Coroner's Inquests into the London Bombings of 7 July 2005

Addressees:

Secretary of State for the Home Department
Director General of Security Service
London Resilience Team
Transport for London
London Ambulance Service
Secretary of State for Health
Barts & London NHS Trust

6 May 2011

Dear [Secretary of State] etc

Report under Rule 43 of The Coroner's Rules 1984

Preamble

1. Fifty two members of the public were killed as a result of four bombs being detonated on London's transport system on 7th July 2005 ("7/7"). The names of the deceased are set out at Annex A to this report. I heard the evidence in these inquests in the capacity of Assistant Deputy Coroner for Inner West London, from 11th October 2010 to 3rd March 2011. I sat without a jury and have given verdicts of unlawful killing, with the medical cause of deaths recorded as "injuries caused by an explosion", in respect of each of the deceased.

2. Where a Coroner is satisfied that the evidence gives rise to a concern that circumstances creating a risk of other deaths will occur or continue to exist in the future, and is of the opinion that action should be taken to prevent the occurrence or continuation of such circumstances, she may report the circumstances to a person whom she believes has power to take action. I announced in court on 11th March 2011 that I was proposing to make such a report under Rule 43 of the Coroners Rules 1984 ("the Rules").

3. I am satisfied that the criteria in Rule 43 (1) are met as far as some but not all of the recommendations put before me for consideration by the Interested Persons in these proceedings. This is my report.

4. It falls into two sections. For ease of reference, I shall continue to call them "Preventability" and "Emergency response", which were the headings under which I examined the issues. Not all of this report will be directly relevant to you, but I wished to make one report that would read as a consistent whole and reflected the wide ambit of my conduct of these inquests. I attach, therefore at Annex B, a schedule of the recommendations contained in this report together with a note of to whom they are addressed, in the hope that this will assist you in responding to the issues I address specifically to you.

5. Given the public interest in these Inquests, it is appropriate that I provide an overview of the facts and circumstances relating both to what was and was not known about the bombers prior to 7/7, and the emergency response to the bombings. This is essential properly to set the context for the recommendations that I make. In doing so, I can also explain in outline those improvements which have already been made since 7/7 and therefore do not require further intervention.

6. However, given the parameters of Rule 43, it is not appropriate to comment upon all the inquiries I have pursued concerning the bombings. Therefore I have not set out in detail all of the evidence which I have heard or the narrative which it establishes and informs. That evidence is now, in any event, a matter of public record contained on the Inquests' website which will be transferred to and maintained by The National Archives.

Preventability

Introduction

7. For the purposes of this report I can say without a shadow of a doubt that the four men who detonated the bombs and therefore murdered the fifty two innocent people were Mohammed Siddique Khan ("Khan"), Shehzad Tanweer, Jermaine Lindsay and Hasib Hussain.

8. It is not generally a proper function of an inquest to attribute blame or apportion guilt to individuals, nor is it a proper function of a Coroner to express opinions in the verdicts returned. The Rules are clear and I have not strayed from those restrictions in the verdicts I have delivered. However, the exceptional circumstances of these Inquests mean that it is appropriate to name the bombers within this Rule 43 report, which is not subject to the same constraints. There are three principal reasons: the bombers are dead. There can be no question of prejudicing any criminal or civil proceedings against them and I cannot defame them. Further, I cannot consider the issue of preventability, one of the most important of the issues I have set, without

stating in positive terms that they were the bombers. Finally, the evidence is utterly overwhelming.

9. To argue or find to the contrary would be irrational. It would be to ignore a huge body of evidence from a vast array of sources. Had there been a conspiracy falsely to implicate any of the four in the murder plot, as some have suggested, it would have been of such massive proportions as to be simply unthinkable in a democratic country. It would have involved hundreds of ordinary people, members of the bombers' families, their friends, their fellow terrorists, independent experts, scientists, as well as various police forces and the Security Service. It would have cost millions of pounds to fabricate the forensic evidence. Independent barristers and solicitors who have had access to the source material (for example the CCTV footage) during the criminal trials and these proceedings would have had to be involved. Just to state the proposition is to reveal its absurdity.

10. None of those involved in the inquests have come under any pressure to hide the truth. On the contrary, together we have done our very best to seek it out. I am not conscious of any obstacles being put in my way, despite the extremely heavy burdens upon the organisations represented before me and the limited resources available to them.

11. That brings me to the burdens on the Security Service. It is worth noting the huge task which confronts them on a daily basis. A glimpse at the challenges they face may be gleaned from the gists that have been prepared of the Quarterly Summaries for 2004/2005. I shall not repeat the detail. It is important to note, however, not just the large number of the threats to the UK from terrorists, but the nature of them. They cover everything from attack planning to radicalisation of individuals.

12. I should also record the conspicuous success that the officers of the Security Service have had in preventing many acts of terrorism in the UK and the inconspicuous success they have had, the precise details of which can never be made public. As the representatives of the bereaved families properly acknowledged, members of the Service work unsung and tirelessly on behalf of the British public. They gather, sift and analyse vast quantities of intelligence material each year and try desperately to focus their precious resources and efforts on preventing the kind of murderous attack that took place on 7/7. Mr James Eadie QC, on behalf of the Secretary of State for the Home Department and the Security Service, expressed more than once, as did Witness G (Chief of Staff to the Security Service's Director General) the profound regret of the Service that they were unable to prevent the bombings. The very fact that the Security Service has put forward someone as senior as Witness G is said to be a mark of their regret and their acceptance of the importance of these proceedings.

13. Mr Eadie rightly observed that any suggestion that the Security Service might have done more to prevent the attacks was inevitably based to a considerable extent on hindsight. I am sure Mr Patrick O'Connor QC, who made submissions on behalf of all the bereaved families represented on the issue of preventability, would accept a degree of hindsight is unavoidable. He was able to focus his submissions solely on what was known about Khan and Tanweer, because the huge quantity of material from the time has been filtered down to one lever arch file, a core bundle of material relating just to them and known links to them. However, one must never lose sight of the fact that the material confronting the Security Service at the time would have comprised literally thousands of strands of intelligence of varying degrees of quality, in relation to thousands of possible contacts and hundreds of possible targets. The desk officers must usually work at speed and in very difficult conditions. We do not know the precise details, but we know enough properly to infer that the sheer scale and number of the threats facing the UK was immense. If one plot is discovered to involve an imminent threat to life resources must be diverted to meet it at the expense of other investigations.

