Stephen Alan HUNT (Deceased)

REGULATION 28: REPORT TO PREVENT FUTURE DEATHS .

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** • The Rt Hon. Theresa May MP, the Home Secretary • Mr Peter Holland CBE, Chief Fire and Rescue Adviser Copied for interest to: • The Chief Fire Officer of Greater Manchester Fire and Rescue Service • The Chief Fire Officer of Merseyside Fire and Rescue Service • The Chief Fire Officer of West Yorkshire Fire and Rescue Service • The family of the Deceased • The President of the IFE • The other Interested Persons in the Inquest
1	**CORONER** I am Nigel Meadows, H.M. Senior Coroner for the area of Manchester City.
2	**CORONER'S LEGAL POWERS** I make this report under paragraph 7, Schedule 5, of the Coroners and Justice Act 2009 and regulations 28 and 29 of the Coroners (Investigations) Regulations 2013.
3	**INQUEST** In summary terms the jury found that the deceased had been unlawfully killed (by unlawful act manslaughter by arson) by a joint enterprise involving two juveniles and answered a number of other specific factual issues. Narrative conclusion comprising the answers to the following questions: Question 1: Are you satisfied so that you are sure that the deceased was unlawfully killed by the acts of a single person? Answer: No Question 2: Are you satisfied so that you are sure that the deceased was unlawfully killed by the acts of a joint enterprise? Answer: Yes Question 3: Do you find that the fire was probably deliberately started by the acts of one person? Answer: No Question 4: Do you find that the fire was probably deliberately started by the acts of a joint enterprise? Answer: Yes

Question 5: Was the caged cardboard storage area and the racking up the stairs from the emergency exit doors probably installed in or about the summer of 2009?

Answer: Yes

Question 6: Was the caged cardboard storage area and the racking up the stairs from the emergency exit doors probably installed and in place on 2 August 2012 when a fire risk assessment was carried out and was it in place on 13 July 2013?

Answer: Yes

Question 7: Did the presence of the caged cardboard storage area and the racking up the stairs from the emergency exit doors contribute to the fire developing?

Answer: Yes

Question 8: This question asks you about the probable control measures that were in place during the afternoon shift on 13 July 2013:-

(a): Was the period of wear for BA crews entering through the doorway in sector 1 probably limited to a period of time during the day shift?

Answer: Yes

(b) If the answer to the previous question is "yes", what was the time limit?

Answer: Maximum 20 minutes

(c) Were most BA crews entering through the doorway in sector 1 probably told to remain at the top of the stairs just inside the doorway and fight the fire from there only?

Answer: Yes

(d) Were there any other probable safety control measures instigated in sector 1 doorway for BA crews entering the building during the afternoon of 13 July 2013?"

Answer: Yes, there was a second safety officer to keep an eye on BA crews entering the doorway and to keep visual and/or verbal contact to check that they are okay.

Question 9: Were the safety control measures that you have identified in response to question 8 probably communicated to:-

(a) The entry control officer who sent the deceased and [redacted] into the building?

Answer: No

(b) The new sector commander for sector 1 at the changeover of shifts at about 2000 hours on 13 July 2013?

Answer: Yes

(c) The new entry control officer for sector 1 at the changeover of shifts at about 2000 hours on 13 July 2013?"

Answer: No

Question 10: Were the same safety measures that you have identified in response to question 8 probably in place when the Deceased and his colleague entered the building and if not should they have been?

Answer: Measures were in place although not implemented. These measures should have been carried through over handovers.

Question 11: Did the new sector commander and/or entry control officer for sector 1 probably fail to understand or comprehend and then implement the safety measures they were advised about?

Answer: The new sector commander misinterpreted the brief and the entry control officer was not fully informed and, therefore, couldn't implement the safety measures.

Question 12: On or about the time the deceased and his colleague entered the building was either of the new Entry Control Officer, the Sector Commander, the Sector Safety Officer, probably aware of the following:-

(a) that the previous BA teams had been limited to a 20 minute wear? If so, please specify who (by reference to their role and not their name - for example, Sector Commander; Entry Control Officer; Sector Safety Officer etc) knew what?

