support was well received and continues to be available to all involved in the incident.
46. Once the isolation points had been agreed with the LFB fire officers, Jason liaised with the LFB to arrange access for our machines to the isolation points so that the Repair teams could start on the excavation work. I am unaware of the names of the LFB officers involved. The LFB were being

Signature: J HARRISON
2018

Signature witnessed by:

supported by a number of responders to the incident that day and we of course had to wait from time to time to speak with their officers.

47. The impression I had from the information fed back to me from the team on site was that when our engineers first arrived on site, Cadent was not a priority to the LFB. Understandably, they had other priorities to focus on. They acknowledged that we were on site but did not request any information or immediate action from us. They asked us to remain in the local area and be on standby.
48. I understand that when Dave EDWARDS arrived on site, members of the public were manning the police cordon which gives an indication of the intensity of the situation and the number of resources this incident was sucking up.
49. It took longer than anticipated to arrange access to the excavation sites as the fire service's rescue operation was ongoing and some of the emergency vehicles were blocking the access to the sites. The priority was to maintain access to and from the site for the emergency vehicles.
50. Work on the 12" main started at around 13:30pm on the afternoon of 14 June 2017. The teams working on the 180mm and the 4" mains faced some further delay in obtaining access to the sites. Excavation work on these mains commenced at approximately 14:30pm. It has been explained to me that there was a fire engine restricting their access to one site. I understand that, unfortunately, when the fire officers had been taken back to their depot at the end of a shift, one of them had taken the keys to the engine back with him and it therefore took time to move the engine so that our machinery could be moved to the excavation points.
51. At around 15:00pm on 14 June 2017, I was told that the LFB asked Jason to enter the basement of the tower to turn off the valves on the gas risers within the building. I understand that this request came as a result of an increased pressure felt by the LFB to disconnect the supply of gas because of concerns to the structure of the building. I understand that at this stage there were no surviving casualties in the building.
52. I knew that the operation on site was in Jason and Tony's capable hands and Tony kept me abreast of all developments. However, given the severity of the incident, I felt that I needed to be on site to support my team and I travelled to the site that afternoon. I arrived at the site of Grenfell Tower at approximately 16:30pm on the afternoon of 14 June 2017. The journey from Slough to Grenfell Tower took two and a half hours. It took an hour to travel from Shepherds Bush Green which helps put into some context how congested the area was. I parked my car just south of Darfield Way, put on my Personal Protective Equipment and walked towards the Cadent muster point.

Signature: J HARRISON
2018

Signature witnessed by:

53. When I arrived on site I concluded that gas was on fire within the building because of the nature of the flames that I could see and based on my experience of previous gas incidents. The team told me that there were growing concerns by the LFB officers about the stability of the building. There were times when we had to retreat from our excavation points due to LFB concerns of the buildings structure. However, we worked with the LFB throughout the incident and had ongoing dialogues with them to discuss how we could assist and work with the LFB to ensure that we could isolate the supply of gas as quickly as possible. I never sensed any tension between us and the LFB and the feedback from the men on site was that Jason had developed a very good working relationship with the fire officers and worked collaboratively with them throughout the day. That was certainly my impression.
54. The LFB requested that Jason accompany them into the basement of the building. Jason had carried out his own risk assessment, and was also working closely with LFB and relying on their risk assessment. I understand that UKPN did not isolate the supply of electricity until after the gas had been disconnected. I was concerned that Jason had put himself at risk and after the incident I asked him to talk through his thought process and explain how he had satisfied himself that it would be safe for him to enter the building. Jason explained that he had his own dynamic risk assessment and had been guided by the LFB with regard to the structure of the building. Once inside the building he carried out a further risk assessment in conjunction with the LFB.
55. I was told that, once inside the building, Jason and the LFB were instructed via the LFB's radio to retreat almost immediately due to concerns about the stability of the building and Jason pulled the Repair teams who were working on the excavations back to the Cadent muster point.
56. It is very hard to describe the scenes at Grenfell Tower. I have attended a number of incidents but had never seen anything like what I saw at Grenfell Tower. Even at that point in the afternoon, the area was in a state of absolute chaos. There were crowds of people everywhere, hundreds of emergency officers and a lot of emergency vehicles leading up to the site. People were walking around in a state of bewilderment. There were a number of cordons restricting the public's access to the site which were tightly controlled by the police.
57. At around 17:00pm, we received information from the LFB officers that there was a risk that the building could collapse. Jason received information from the LFB that the structure of the building was changing every 15 minutes because of the intense heat of the fire. There was a continuing sense of urgency amongst all of the men on site to disconnect the supply of gas to the building. We all felt the pressure and knew that the LFB wanted us to disconnect the supply of gas as quickly as possible.