14. Accordingly, I remind myself of the wise words of Megarry J (in a different context) in the case of Duchess of Argyll v Beuselinck [1972] 2 Lloyd's Rep 172. At page 185 (col. 1) he said this:

    "In this world there are few things that could not have been better done if done with hindsight. The advantages of hindsight include the benefit of having a sufficient indication of which of the many factors present are important and which are unimportant. But hindsight is no touchstone of negligence"

15. In any analysis, therefore, of what we now know about the background of the bombers and of the lead up to the bombings, it is important to emphasise that much of it was not known to the police and the Security Service before 7/7, and *could not* have been known to them. I should add that the bereaved families represented before me accepted, rightly, that the evidence called disclosed no failings by the Security Service that could properly be reflected in the verdicts as a contributory cause of the deaths (although that is not to say that they remain uncritical of some of the actions that the Security Service did or did not take at that time). I should also make it clear that there is no suggestion by anyone before me, and there is simply no evidence at all, that the Security Service knew of, and therefore failed to prevent, the bombings on 7/7.

Background

16. The story as far as this issue is concerned begins with a man called Martin McDaid. He was known to the Security Service and West Yorkshire Police ("WYP") from about 1998. He was suspected of being an Islamist extremist

and of possible involvement in Jihad training. In January 2001, a group of about forty men were observed by WYP attending a training camp organised by known extremists, one of whom was McDaid. This was one of a number of such camps which did not apparently involve illegal activity. Although the significance of such camps was not as well appreciated then as it is now, the Security Service were nevertheless interested in them and particularly in those who attended regularly. Stills were taken from video footage of the surveillance (at least one of which included a clear shot of Khan) and shown to a number of sources. Nine of the men were identified including a "Tafalal Mohammed", later identified as Tafazal Mohammed. Khan was, however, not identified until after 7/7. None of the vehicle registration numbers taken was traced to Khan.

17. Between July and September 2001 we know now that Khan travelled to Pakistan with Waheed Ali (also known as Shippon Ullah). Ali admitted at his trial for conspiring with the 7/7 bombers, many years later, that they had received terrorist training while there.

18. McDaid remained of interest to the Security Service and WYP. On 14th April 2003, he was given a lift for a very short distance (the journey took about 3 minutes) in a BMW car that was subsequently discovered to be registered to a Mr Sidique Khan of 11 Gregory Street Batley West Yorkshire. The driver was unknown. The only other record relating to Sidique Khan of Gregory Street was a caution, and the lift was not, therefore, considered significant. Despite the surveillance being carried out under a joint investigation between WYP and the Security Service, it seems that neither the surveillance report nor the record of the BMW was passed by WYP to the Security Service. Given the reference to Sidique Khan, Witness G accepted that, in hindsight, this had been unfortunate.

19. Another extremist was also under investigation at this time. Mohammed Qayam Khan ("MQK") was the suspected leader of an Al Qaeda facilitation network in Luton. Operation Crevice began in the early part of 2003 as an investigation into the activities of the network. Calls were made on 13th, 19th and 24th July, and on 15th August 2003 (not 17th August, as the ISC reported) between a mobile phone associated with him and two mobile phones, one of which was registered to a Sidique Khan of 49a Bude Rd, Leeds. There had earlier been contact between the number registered to 49a Bude Rd and another number believed to be connected to MQK. The calls, amongst many, were not regarded as particularly significant. Calls were also made between two other 'pay as you go' mobile phones and another member of the network, Omar Khyam. A link between these two mobile phones and Khan was only established after 7/7 (one of the SIM cards was found at his address) and only an unjustified amount of intrusive investigative work would have led to the discovery of the link before that time.

20. During 2003, WYP investigated the Iqra bookshop which was based in Bude Road. It was conceived as a learning and community centre and registered as a charity. However, we now know extremists were involved with it to varying degrees. Khan and Tanweer were trustees for a short time and other suspected terrorist sympathisers visited (some of whom were also trustees). They included Tafazal Mohammed, McDaid, Khalid Khaliq (who was convicted in 2008 of possessing an Al Qaeda training manual), Waheed Ali and Mohammed Shakil. The last two were convicted in 2009 of conspiring to attend a training camp, but acquitted of conspiring with the London bombers. Another trustee, Sadeer Saleem, was also acquitted of conspiring with Khan and the others. There was some evidence of a regular transfer of extremist literature and records between the Iqra bookshop and the Leeds Community School and elsewhere by Khan and others. However, there was also evidence that Khan withdrew from the bookshop (probably in early 2003) after a dispute about a man called Hamza Yusuf. Mr Yusuf condemned suicide bombings. Khan, it seems, did not wish the bookshop to continue selling his work.

21. The bookshop was closed following the events of 7/7. The police have never recovered any material which tends to suggest the Iqra bookshop was a base for unlawful activity as opposed to somewhere that was visited by men with extremist views. There is a world of difference in law between those who promote terrorism and violence and those who simply promote their religion. On the evidence, therefore, I cannot legitimately conclude either that the Iqra bookshop was a hotbed of violent and unlawful extremism or that it should have been recognised as such by the authorities.

22. The radicalisation of suicide bombers is an extremely complex subject. I am conscious that the previous Government implemented a PREVENT strategy to address radicalisation of vulnerable members of the public and that the current Government is seeking to refine that strategy. The only evidence on the wider issue of prevention, before me, came from a member of the public, Mr Sarwar Khan, who lived in the Beeston area. He believed fervently that the way to dilute the message of the proselytisers and prevent radicalisation of the impressionable was far more community-based activity and better communication between the elders of a community and the young. He may well be right, but it is beyond my remit to consider this issue further.

23. There was also evidence about radicalisation from Mr Mark Hargreaves and Mr Martin Gilbertson. Mr Hargreaves described his meeting McDaid and others during the course of his youth work in the area and their attempts to radicalise the local youth. Mr Gilbertson suggested that he too encountered extremism during the course of his work for the Iqra bookshop. Further, he claimed to have alerted the WYP to that extremism before 7/7. However, to rely upon anything Mr Gilbertson told me, I would require verification by objective evidence. He was not an accurate or reliable witness. His accounts of how and when he claims to have contacted the police have varied, not just

with time, but quite radically during his short stay in the witness box. Despite a very thorough police investigation there is absolutely nothing to support his allegations and I do not accept them. Unfortunately, his claims have been widely publicised and have caused some of the families and survivors unnecessary distress. They have impacted upon the vital relationship between WYP and local communities. Various investigations into his claims have wasted a considerable amount of hard pressed public money and resources. I do not intend to waste any more upon them. I return to what we know.