Answer: Ops commander, Sector 1 commander, Second safety officer, Ops support, Ops assurance and Sector safety officer

(b) that they had been directed to go to the top of the stairs and fight the fire at that point but go no further? If so, please specify who (by reference to their role and not their name - for example, Sector Commander; Entry Control Officer; Sector Safety Officer; etc) knew what?

Answer: Sector 1 commander, BA entry control officer, second safety officer, incident commander, operations commander, operational support, operations assurance, sector safety officer, logistics officer, and sector 4 commander.

(c) that a safety officer had been dedicated to watch over them and keep in communication? If so, please specify who (by reference to their role and not their name - for example, Sector Commander; Entry Control Officer; Sector Safety Officer; etc) knew what?

Answer: Second safety officer, sector 1 commander, operations commander, operational support, sector safety officer, and sector 4 commander.

Question 13 (a) What brief was probably given to the deceased and his colleague before entering the building at 20:04 hours; and (b) had this brief changed from earlier briefs and, if so, in what respect/s?

Answer: The deceased and his colleague were two briefs. The entry control officer gave:" Go to the top of the stairs, take over, sit there and squirt water, top of the mezzanine, you know what the crack is". The second safety officer gave this quote "Go to the top of the stairs, turn left, turn right, use the thermal imaging camera, and spray water from there." The brief changed from earlier briefs due to the wording -- sorry, the brief changed from earlier briefs due to the wording with the inclusion of the word "mezzanine" and no direct instructions.

Question 14: Did the deceased and his colleague probably follow their brief?

Answer: Yes, they followed their brief as they understood it. The confusion was due to the use of the term "mezzanine" and "seek out hot spots" may have led them to misunderstanding the brief.

Question 15: What factors probably contributed significantly to the death? They need not be the sole or even the principal cause of death, but they must be more than merely

	minimal. Answer: 1. Lack of communication / information at handover 2. Lack of communication, information at briefing and debriefing 3. Misinterpretation of instructions 4. Incorrect decision making 5. Competency within roles given 6. Paul's Hair World storeroom layout, internal conditions (stock, debris, smoke detectors) 7. Breakdown of telemetry radio communications 8. Inadequate fire risk assessments 9. Inadequate fire safety measures within Paul's Hair World (Fire drills) 10. Act of vandalism / criminal damage.
4	**CIRCUMSTANCES OF THE DEATH** The events concern a business known as Paul's Hair and Beauty World ("PHW") operating from the ground floor of 21 to 33 Oldham Street in the city centre of Manchester. The business is run by [redacted] and he took up occupation of this premises in approximately 2003 as a sub-tenant. He then became the main tenant in 2006. Over the years his business has been quite successful and he has other outlets. The nature of the business is the sale in particular of human and synthetic hair extensions as well as associated hair and beauty products. He also had an on-line business. Prior to PHW's occupation, the premises was used as a nightclub requiring a public entertainment licence. It has a main front entrance as well as a rear emergency exit comprising of two doors which open outwards, but also another emergency exit which led onto a protected staircase also towards the rear of the premises. It seems that the protected staircase emergency exit was not used and indeed was padlocked when PHW took over the premises. The evidence indicated that it had never been used. The business kept a substantial amount of stock usually in large boxes. The front of the premises was designed as a shop in which customers could simply walk through aisles of products and it also had display cabinets. There was a main counter system. The rear of the premises which used for storage and office space and this was at a premium. It seems that over the years in order to boost the level of stock that could be kept a system of wooden racking from floor to near ceiling had been fitted out. It seems that by 13 July 2013 the disused emergency exit doors had been covered with racking for some years. In or about 2004 [redacted], who had previously been a Greater Manchester Fire and Rescue Service ("GMFRS") firefighter for 23 years, started an unincorporated business known as Firefighter UK. Originally, he simply serviced fire extinguishers at PHW but ,as his business developed , he subsequently held himself out as being a competent fire risk assessor. In 2009, he completed a formal fire risk assessment document for PHW. He returned in 2010 and 2011 to service the business's fire extinguishers. However, in July 2012 PHW had a health and safety assessment carried out by [redacted] of a business known as Spectra Business Solutions and it was noted that the businesses fire risk assessment was out of date. Mr Aspinall was contacted and arranged to attend again, and conducted what he told the court was a fresh or initial fire risk assessment. In about the summer of 2009, a [redacted] of RA Smith Joinery was asked by PHW to construct a mezzanine floor level within the storage area at the rear of the demised premises and in addition to create some additional racking to store products which run up from the emergency exit doors at the rear of the premises on the right-hand side as you look at them from the outside. He also created a caged cardboard storage area which was situated behind the left hand door as you look at them from the outside.