Signature: J HARRISON
2018

Signature witnessed by:

Jason, and Tony had a constructive discussion with the LFB command officer where we shared information and agreed that our teams would continue to work within the inner-safety cordon whilst the LFB surveyed the building for any further structural movement. The LFB briefed our Repair teams and it was agreed that they would inform our Repair teams if they had further concerns. We also agreed safe egress routes should the stability of the building change. This joint safe system of work was critical and enabled the Repair teams to continue with their work.

58. At around 18:30, we received further information from the LFB that the building was unsafe and we pulled our teams that were working within the inner safety cordon on the 4" and 180mm mains away from the sites. We knew that the excavation work to locate the gas mains so that they could be isolated had to continue. Jason and Tony carried out a risk assessment and we instructed the teams to continue with their work of excavating the mains. The LFB provided support by continually monitoring the structural integrity of the building and checking it for any movement. The environment that the teams was working in was of course dangerous. However, I would not have instructed the teams to continue with the work if the LFB felt that the situation was too dangerous.
59. Around this time, Jason informed the LFB that it was likely to take until midnight that evening for the teams to disconnect the supply of gas. The excavation work was delayed because of difficulties accessing the site and the excavation work was also stopped because of concerns to the stability of the building and the instructions to retreat from the building. Under the difficult circumstances that the men were operating, it was unlikely that the supply of gas would be isolated by 20:00pm that evening as originally anticipated.
60. The 4" main and the 180mm mains which were located on Testerton Walk and Grenfell Road were cut and capped by 20:25pm that evening. The team working on the 180mm main had to excavate that main all by hand because the JCB could not reach that site. They did remarkably well to finish the work within this time frame. Work on the 12" main, which was located at the top of Station Walk, near Latimer Tube Station continued. Until all three mains had been isolated, gas was still being supplied into the building.
61. At around 21:00pm the LFB approached Jason again and asked whether he would be prepared to enter the building to see if the gas could be isolated internally. Jason had seen how dangerous it was in the basement when he last entered the building. There was live electricity and flooding inside the basement and he made a decision not to enter the building again due to safety concerns. Jason informed me of his decision not to re-enter the building and I fully supported that decision.

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62. The teams continued to work hard on the excavation work to locate the final main. This 12" main was buried deeper underground and in a different configuration to what the Repair team had expected. The Repair teams used equipment to assist them in locating the main, but the network was congested and this made it harder to locate the main. This was an incredibly difficult area for the men to work in. A low rise wall and a walkway on a ramp made the excavation work hard and the site was situated next to where the paramedics had set up a first aid tent to treat the injured.
63. The team located the main at around 21:30pm that evening. However, it was discovered that the main was in fact 15", rather than 12" as we had anticipated. This impacted on the Repair team's operation and we had to think quickly what the best way of dealing with the situation was under the circumstances.
64. A 12" main and a 15" main on the face of it do not look very different. However, the equipment used to stop the flow of gas is different and varies depending on the size of the main. The Repair team's plan had been to flow stop the main using inflatable bags which are inserted into holes in the main and then inflated to stop the flow of gas. Once the team is comfortable that there is no flow of gas, the main is cut and then capped. The Repair teams in London are well structured and well equipped to deal with incidents. They are equipped to deal with all mains from 3" to 12" but are not normally equipped to cut and cap a 15" main. This work is considered to be a non-routine operation that is sub-contracted to Pipelines Maintenance Centre ("PMC").
65. The service level agreement for PMC to attend site was 6 hours. We were under pressure to isolate the supply of gas and could not wait for PMC to attend site and carry out the operation. Tony, Jason and Neale MILAM, who is a Repair Network Supervisor, therefore discussed what options were available to isolate the gas before PMC arrived.
66. Jason approached me and explained his proposed plan. Jason proposed carrying out a temporary isolation on the main by using the flow-stopping bags that would normally be used for a 12" main on the 15" main. They overinflated the bag and saw that they could over-inflate the bag to measure 14.5". We knew that the bags would overinflate and that this would temporarily isolate the gas until PMC could get to the site. I instructed Jason to isolate the gas as quickly as possible and to proceed with the proposed plan. I was accountable for that decision. The decision to use the 12" equipment and the smaller bag was not in line with our normal practices, and I class it as a temporary isolation. However, had we followed our flow stopping procedures (to use specialist equipment above 12"), we would not have been able to isolate the supply of gas as quickly as we did. Isolating the gas was the