24. At his trial after 7/7, Mohammed Shakil said he travelled to Pakistan with Khan in July 2003. During that trip, Khan used the pseudonym 'Ibrahim', and Shakil used the name 'Zubair'. In Pakistan they met Omar Khyam and a man called Mohammed Junaid Babar. Babar later gave evidence to the effect that both Khan and Omar Khyam had attended a terrorist training camp in Malakand in Pakistan.

25. Of course, the Security Service knew none of this in 2003 but they were subsequently alerted to the possible significance of Omar Khyam during Operation Crevice. The Security Service received intelligence in 2004 that Omar Khyam and others were engaged in "attack planning", in other words they posed an immediate threat to life. He and his fellow plotters became, therefore, the highest category of target in the UK. The sheer scale of Operation Crevice was such that almost all the key resources of the Security Service were directed towards disrupting a major threat to life. Omar Khyam was put under surveillance in February and March 2004. It is worth noting here that surveillance is a very intrusive, resource intensive measure. Given the limited resources available to any security service in a democratic state, for both practical and legal reasons, its use must be strictly controlled and always proportionate to the threat.

26. During the period they were watching Omar Khyam, the Security Service observed his meeting, amongst others, three then unidentified men. They were later discovered to be Waheed Ali, Tanweer and Khan (known at the time as Unidentified Males C, D and E).

27. On 2nd February 2004, Omar Khyam was seen to get into a green Honda Civic which had driven to Crawley and parked alongside his car. Two men got out of the Honda, and one remained to drive up and down the A23 with Khyam in what was plainly a meeting. Their visit lasted about forty five minutes in all. The Honda Civic, with its original three occupants on board (C, D and E), was then followed from Crawley to Leeds, where its journey ended. Its two passengers alighted at Lodge Road and at Tempest Road, Leeds, and the driver at 10 Thornhill Park Avenue, the address of the registered keeper of the car, Hasina Patel. Covert photographs were taken at Toddington Service station during the journey. WYP were asked by the Security Service for any details that they had on the Thornhill Park Avenue address. Hasina Patel's name, date of birth and record came to light, but not the fact that she had

married Khan in a Muslim ceremony in October 2001, maybe because their marriage was not registered with the civil authorities.

28. On 20th February 2004, two very significant things happened. The authorities were alerted by a call to the anti-terrorist hotline to the fact that 600 kilos of fertiliser were being stored in a depot. The fertiliser was to be used by the Crevice plotters to make bombs. Whoever was responsible for the call is to be highly commended for their action. Their call may well have saved dozens of lives. The same day an electronics bomb expert called Khawaja arrived in the UK to meet key Crevice plotters. Conversations took place at Omar Khyam's home address, during which there was discussion of bomb making, but, based on fairly complete surveillance and eavesdropping coverage, the Security Service did not believe D and E were present during such conversations.

29. On 21st February 2004, a 'farewell' meal was held for Khawaja. Surveillance of the meal was difficult. Omar Khyam and another man, thought to be Shujah Mahmood, left the house in which the meal was held and, after having bought a kebab nearby, were seen to be sitting in Omar Khyam's Suzuki Vitara talking. Those conducting surveillance thought there were only two people in the car. Those monitoring the conversation (there was a bugging device in the car) thought that were possibly three individuals present. They heard possible references to 'brothers' arriving but not being ready, travel to Pakistan, 'operation', and to fraud. About 21.30 the occupants went back inside the house. A number of individuals left the area sometime after midnight in a variety of vehicles, including an unidentified Toyota Avensis.

30. Thereafter, the eavesdropping tapes were subjected to repeated and detailed analysis, initially by the Security Service and then by the Metropolitan Police Service both before and after the Crevice arrests on 30th March 2004. It was soon realised that there were at least three people in the car.

31. One version of the transcript, prepared much later by the police in February 2008 for the purposes of the Theseus trial (the trial of those alleged to have conspired with the London bombers), revealed that there were in fact five people in the car: Omar Khyam, Waheed Ali, Mahmood, Khan and, possibly, Tanweer. It is also possible that Khan and Tanweer attended the farewell meal for Khawaja. After 7/7, based upon a credit card in Khan's name found at the scene of the Aldgate bomb, inquiries revealed that Khan had hired the Toyota Avensis earlier that day, 21st February. He gave his name on the hire documents as Sidique Khan and his address as 11 Gregory Street, Batley, Leeds, and provided a copy of his driving licence and credit card.

32. One of the earlier versions of the eavesdropping transcript of the 21st February meeting requires, however, further mention. A transcript, prepared in March 2004, referred to NM1 and NM2. Witness G's evidence was that Security Service officers reading this transcript would have taken these references to mean Nominal Male 1 and Nominal Male 2. During the inquests I was

informed that NM1 and NM2 in fact stood for Northern Male 1 and Northern Male 2. I was asked to note the significance of the northern accents and other details which tended to show that the participants were indeed visitors from the north (as of course they were), and invited to conclude that this should have been picked up at the time. Had it been, it was argued, a link to the unidentified males C, D and E who had visited on 2nd February might have been established. It should be emphasised, however, that no-one now suggests that the Security Service could reasonably have identified Khan as a participant in the conversation or at the meal, before 7/7. In any event, as Witness G observed, the conversation did not reveal Khan to be a Crevice attack planner, only as a possible fighter in Pakistan or Afghanistan.

33. On 28th February 2004, C D and E again met Omar Khyam in the Honda Civic, stayed with him all day, attended a meeting and visited a number of builders merchants and were followed back to Tempest Road, Lodge Lane and Pickles Field, Batley, near Leeds. The round trip of about 500 miles was taking them about 9 hours each time. Checks on the Honda this time revealed it to be registered to a new keeper: 'Sidique Khan' of 11 Gregory St, Batley. Details of Sidique Khan's car insurance were located which included his date of birth.