Consequently, when [redacted] carried out his first fire risk assessment in 2009, the evidence suggested that the mezzanine together with the additional racking by the emergency exit doors and the cardboard storage area had been created and was in existence and in use. That would be the same position in 2010 and 2011 and indeed again in 2012.

The emergency services were called at 14:59 hours and initially three fire appliances (or pumps) attended with other supporting colleagues travelling by other vehicles. However, very quickly it became clear that additional resources would be required to fight the fire and eventually some twelve pumps attended, in addition to initially one and then a second aerial platform. The fire was deep-seated and extremely difficult to tackle.

On 13 July 2013 [redacted] and [redacted] had travelled by train into Manchester from Bolton in order to visit the city centre. [redacted] had her 15th birthday only a few days before and she had been given some money by her father. The weather on that day was particularly warm with temperatures reaching 27°C. Both girls were intending to visit a business known as Affleck's Palace which is adjacent to PHW's premises.

One entrance into Affleck's Palace is situated near to the rear of PHW's premises on what is known as Tib Street. Significant parts but not all of the events of relevance that happened thereafter were captured on CCTV cameras. The evidence indicates that [redacted] and [redacted] went to sit outside the rear emergency exit doors of PHW at about 14:38:32 hours. Both girls wanted to smoke and it seems that they sat down and lit and smoked a cigarette each. [redacted] had a hand bag which contained both the cigarettes and lighters which were in their possession. There was a significant dispute as to fact between [redacted] and [redacted] about what transpired. It was contended by [redacted] that for some time she had difficulty in practical terms in actually using a lighter and she got her friends to do so and in particular [redacted]

[redacted] told the court that she was still unable to light a cigarette using a lighter on 13 July 2013. She said that [redacted] lit her cigarette for her on this occasion and passed her the lit cigarette. However, [redacted] maintained that whilst [redacted] had been unable to light her own cigarettes using a lighter for some time, she was able to do so by 13 July 2013 and did in fact light her own cigarette on this occasion. It would be fair to say that there were inconsistencies and contradictions in both their accounts but this was a matter of fact for the jury to determine.

The girls sat down and smoked the cigarettes slowly and chatted for a few minutes. The CCTV shows their leaving the vicinity of the rear emergency exit doors 14:45:36 hours. However, it is suggested that on close observation of the CCTV images the first signs of smoke from the fire are seen at about 14:46:33 hours. This was before the girls leave the doorway. At about 14:47:06 smoke was clearly visible. In other words about one and a half minutes after the girls moved away from the doors. [redacted] the shop manager, ran around the back and is seen on camera at 14:47:11 hours and she thought that it had taken about 2 minutes being alerted to the fire to arriving at the back doors. The fire itself was discovered by an employee of the business known as [redacted]. Allowing a margin of error for back calculation it was estimated that he had actually discovered the fire at about 14:45:35 hours. This means that the fire was first noticed when [redacted] and [redacted] would still have been at the doors. When it was first discovered the fire was described as being in the cage cardboard storage area with flames about 4 or 5 feet high. As a matter of common sense it would have taken some time to get to that stage after ignition, albeit quite rapidly as the expert evidence indicated.