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- absolute priority. I carried out a dynamic risk assessment and told Jason to proceed to temporarily isolate the gas. We had a contingency plan in place which consisted of a spare flow-stopping 12" bag and constant monitoring of the main pending the arrival of PMC, this included a repair mate holding the configuration to ensure there was no movement which could cause the equipment to fail.
67. This final main which was supplying gas to the building was isolated at 23:30pm. When I went to the final isolation point, there were LFB officers present and they were asking how quickly the supply would be isolated. I was told by Tony and Jason that the LFB had been increasingly concerned about the stability of the building and were re-assured when the team succeeded to isolate the supply of gas to the building. The LFB officers were very grateful to Jason and the team once the supply had been isolated.
68. The discovery that the final main was a 15" main did hinder the Repair team's progress. However, I don't believe that it caused more than a 60 minute delay to the team temporarily isolating the gas albeit the permanent cut and cap was not achieved until the following morning.
69. At around 01:00am on the morning of 15 June 2017, as I was walking back to the muster point with the team after successfully isolating the supply of gas, we were still wearing our PPE when we were approached by members of the public who were asking us questions and filming us — there was an increased sense of unease as some of the members of the public were shouting abuse at us.
70. I left the site at around 01:30am. The team remained on site to monitor the 15" main until PMC arrived on site at around 03:30am to carry out the permanent isolation. I updated Darren ELSOM who was on standby again that evening. However, it was agreed that any calls relating to Grenfell Tower should be directed to me.
71. We were very aware that some of the men had been working long hours. It was an intense period of time, but the men were dedicated to the job. Given the severity of the situation and the urgency to disconnect the supply of gas, we decided that the most efficient way for the operation to be completed would be if both Tony and Jason stayed on site until the gas had been disconnected. Jason coordinated the repair operation from start to finish and they both knew exactly how the network operated.

Reflections

72. I have attended a number of incidents during my career, but I have never had to deal with an incident like the fire at Grenfell Tower, or felt pressure like I did that day. I was responsible for our response to the incident but I had a team of competent and highly experienced engineers who led a very successful operation on site. I had the utmost trust in the team who responded to the incident. Jason

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and Tony's knowledge of how the gas network operates was invaluable and Jason did a remarkable job co-ordinating and motivating the men and working with the LFB under what were very difficult circumstances.

73. The emotional situation that the men faced that day could never be captured in a training session.

However, I believe that the incident management course which is run in conjunction with the Fire Service College (Moreton In Marsh) and is designed to provide operational managers with the knowledge and skills to be able to manage an incident on site, work effectively with multi agencies and be able to identify and manage problems when dealing with a major emergency, and the internal Cadent incident management course which provides field force operatives and managers with an awareness of incident management, equipped us well for the incident and gave us the confidence to co-ordinate a successful Emergency and Repair response.

74. The men did well to isolate the gas given the obstacles they faced. Our men don't come to work expecting to deal with an incident like Grenfell Tower. They are trained gas engineers. They are not trained to work under that pressure and carry out physical excavations in the immediate vicinity of a major fire incident. They faced the trauma of working in an intense environment but worked incredibly hard to complete an operational task that would, under normal conditions, take much longer.

75. I have replayed the events of 14 June 2017 over and over in my mind and have reflected on the decisions we took. I have questioned whether there was anything I personally, or the operational team could have done differently, or would have done differently had we known at 03:22am on 14 June everything that we know today. However, I come back to the same conclusions and there isn't one decision that I would make differently today.

I understand that the material I have provided to the Police may be shared with the Public Inquiry investigating the Grenfell Tower Fire. I am willing for any material handed to the criminal investigation to be shared with the Public Inquiry.

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