34. Checks also revealed that this Sidique Khan was linked to two other addresses: 10 Thornhill Park Avenue and also 99 Stratford St Leeds (where, according to the voters register, a 'Mohammad Sadikue Khan' was said to reside). There were, however, no other traces of Sidique Khan in the WYP systems, or recorded in Special Branch records. By this stage Omar Khyam was known to be plotting an imminent attack and the fact there was no detected discussion with D and E about an attack was judged significant in relation to the prioritisation of D and E as targets.

35. In the early hours of the morning of 21st March 2004, a green Vauxhall Corsa was seen leaving the near vicinity of Omar Khyam's address. Checks revealed that the car was registered to Lombard Vehicle Management of the West Midlands who in turn had leased it to Just Car Clinic of Wakefield as a "pool car", but no further steps were taken at that time to identify to whom the car had been lent.

36. Two days later, on 23rd March 2004, the green Vauxhall Corsa was seen again at a meeting with Khyam. Khyam's Vitara and the Corsa then travelled to a number of different locations in and around Slough. Surveillance officers recognised the driver and, on 24th March, he was assessed to have been the same person as the driver of the Honda Civic, i.e. unidentified male E. A passenger in the Corsa was also recognised as having been unidentified male D. Unidentified male E and Khyam also visited an internet café.

37. Seen written on the side of the car on this occasion were the words: "Just Car Clinic" and a telephone number. Inquiries in February 2005 revealed that the

car had been given by Just Car Clinic to a Mr S Khan of 11 Gregory St, Batley as a courtesy car on 18th March 2004 whilst his own green Honda Civic was being repaired (the courtesy car had been delivered to 10 Thornhill Park Avenue). This was significant because although the Security Service was aware that the drivers of the Honda and the Vauxhall were one and the same, they had not in fact assumed that the driver of the Honda (unidentified male E) was in fact its registered keeper, Sidique Khan.

38. During a conversation in Khyam's car, when a man with a Northern accent (possibly unidentified male D, namely Tanweer) is recorded as having been present, Khyam is heard to be discussing the recent Madrid bombings and financial fraud. Again, there was no reference to a planned attack. Others including Omar Khyam and a man called Akbar had been detected discussing targets, but never when D and E were present.

39. After the arrest of Omar Khyam and the main Crevice plotters on 30th March 2004, and once the immediate threat to life had been dealt with, all those whom Omar Khyam had met and to whom he had spoken were assessed to see if they were involved in some way in terrorist activity. There were over four thousand telephone contacts alone to be reassessed. Operation Scraw began in April 2004. This initially involved examining the cases of twelve main targets considered to be closely associated with attack planning. Later, others considered to be on the periphery of the plot,, including D and E, were added Attention was focussed primarily on the twelve. The assessment at that time, according to G's witness statement, was that higher prioritisation and more intensive investigation into the two men (D and E) was simply unwarranted on the basis of the intelligence picture that had emerged.

40. In April 2004, Mohammed Junaid Babar, an associate of the Crevice plotters and other terrorists, began to provide information whilst in the custody of the FBI.

41. On 6th April 2004 Babar was shown one of the pictures of unidentified male D (Tanweer) that had been taken on 2nd February 2004 at Toddington Services. However the photograph had been cropped in such a way as to render him virtually unidentifiable. A photograph of E (Khan), cut in half, was not shown to Babar at all and thus no opportunity was presented to him to identify him. Witness G was unable to explain why the photograph of E was not shown, and accepted that there was no contemporaneous documentation explaining the position. He agreed with Mr Keith QC that the photographs could have been provided in a better condition.

42. The Crevice surveillance had produced other photographs, including some taken of D and E later in February and March 2004 which were of better quality. Babar was shown some more photographs relating to Operation Crevice on 30th April 2004, but these happened not to include any of D or E. However, as I shall mention in a moment, the use of the cropped photograph

did not in fact impact upon the operation because photographs of D and E were ultimately shown to Babar.

43. On 12th May Babar provided further information. He stated that two men calling themselves Ibrahim and Zubair had travelled to Pakistan in June 2003 and had met him and some of the Crevice plotters on their arrival at Islamabad airport. Shakil, it should be remembered, claimed (after 7/7) that he was the man calling himself Zubair.

44. In mid May 2004, a second overseas detainee indicated he had met two men from Leeds called Ibrahim and Zubair who had been sent on a fact finding mission by MQK. The second detainee, who had better reason to recognise the two men than Babar, was shown good quality photographs of D and E, but failed to recognise D or E, let alone to identify E as Ibrahim.

45. Amongst other work, the Security Service sent a "cluster message" to agencies in the North dated 8th June 2004 with the information they had obtained from Crevice on individuals with links to Leeds including Ibrahim and Zubair. They asked for information which might identify them. They referred to the Honda Civic, the registered owner Sidique Khan of 11 Gregory Street Batley, the previous owner Hasina Patel of Thornhill Avenue, the green Corsa, Lodge Lane, Tempest Road and Pickles Field, Batley.

46. Also in June 2004, the Security Service began an intensive investigation, known as Operation Rhyme, into a further group of attack planners based in the UK. This group was assessed to have a number of different plans to attack targets around the UK including the possible use of car bombs and radiological devices.

47. The Intelligence and Security Committee (the "ISC") is the Parliamentary body whose role it is to examine the work of the intelligence and security agencies. In its May 2009 report entitled "Could 7/7 have been prevented?" the ISC described the effect of the number and scale of operations facing the Security Service during this period in this way (at paragraph 38): "MI5 were playing catch-up, moving resources from one plot to the next, whilst each time unearthing still more people of interest on the sidelines of each plot that they would need to return to and investigate when they had time."

48. Meanwhile, the North East Regional Intelligence Cell ("NERIC") reported back in July 2004 that the records of NERIC and WYP had been checked. They provided a date of birth for Khan coupled with his police record (nothing relevant) and two further addresses linked to him, one in Holbeck and 99 Stratford Street Beeston. They produced a photograph dated February 2003. This does not seem to have been shown to anyone significant. They also mentioned a report by Hasina Patel of 11 Gregory Street, Soothill, Batley made on 29th May 2003 that a blue Vauxhall Corsa had been taken without consent. Her record and the address Thornhill Park Avenue were disclosed. Checks on

intelligence data bases for the residents of the addresses given produced no results. NERIC also reported that the only relevance to Lodge Lane they could find was that it was close to the Iqra bookshop. The search also noted the green Corsa was registered to Lombard Vehicle Management Ltd of Solihull. NERIC also stated that it had conducted checks, but was unable to provide any intelligence as to the possible identities of Ibrahim and Zubair.