The court heard from a total of four expert witnesses in relation to the cause of the fire. Merseyside Fire and Rescue Service have been appointed to investigate the fire and the fire investigator involved was [redacted] He was an extremely experienced fire officer with over 10 years experience as a fire investigator and had investigated in excess of 1000 fires. He visited the scene of the fire following the fatality and took a number of photographs. Subsequently a number of tests were conducted in a simulation of the location. In his opinion, the fire had been caused by naked flame passed

underneath the left-hand door as you look at them from the outside coming into contact with cardboard in the store.

In simple terms on the accounts given by both juveniles, neither of them could have been responsible for starting the fire. There was no evidence of any other third party involved. Even if there had been a discarded cigarette involved originating from either them they both told the court that they smoke their cigarettes virtually down to the filter and had stubbed their cigarettes out very shortly before leaving. Irrespective of the consideration of there being insufficient fuel in the sense of tobacco to burn in the cigarette, the experiment that [redacted] conducted would suggest that even in unique circumstances it would have taken another three and a half minutes for the fire to have started and it was quite clear that the fire had started when the girls were at the back door.

[redacted] opinions were supported by [redacted] who is a forensic scientist and has been investigating fires since about 2002. He had been involved in advising the police and the CPS in connection with the original prosecution of [redacted] He agreed that the seat of the fire was the caged cardboard store. He too had attended the scene of the fire and assisted in the initial excavation. In his opinion the most likely explanation was fire started as a result of a naked flame rather than a smouldering cause, such as a lit cigarette. He agreed with [redacted] that a lit leaflet could ignite cardboard within seconds or almost instantly. Whilst he acknowledged that in very particular circumstances it may be possible to start a fire using a lit cigarette, having read the transcripts of the evidence given by both juveniles it was apparent that neither of them was saying that any cigarette butt that they had been smoking had rolled under the left-hand door or could have rolled under the left-hand door.

In any event both girls were saying that their cigarettes were completely extinguished and had been smoked virtually down to the filter. [redacted] opinion that the cause of the fire was due to a naked flame was supported because of the timing of the events and that the girls were at the doors when the first signs of smoke can be seen. All of this points towards a naked flame ignition rather than a smouldering source.

[redacted], another forensic scientist who had been investigating fires longer than [redacted] was essentially of the same view, particularly with regard to the timings of the development of the fire. He had been instructed by the solicitors then acting from [redacted] in respect of the criminal charges but had not been provided with copies of the girls' police interview records to understand precisely what they were alleging had happened. He had been asked to consider whether or not the fire could have been potentially caused by a discarded lit cigarette igniting combustible materials. He was advised that [redacted] cigarette was dropped on the floor and it either was rolled or was kicked under the rear door. However, he agreed when giving evidence that if the explanation about a lit cigarette rolling under the door is ruled out than that would leave only one other potential source of ignition. Namely, the use of a naked flame in the form of a lit leaflet pushed under the door.

He did not attend the scene and carried out a paper review but then also carried out his own experiments. He purchased a number of cigarettes including those which were apparently being smoked by the girls at the time. He lit seven whole cigarettes and placed them on top of cardboard but on no occasion did they ignite a fire. For the eighth cigarette he created what was described as a cardboard sandwich with some paper wedged between them. He then inserted a lit cigarette horizontally into the package and blew on it several times. After about three and a half minutes there was an ignition and a flaming fire started. Unfortunately he did not record how many times he blew on the cigarette or for what length of time nor with what strength. Having completed this experiment, he thought as he demonstrated it was possible in some circumstances for a fire to be started and therefore did not do any further experiments including control experiments or putting a lit cigarette in contact with cardboard and/or paper is a different angle. Nor did he use cigarettes that have been smoked virtually down to the filter as was described in this case. This is important because the experiment that he video

recorded when a fire was ignited indicated that at least half of the cigarette had to be burnt before a fire could start. A virtually completely smoked cigarette would have very little fuel in the sense of tobacco to burn and would self extinguish within a much shorter space of time. Apparently, the CPS decided to discontinue the prosecution and offer no evidence based on the contents of his report.