49. In August 2004, the FBI showed Babar some more photographs. These included good quality photographs of D and E that had been taken on 28th February and 23rd March 2004 (these had provided for them by the MPS). However, Babar failed, for whatever reason, to recognise either man, or to identify E as 'Ibrahim'. Thus, as it turned out, the earlier incident of D (Tanweer)'s cropped photograph and the failure to show the cut picture of E (Khan) to him on 6th April played no causative part in the failure to identify Khan or Tanweer. As a result of the lack of identification by both Babar and the second detainee (see paragraph 44 above), the Security Service inferred that D and E were not main Crevice plotters and were not linked to either Ibrahim or Zubair.

50. In August 2004 Operation Rhyme came to a head. Thirteen individuals were arrested and eight later convicted of being involved in a major terrorist plot. Targets in Rhyme were added to the pot of those to be reassessed and investigated further.

51. By September 2004 the focus of Operation Scraw was on two sets of targets: those individuals who featured in Crevice, assessed as being of greater concern than D and E, and those named by Babar. The priority was to identify an individual Babar said was prepared to be a suicide bomber and one who was believed to have undergone explosive training in Pakistan.

52. In November 2004, we now know, Khan and Tanweer flew to Pakistan.

53. Between January and March 2005, the Security Service received reliable intelligence which revealed that two men by the names of Saddique *** (surname not Khan) and Imran both from Batley in West Yorkshire had been trained in Afghanistan in the late 90s/early 2000s. Intelligence further suggested that Saddique lived in the Soothill area of Batley, and that both men were committed to the cause of extremism. Saddique (or Sidiq) *** was in his early 30s and attended the gym. He had travelled to Pakistan in 2001 for two months where he received military training in a mujahaddin camp. Imran visited a mosque in Bradford. During the same period, West Yorkshire Police reported to the Security Service that both Saddique *** and Imran had associates in West Yorkshire including an Asian man called Taf (assessed as likely to be Tafazel Mohammed, associate of McDaid).

54. No investigative steps were taken after 1 March 2005 to identify Saddique *** partly because of his relatively low profile and partly for operational reasons

that cannot be disclosed. Significantly, the Security Service do not suggest that it would nevertheless have been impossible to identify Saddique *** as Khan in March 2005. The ISC wrongly stated at page 38 of their second report, with regard to this intelligence, that "it was not possible to corroborate it or investigate to find out more".

55. It should be remembered, however, that at this time men D and E, and also Saddique *** and Imran, were still lower down the order of priority targets than others investigated during Operations Crevice and Scraw. A number of suspects had been heard discussing specific targets for terrorist attack and the various methods of attack open to them. D and E had not. They had met a suspected terrorist in suspicious circumstances, they may have revealed a willingness to fight abroad and they may have been sympathetic to the extremist cause. Further, Saddique *** and Imran may have trained abroad and sympathised with extremists. However, that did not put any of them at the same level as imminent attack planners. The same could be said about Ibrahim and Zubair.

56. In March 2005, Babar gave further details of Ibrahim and Zubair. He said they came from Bradford (i.e. not Leeds, Batley or Beeston). To that limited extent, his information seemed, therefore, to distance D and E from Ibrahim and Zubair. Babar also reported that they arrived in Islamabad in late July 2003 to attend a terrorist training camp with the Crevice plotters. This raised their profile and in April 2005, Operation Downtempo began, the purpose of which was to identify Ibrahim and Zubair and establish if they were a threat. The Security Service sent WYP a summary of what they knew of the two men. Unfortunately, these inquiries had not borne fruit before 7/7.

57. One of the other pieces of information Babar had given was that the reason he had been present at Islambad airport on the occasion when he met Zubair and Ibrahim there was to pick up a number of individuals, one of whom he identified from a photograph as being Jawad Akbar. Akbar was one of those arrested as a Crevice plotter in March 2004. In preparation for the Crevice trial, the Metropolitan Police Service (the "MPS") obtained further details of Akbar's travel abroad. In June 2005, they made a formal request to the Pakistani authorities for information relating to Akbar and six other Crevice plotters. At that time the MPS had information that Akbar arrived in Pakistan on 25th July 2003. There was a stamp to that effect in his passport.

58. The Pakistani authorities interrogated their systems (for which they needed a name, date of birth and date of travel) and produced on 6th September 2005 an arrival time, flight number and departure airport for Akbar. The system does not produce a manifest for each flight. The MPS, after 7/7 and all too aware of Khan's involvement with terrorism and the fact that he used the name Ibrahim, asked for his travel itinerary and in January 2006 discovered he was on the same flight.

59. After 7/7, on 14th July 2005, Babar identified Khan from a press photograph as being Ibrahim.

60. A comprehensive review of the huge quantity of material gathered for the Crevice trial has revealed nothing to suggest that Khan and Tanweer were actively and directly involved in planning the Crevice attack or attacks. A similarly comprehensive review of the huge amount of material gathered for the Theseus trial (of the London bombers' alleged co-conspirators) suggests that Khan and his conspirators did not begin planning to bomb London until late 2004.

61. Khan's goodbye video of 15th November 2004 indicated he thought that he was leaving the UK for Pakistan or Afghanistan for good and did not intend to return. Hasina Patel noted in her diary with surprise that he was due to return in January 2005. In fact Khan returned with Tanweer in February. The two premises 111 Chapeltown Road and 18 Alexandra Grove used as bomb factories for the 7/7 bombings were acquired on 11th April and late May 2005 respectively. Witness G made the point that with the constraints on intrusive surveillance, had surveillance even been started at the time of Khan and Tanweer's return to the UK, it could not have continued until April when the occupation of Chapeltown Road began.

62. Post 7/7 enquiries revealed that between 22nd February and 15th June 2005 there were forty one telephone contacts between mobile phones attributed to Tanweer, Khan, and Lindsay and hydroponics outlets. It is unlikely these could have been detected by surveillance given the large number of untraceable "operational" phones used by the bombers and only attributed to them once their identities and details were known.

63. On the evidence, 18 Alexandra Grove was the main bomb factory from its acquisition until the bombers' departure on the morning of 7/7. It was rented by a man called Samir Alani who returned to Iraq and left the keys with a relative. He in turn rented it out to Jermaine Lindsay (calling himself "Jamal").

64. When discovered, 18 Alexandra Grove still had most of the bomb making equipment in place. Forensic investigators concluded that each of the bombs consisted of several kilograms of high explosive containing a mixture of pepper and hydrogen peroxide, initiated by an improvised electric detonator containing HMTD (a primary high explosive compound made using hydrogen peroxide). Such use was unique in the UK and possibly worldwide at the time. Each bomb was carried in a rucksack, kept cool by the use of ice packs (some of which were found left behind in a Micra car used on 7/7), placed on the floor at the bomber's feet. There was evidence to suggest that each bomber had bent over his rucksack to detonate it.

65. Anyone who has any lingering doubts about the active involvement of the 4 men Khan, Tanweer, Hussain and Lindsay in the plot should refer to the evidence linking them all to the premises and the purchase of the equipment. There is no evidence at all that anyone else in the UK was involved on the day (the evidence which suggested otherwise proved unreliable) and/or that the bombers were duped in some way. On the contrary, the evidence establishes beyond any shadow of a doubt they were full and knowing parties to the plot, possibly aided and abetted by an unidentified individual in Pakistan who (it was discovered after 7/7) called Khan on one of his "operational" telephones a number of times in the build-up to the bombings and for the last time shortly after the bombs exploded.

Hydroponics

66. That brings me to the ease with which the four bombers acquired their expertise and purchased the equipment they needed. It is a sad fact of 21st century life that those with evil intent may search on the internet and obtain the information they need to build explosive devices. If that were not sufficient, there are men like Khawaja prepared to travel the world to train extremists. It was also a fact of life that in the spring of 2005 the bombers were able to purchase and store their equipment without questions being asked. Indeed the plot of 21st July 2005, which was thankfully unsuccessful, similarly involved the use of hydrogen peroxide in the main explosive charge (albeit with a different organic substance, namely flour as opposed to pepper).

67. Chief Superintendent McKenna of the MPS gave evidence about the steps that have been taken to restrict the sale of substances that may be used to construct explosive devices, such as campaigns to raise the awareness of manufacturers, suppliers and trade outlets, as well as emergency responders, to the risks of potential illegal and dangerous use of such otherwise innocent substances. Steps have also been taken to encourage manufacturers to reduce the concentration of explosive precursors.

68. I appreciate that attempts at regulation do not always succeed. People who have a perfectly legitimate use for substances such as bleach should not find themselves hidebound by red tape. More importantly it is far from uncommon for regulation to outlaw one substance only for imaginative criminals to find a substitute.

69. However, I do believe it is appropriate to lend my support to the sensible regulation of the supply of hydrogen peroxide and other substances that might be used to make improvised explosive devices. I understand that there are already existing regulations, for example the Ammonium Nitrate Materials (High Nitrogen Content) Safety Regulations 2003, which concern the sale of ammonium nitrate and which, in essence, restrict its sale above a certain percentage strength. The European Commission proposed in September 2010, however, more general regulations on the marketing and use of

explosive precursors. If given effect in domestic law, these would allow the sale of such substances above a certain percentage concentration to the general public only on the presentation of a licence and provide for the making of a suspicious transaction report in other circumstances. The list of substances requiring a licence for purchase includes hydrogen peroxide. The proposals are currently under consideration by the House of Commons European Scrutiny Committee, and have not yet passed into domestic law.

70. I welcome these proposals, and given the fact that they are under active scrutiny, I need not make any Rule 43 recommendation on this issue. I would, however, urge those responsible for the general regulation of explosive precursors to implement appropriate restrictions as soon as possible. I also applaud the campaigns in the media which alert members of the public to possible suspicious activity and encourage them to report it.

Photographs

71. In so far as the Security Service depend upon the identification of suspects by photographs, Witness G accepted that much will depend on the quality of the photographs shown to a "source". He speculated that the cropped photograph of E (Khan) was of such poor quality that it was not deemed worth showing to Babar. This, of course, begs the question of why the photographs of D and E were cropped in this way. They were dreadful. Witness G's only attempt at an explanation was that the background was sensitive and the desk officer concerned must have been very busy or acting at great speed. Although he asserted that the desk officer might have been concerned at not giving too much away about the location at, and the means by which, the photographs was taken, I cannot understand why that might have been a concern in the present case when the photographs were taken publicly at a non-descript service station on a motorway. If any disguise of the background was considered truly necessary, one might have hoped the Security Service had a more efficient masking system.

72. The concerns about the quality of the photographs shown are two fold. First, a poor quality photograph limits the scope for identification. Second, Witness G confirmed that in certain circumstances, a witness's failure to identify someone the witness may be expected to recognise may be taken as a positive indication that the person in the photograph is not the suspect. If so, one would hope that the best quality photographs would be shown and a proper record kept of the circumstances of the identification procedure.

73. Given the confusion that reigned within the Security Service about these photographs (as evidenced by their briefing of the Intelligence and Security Committee) it was not clear to me what records were kept of the procedure. Fortunately, the evidence demonstrates that the decision to show the poorly cropped photo of Tanweer (D), and the decision not to show the photograph of Khan (E) at all, had little or no practical effect. However, poorly cropped

photographs were used and there is no satisfactory explanation for this having happened. I fully expect the Security Service to review their procedures to ensure that good quality images are shown and that whatever went wrong on this occasion does not happen again. I so recommend below.

74. This failure has given rise to a more general concern about the Security Service's use of photographs, given the importance of showing photographs to significant sources, and the possible detrimental effect on their investigations if the best means of identifying suspects are not utilised.

75. I was troubled by Witness G's evidence that it was not then, and would not now be, normal practice for photographs to be revisited as and when new sources become available. I understand that many thousands of photographs may come the way of the Security Service within the course of a year and they cannot show all of them to all their sources. However, it seems strange to ignore the possibility of having in place a system whereby old photographs are routinely reconsidered to ensure that the more significant ones are re-visited.

76. The Security Service accepted in their submissions that it is best practice to show human sources the best quality photographs available consistent with operational sensitivity. Further, I am assured that the new system of review of "old" intelligence by a "legacy" team has made a significant difference to the approach to "old" intelligence and the bringing together of various strands of intelligence. The new system was described by the ISC as an important development. It allows the team "to follow up on intelligence that, given limited resources and the original operational focus was not prioritised for action at the time" (paragraph 167 of the ISC 2009 report).