The court instructed another independent expert called [redacted]. He was a very senior ex-Assistant and Acting Chief Fire Officer. He started investigating fires in 1984 and became a specialist fire investigation officer in 1993. He was the lead instructor for fire investigation for Derbyshire Fire and Rescue Service, as well as teaching police officers and scenes of crime officers about the process of fire investigation. He passed a number of examinations relevant in the fire service and was a member of the Institute of Fire Engineers. He investigated a large number of both fatal and non-fatal fires. He felt that the only credible way that the fire started was by the application of naked flame. He too took into account the timing of the events and pointed out that even if a discarded lit cigarette from the girls had managed to find its way under the door it would have taken much longer for any fire to have started than the evidence clearly shows in this case.

The expert evidence clearly indicates that the only credible explanation for the start of the fire is the introduction of a naked flame under the door into the cardboard storage area.

The fire itself took hold quite rapidly despite attempts by the owner and indeed others to try and extinguish the initial flames in the cardboard storage area. They had spread to the ceiling and across to the racking on the other side and ignited materials there which in turn had spread. There was a significant amount of combustible material. The premises were evacuated of all persons and on arrival one pump went to the back of PHW and the other to the front. The rear emergency doors where the fire started was designated as sector 1 in fire service terminology and the front of the building as sector 2. Initially crews wearing breathing apparatus (BA) were sent in to sector 1 in order to try and fight the fire but also carry out a reconnaissance mission. They reported back that the conditions were very cramped and there was an enormous amount of smoke being generated by the fire.

The span of command at a fire like this has an overall incident commander. Depending upon the nature and size of the fire they may have an operations commander as well as a logistics commander. The various designated sectors will each have sector commanders. The incident commander will set the overall strategy for fighting the fire which is then actioned by the operations commander. The individual sector commanders have responsibility for fighting the fire in their area and for the health and safety of the firefighters involved as well as members of the public. Where BA crews are used there will also be what is known as an Entry Control Officer who also operates the Entry Control Board. This can be written on with a black chinagraph pencil but also has telemetry connections with the BA crews' equipment. In this case, considerable amounts of pressurised smoke poured out of the building from both the front and the rear. Jets of water were applied to the front of the premises from early on but there was no ingress into the building by BA wearers.

As the afternoon progressed the sector commander in sector 1 appointed an overall sector safety officer but also appointed a second safety officer with a particular role. He had formulated a plan that BA wearers could enter via the emergency exit doors in sector 1, go up a short flight of about six steps and fight the fire from the top of that area but go no further. They were to be within visible sight or to be contacted audibly at all times. They could then direct jets of water to particular hotspots. Crews were given radios and thermal imaging cameras to assist. In addition because of extremely hot conditions both outside but particularly inside he set a maximum wear of 20 minutes. Over the afternoon there were some 40 entrances and exits by BA crew teams. In addition there was a specific entry control officer who had the responsibility of operating what is known as the entry control board. This role was carried out in the afternoon by a firefighter. He kept an eye on the 20 minute time limit and notified the second safety

officer when crews needed to be withdrawn. Overall, during the afternoon crews had self withdrawn on several occasions due to the deteriorating conditions. In addition they had been withdrawn by the second safety officer who could observe the conditions himself but from the outside. The entry control board itself has what is known as telemetry with the BA wearers equipment. On occasions this can be lost or can be intermittent but this would not automatically trigger any emergency response.

Over several hours, the conditions periodically changed in that there would be periods when less smoke came out of the building but other periods when significant amounts of pressurised smoke emanated from the building. In sector 1 they had managed to take down boarding across a disused window at the back of the building and make an entry into that compartment so that firefighters could be positioned on a platform immediately outside the building spraying a jet of water inside. They also managed to gain access to a protected staircase on the other side of the building in what became sector 4 and cut a hole in roller shutter doors covering the other set of disused emergency exit doors that had apparently been covered up with racking in the PHW premises. From there they deployed a fixed ground monitor. This is a static jet of water that is not controlled by firefighters themselves.

It was recognised this was a fire that was going to burn for some considerable time. The day shift would change at about 19:00 hours and new crews would be attending in order to take over from their colleagues who had been fighting the fire all afternoon. At the front of the premises had been positioned what is known as an aerial platform. This is able to deliver significant quantities of water onto a fire usually from a height. Depending upon the availability of water this equipment can fire a jet which is many times more in the terms of quantity than an ordinary 45mm hose. The building itself had on one side a coffee shop and on the other a hotel. There was concern to stop the fire spreading. At one point it was noticed that fire had apparently spread to the first floor and at about 19:18 hours there was a direction that all BA crews be withdrawn from the premises whilst the aerial platform directed water into the first floor.

This appeared to be successful and at about 19:30 hours the incident commander and his other senior officers met and decided that BA crews could be redeployed into the premises in sector 1 because there was no noticeable effect at the rear from the deployment of the aerial platform at the front of the building. Consequently, at 19:35 hours to firefighters wearing BA equipment were deployed into the building and they left at 19:52 hours. The BA crew team leader did not recall being told about the 20 minute maximum wear but in any event heard a shout for them to leave and they did so and took with them their hose. Usually they would have a debrief with either the entry control officer or the sector commander but this did not take place. It would seem that sometime after about 19:30 hours the sector commander of sector 1 handed over to his replacement and maintained that he gave a thorough brief explaining in particular the role of the second safety officer outside the sector 1 entrance keeping an eye on the firefighters at the top of the stairs. The second safety officer himself told the court that he briefed three colleagues on his role because originally he thought one of them was going to take over his particular tasks. Likewise the entry control officer says that he handed over what he had been doing that afternoon.

The incoming sector commander, entry control officer and sector safety officer gave evidence and did not seem to have either heard or understood about the particular safety measures for BA crews entering via sector 1. It is a matter of fact for the jury to decide but on the evidence that they have heard they could come to the conclusion that whatever brief was given to the deceased and Firefighter [redacted] was not the same as the earlier briefs. There was no second safety officer appointed. The jury were played CCTV recordings of the exit of the firefighters at 19:52 hours and then the deceased and Firefighter [redacted] preparing to go in at 20:04 hours.

The sector 3 commander decided to redirect the aerial platform jet into the front ground floor main entrance of the premises but indicated that he would not have done so had he realised that there were BA crews entering via sector 1. It seems that he decided to do

this without any specific instruction from the operations commander who told the court that he gave no such authority or instruction. Both the operations commander and the incident commander told the court that in fact they would have had no concern about this because they knew something of the structure of the internal part of the premises in that there was a dividing wall between the front of the shop in the rear storage area. Ideally sector commanders should communicate with one another about their activities in case they may affect the firefighting operations in another sector.

The deceased and his colleague Firefighter [redacted] had arrived as a member of the new evening shift and formed the BA team. They were directed to go to sector 1 and went under air at 19:59 hours and then went into the building at 20:04 hours. If they had been subject to a 20 minute maximum wear then they should have been exiting the building at 20:19 hours. In the event relief crew was sent in at 20:26 hours and they believed that it took them a couple of minutes to find the deceased and Firefighter [redacted]. They had gone to the top of the stairs, turned left and had been found in the area outside what was described as the post room and at the base of a flight of stairs up to a mezzanine level. Visibility inside was virtually zero. The relieving crew had followed in the hose. The deceased was the leader of the BA crew and apparently walked towards the leader of the relieving crew and thrust the hose in his chest and said words the effect that they were getting out of there.