77. In those circumstances, I accept that the evidence concerning the re-visiting of photographs does not establish a risk, necessarily, of other deaths in the future, and thus I cannot make a Rule 43 recommendation in this regard. This is also an area in which a high degree of judgement and operational sensitivity can reasonably be assumed to apply. I have expressed my concerns, given the serious possible consequences of any failings in this respect and I have been assured through Counsel that the point is well understood by the Security Service. I make only one recommendation, therefore, as far as photographs are concerned.

R1. I recommend that consideration be given to whether the procedures can be improved to ensure that "human sources" who are asked to view photographs are shown copies of the photographs of the best possible quality, consistent with operational sensitivities.

Assessments of Prioritisation of Targets & Record Keeping

78. Witness G gave evidence that that the assessment stage is critical, that a consistency of approach is "very important" and that a structured approach reduces the danger of inconsistent decisions. Given the importance of the assessment process and the fact that the question of how D and E were categorised, if at all, by the Security Service was at the heart of the ISC's report in 2009, it is particularly unfortunate that there has been confusion about the system in place in 2004-2005.

79. Having listed some of the various strands of information on Khan available to the Security Service by the beginning of 2005, at paragraph 84 of its May 2009 report, the ISC stated "MI5 have told the Committee that they could easily have verified the information they had and formally identified who UDM E was, but there was no reason to take this formal step because of what they thought he was. There was nothing at the time to suggest that UDMs D or E were more than small-time fraudsters who had some minor contact with the CREVICE plotters. MI5 did not, therefore, verify the details they had on the men or open "personal files" for them. There was nothing, at the time, to suggest that MI5 should divert resources away from investigations of known terrorist plots in order to investigate someone whom they believed was a minor criminal."

80. I note the suggestion the Security Service could have elicited with some ease the identity of E but did not "take this formal step". This seems at odds with the evidence that this is precisely what the Security Service and other agencies tried to do by asking for information on the Honda Civic in which they had travelled and on the names and addresses associated with it.

81. If paragraph 84 contains an accurate summary of what the Security Service believed at the time, I would be surprised. D and E were plainly more than minor criminals. They had a number of highly suspicious meetings with a known attack planner, at a time when his plans were coming to fruition and he met a bomb expert who had flown into the UK from Canada. Also, there was reason to believe they may be leaving for Pakistan intending to become involved in extremist activity there. There is considerable force in Mr Patrick O'Connor's submission that if they were dismissed as common criminals that would have been a mistake.

82. However, the next three paragraphs of the ISC report appear under the heading 'Why was UDM E (Mohammed Siddique Khan) only "desirable"?' The categorisation of Khan as a "desirable" target would seem to go further than his being perceived as a "minor criminal". At paragraph 86, the ISC continued: "At the time, MI5 prioritised investigative effort based on the threat posed by individuals". The ISC then provided details of "MI5's investigative categories (in 2004/05)", as follows:

"Essential- An individual who is likely to be directly involved in or have knowledge of plans for terrorist activity, or an individual who may have knowledge of terrorist activity.

Desirable- An individual who is associated with individuals who are directly involved in or have knowledge of plans for terrorist activity or who is raising money for terrorism or who is in jail and would be an essential target if at large.

Other- An individual who may be associated with individuals who are directly involved in, or have knowledge of, plans for terrorist activity.

These categories were fluid and, depending on the latest available intelligence, targets might move between them."

83. The same categories to "help prioritise investigative effort" appear in the 2006 ISC report as well. At paragraph 48 of that report the ISC says this:

"....The judgement was made (correctly with hindsight) that they were peripheral to the main investigation and there was no intelligence to suggest they were interested in planning an attack against the UK. Intelligence at the time suggested that their focus was training and insurgency operations in Pakistan and schemes to defraud financial institutions. As such, there was no reason to divert resources away from higher priorities, which included investigations into attack planning against the UK".

84. It continued at paragraph 49 as follows:

" Once resources became available, an investigation was launched by the Security Service into over *** unidentified contacts who had come to light on the periphery of the earlier (2004) investigation. This included, among others, the unidentified men we now know to have been Siddeque Khan and Shazad Tanweer. However, resources were soon diverted again to higher priorities. Further attempts were made to return to the men involved in the meetings in 2004 as resources became available. Some of them were subsequently identified and categorised as "Essential", "Desirable" or "Other" targets and more intensive investigations were conducted. Only limited additional attempts were made to identify the men we now know to have been Siddeque Khan and Shazad Tanweer, and to find out more about their activities. *They were not characterised as investigative targets* (my emphasis) because, on the basis of the available intelligence, there was no reason to suggest they should be investigated above other more pressing priorities at the time. "

85. If the categories "essential", "desirable", and "other" were used for operational purposes one would have expected D and E to be classified (as the ISC

thought they were) not only as investigative targets but as "desirable" investigative targets. They came within the definition. At paragraph 87 of the May 2009 report the ISC stated that "UDMs D and E (Shazad TANWEER and Mohammed Siddique KHAN) were of some interest to MI5 because they were seen meeting Omar KHYAM, a known attack planner, and were heard (on 23 March) talking about financial fraud and possible travel to Pakistan. This was sufficient to categorise them as "desirable" targets."

86. Thus, the picture emerging from the reports of the ISC in 2006 and 2009 of the nature of the system employed to categorise targets, and of D and E's categorisation, if any, as investigative targets was far from clear.

87. Witness G tried to clarify the position. He informed me the ISC got it wrong, at least in part. He stated that the terms "essential" and "desirable" had only been used as shorthand by the Security Service, which seems curious given the clear definitions and emphasis placed upon the categorisations in the ISC reports. In any event, Witness G insisted that the categories of "essential, desirable and other" were only used for funding bids to Government and had not been used for operational assessment. He said that the Security Service's approach to operational prioritisation was "more nuanced" than that, was "more flexible" and involved "finer and more regular judgments".

88. Whether or not labels were attached to the categories, Witness G at one stage in his evidence appeared to accept that D and E were categorised, as the ISC stated originally, as common criminals. Mr Patrick O'Connor's submissions in this respect seem partly to have been based on that assumption. The evidence suggested there must have been a misunderstanding both before me and before the ISC. As I understood G's evidence as a whole and the ISC reports as a whole, D and E were not assessed simply as common criminals. The expression "common criminals" was being used as shorthand for common criminals in the UK and possible insurgents abroad. They were not assessed as being involved in attack planning in the UK (rightly at that time) and it was on that basis they were not considered a number one priority.