It was thought that this was about 10 metres inside the building. It was only a few feet away from the top of the stairs and the exit. Firefighter [redacted] had no recollection of this at all and in particular seeing and being relieved by the new BA crew. However, he did remember the post room and the fact that the deceased had gone virtually to the top of the stairs leading to the mezzanine when Firefighter [redacted] explained that he was feeling extremely hot and he thought that they should leave the premises. His recollection was that the deceased came down the stairs and they tried to follow their hose out but could not do so. They were crawling on their hands and knees and he recognised that he was suffering the cognitive effects of extreme heat. At one point he recognised the need to press the emergency button on his ASDU equipment but simply could not manage to do so even though he knew fully how to operate it. It seems that he suffered a very painful burn to his left hand and removed his glove.

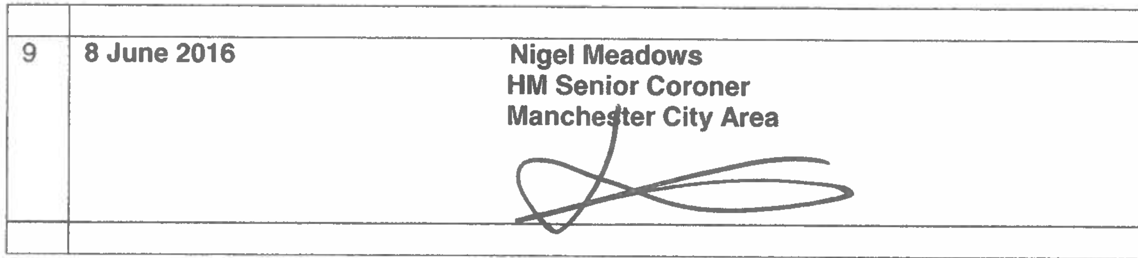
The BA crew which had gone in to relieve the deceased and Firefighter [redacted] very quickly came to the conclusion that the circumstances inside were not as described to them when they were briefed and they decided to withdraw from the building and were seen doing so at 20:32 hours. When they exited they were mistaken for been the deceased and Firefighter [redacted]. On leaving the building they thought they heard cries for help.

The BA equipment also known as ASDU has a telemetry system to make contact with the entry control board. This will show the rate of consumption of their air. It also has a movement sensor system so that if the operator does not physically move for a period of 36 seconds it will set an alarm off. The equipment can also set off what is known as a low pressure alarm when only a limited amount of air is still in the BA cylinder. In this case, the deceased's low pressure alarm was sounded at 20:30 hours and then motion alarm itself 20:35 hours. This coincided with the time that the deceased actually ran out of air completely.

Firefighter [redacted] low pressure alarm sounded at 20:32 hours. A BA emergency was called at 20:34 hours. A BA crew that had been sent to reposition the ground monitor at sector 4 heard what they thought was the sound of colleagues within the compartment. By crawling on his hands and knees he came across Firefighter [redacted] began to rescue him with the assistance of his colleagues. This coincided with the initiation of the BA emergency and it is thought Firefighter [redacted] was rescued at 20:35 hours. Other colleagues came to assist but it was not until 20:41 hours that the deceased was found a short distance away and removed from the fire compartment outside. He was still wearing his facemask but not his helmet. He had also lost a glove and a boot. Attempts were made to resuscitate him at the scene but with no success. He was taken to the

	Manchester Royal Infirmary where further efforts at resuscitation also proved unsuccessful and he was pronounced dead at 21:21 hours. After his death was reported to me, I authorised a forensic post-mortem examination carried out by a very experienced forensic pathologist. I also authorised a second post-mortem examination carried out by another forensic pathologist. It was apparent the deceased had suffered no significant traumatic injuries and examination of his heart and other organs demonstrated no abnormality. The first Forensic Pathologist, [redacted] gave evidence and in summary terms expressed the opinion that the cause of death should be described as 1(a) Heat exhaustion and hypoxia.
5	**CORONER'S CONCERNS** During the course of the inquest the evidence revealed matters giving rise to concern. In my opinion there is a risk that future deaths will occur unless action is taken. In the circumstances it is my statutory duty to report to you. The **MATTERS OF CONCERN** are as follows: (1) It is suggested that all Fire and Rescue Services (FRS's) should consider the implementation of measures to reduce the risks associated with the physiological affects of working in a hot environment. In particular consideration should be given to: Duration of wears under breathing apparatus; Having regard to all relevant factors including, for example the weather, previous exertions of BA teams and individual circumstances; Training and guidance for all operational personnel to recognize the effects of heat both on themselves and on their colleagues and the appropriate steps to take upon such recognition, including withdrawal and self withdrawal. Training and guidance for all operational personnel to have the ability and confidence to ensure the withdrawal of others who may be adversely affected by heat whether by calling a BA emergency or otherwise appropriately. Training and guidance for all operational personnel to have the ability and confidence to withdraw themselves by whatever means appropriate including activating the ADSU. (2) It is suggested that all FRSs should consider the implementation of measures to reduce the risks associated with the loss of communications at operational incidents. For example, to include safety control measures to ensure BA teams can be withdrawn from the risk area if needed. (3) It is suggested that all FRSs should undertake a review to ensure the adequacy of standard operating procedures, guidance and training of the handing over and taking over of roles at incidents to ensure all the key areas of information, including safety control measures, are captured and shared. (4) It is suggested that all FRSs should ensure that significant hazards and any safety control measures are the responsibility of the incident commander and should be recorded within each sector, to ensure visibility to all on the fireground, and passed/copied for use by the the incident commander/command team to assist on the analytical risk assessment. (5) It is suggested that all FRSs should undertake a review to ensure the adequacy of standard operating procedures, guidance and training in the appropriate use of thermal imaging cameras to include the limited extent to which they can be relied upon to measure ambient temperature. (6) It is suggested that all FRSs should undertake a review to ensure the adequacy of

	standard operating procedures, guidance and training in the deployment of aerial monitors to ensure the safety of any personnel within the risk area is not compromised. (7) It is suggested that all FRSs should undertake a review to consider the circumstances in which inspections should be carried out under section 7(2)(d) of the Fire and Rescue Services Act 2004. (8) It is suggested the above mentioned steps be undertaken jointly by Fire and Rescue Services and the FBU or other Health and Safety Representatives on the Health and Safety Committees. (9) It is suggested that the Secretary of State for the Home Department considers measures to ensure that: fire risk assessors are adequately trained and qualified so as to be competent in the role, and the responsible person has the means to verify the competence of any person holding themselves out to be a fire risk assessor. (10) It is understood that there are some 45 Fire and Rescue Services and the findings of the inquest need to be disseminated down to them all. The pressure is upon them to find their own solutions to problems against the backdrop of financial pressures. The Home Office now leads on fire issues and there has been ever increasing decentralisation. Whilst this is not without merit there appear to be difficulties in ensuring that services are meeting expectations and a means of disseminating national learning. It is suggested that consideration is given to being able to mobilise a national and consistent approach to sharing the learning and testing so that it can be shown to be received, understood, actioned and embedded.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you and your organisation have the power to take such action.
7	**YOUR RESPONSE** You are under a duty to respond to this report within 56 days of the date of this report, namely by Friday 12 August 2016. I, the coroner, may extend the period. Your response must contain details of action taken or proposed to be taken, setting out the timetable for action. Otherwise you must explain why no action is proposed.
8	**COPIES and PUBLICATION** I have sent a copy of my report to the Chief Coroner and to Interested Persons. I have also sent it to organisations who may find it useful or of interest. I am also under a duty to send the Chief Coroner a copy of your response. The Chief Coroner may publish either or both in a complete or redacted or summary form. He may send a copy of this report to any person who he believes may find it useful or of interest. You may make representations to me, the coroner, at the time of your response, about the release or the publication of your response by the Chief Coroner.



9	**8 June 2016** **Nigel Meadows** **HM Senior Coroner** **Manchester City Area**