89. Even if D and E had been given a higher priority in the summer of 2004 and whatever label one attached to them, the fact remains that there were other far more immediate threats facing the UK which had to be addressed. It would not have been possible to place D and E under intensive and intrusive surveillance. Even if they had been placed under surveillance, there would have come a time quite quickly when the surveillance would have had to stop. The two men would have inevitably slipped down the scale of priorities when they left for Pakistan. They did not begin to put the plot to bomb London into action until the spring of 2005.

90. Mr Patrick O'Connor focussed his attention on what was known at that time and by that time. The families he represented not surprisingly felt constrained in what they could say to me on the subject of the intelligence received in early

2005 the precise details of which could not be disclosed; nor could the operational reasons affecting the Service's actions. They noted however that it was not suggested the operational reasons would have prevented the Security Service re-examining its existing records and / or reassessing any prior risk assessments.

91. In February 2005, the Security Service belatedly learned that the user of the Corsa car in which the unidentified men went to meet a known attack planner in suspicious circumstances more than once and at a crucial time, was Mr S Khan of 11 Gregory Street, Batley. A mobile number for him was available.

92. By March 2005, they had learned that a Saddique *** (surname not Khan) who lived in Batley had undergone military training in Pakistan. It was not known whether he was a serious threat to the UK.

93. Thus, to an extent, Khan had by then been identified as the user of the car and, therefore, possibly one of the unidentified males and a possible extremist. Further, given that the Security Service conceded it may have been within their powers to identify Khan as Saddique ***, it may have been technically possible to link all the strands and produce an extremist who had been in contact with McDaid in 2003, in telephone contact with MQK in 2003, had undergone military training and was an associate of attack planners and a possible facilitator of terrorism in 2004. It is still, unfortunately, questionable whether that would have justified intrusive measures given the demands on and capabilities of the Security Service at that time.

94. Resources had to be deployed to best effect and even the intelligence gathered by March 2005, however analysed, would not have raised Khan's profile sufficiently to trigger greater investigation, under the systems then in use. Further, even if intrusive surveillance had been justified and deployed, it is highly probable that it would have ended before Khan embarked upon putting his murderous plan into action.

95. Similarly, Ibrahim and Zubair may have been assessed as a higher category of target, but even they did not compare to others. The evidence suggested they were linked to a terrorist training camp abroad, the Crevice plotters and a fact finding mission for MQK, but not necessarily to imminent attack planning.

96. As far as establishing the connection between Khan (Ibrahim) and Akbar (Crevice plotter) is concerned, the evidence did not support Mr Patrick O'Connor's submissions that there were "relatively easy steps" which could have been taken by way of international travel monitoring or retracing the steps of Akbar and his journey to Pakistan in July 2005. It is far too much of a stretch to say that the Security Service not only could but should have discovered Khan was in fact on the same flight and must have been the man calling himself Ibrahim. The Security Service did not have sufficient reason or

information (for example a full name and date of birth) to interrogate the systems and establish who was on Akbar's flight. The fact the men met at the same busy airport served by many different routes on the same day was not even a sufficient indication that they were on the same flight from the UK.

97. In summary, it may have been technically possible, as Mr Patrick O'Connor submitted, to deduce Khan's sympathies and to identify him and or Tanweer, in intelligence terms, before 7/7. There were, for example, various references to a Sidique Khan of Gregory Street. However, there are a number of significant flaws in the argument that Khan should have been identified not only as a possible terrorist facilitator but as an attack planner, meriting the closest possible attention. First, the argument is based to a significant degree on hindsight. It presupposes the desks of the officers concerned were clear of virtually all but the material which it is now known related to Khan. Second, it all but ignores the threats posed by targets engaged in actual attack planning in the UK. It relegates people who posed an immediate threat to life to a lower category of priority. Third, it presupposes that even if Khan had been identified as a priority 1 target, the Security Service could and would have maintained surveillance on him for weeks and months after he had been identified. With unlimited resources and time no doubt that is so. The Security Service did not have and do not have unlimited resources.

98. Thus, the evidence is such that it would not be right or fair to criticise the Security Service for the fact they did not pay greater attention to Sidique Khan, Mohammad Sadikue Khan, D and E, Mr S Khan, Saddique *** (surname not Khan), Ibrahim or Zubair (albeit they were targets of varying degrees) in the circumstances then prevailing.

99. However, having said that, I am concerned about the fact that the Security Service's other commitments prevented a more intense investigation of a possible terrorist, who made long and suspicious journeys to meet known terrorists at a time when they were obviously planning an attack. I was also concerned about the confusion in the system of assessment in operation at that time and what was said to the ISC about it.

100. Witness G tried to reassure me. He said that the previous system did not lack structure or resources (he referred in this regard to the Quarterly Summaries, the weekly bids for allocation of resources and the regular discussions between desk officers and managers). In any event, whatever happened in the past, the system of assessing targets has changed significantly since 7/7 and resources have improved immeasurably.

101. Witness G explained, as best he could in open proceedings, that the Security Service now prioritises by operations or groups rather than by individuals. Investigations are categorised as Priority 1A, 1B, 2, 3 and 4. This allows better judgments about the allocation of resources within the networks. He said that had this new system been in place since 2004 this might have

made a difference to the resources dedicated to the significant targets on the periphery including D and E. Further, there is now a national centre for the assessment of International Counter Terrorism. I was informed that the Security Service has developed a "strong assessment capability", alongside the investigative teams. Assessment work is also conducted on concluded investigations to reveal gaps and suggest new leads. Most importantly, there has been a very substantial expansion of the Security Service itself and its capabilities in London and across the country. Regional stations have been developed, which work closely with other agencies. A lot of this work had been planned before July 2005 but was in the process of being implemented at that time. Recruiting and training staff is a lengthy and complicated process and cannot be done overnight.

102. Thus, it seems any concerns I had on this front should have been allayed. Nevertheless, Mr Patrick O'Connor submitted that there may still be room for further improvement. The answer, he suggested, might lie in a more structured written assessment process. He claimed this would allow for a flexible and nuanced approach and also, by providing a better record of decisions, allow for proper supervision by senior officers within the Service, the "legacy" team and the ISC. Witness G accepted that the single most potent criticism of the Security Service in the second ISC report was the question of record-keeping. Yet he insisted that the record keeping systems in relation to prioritisation decisions, at the time, were designed to ensure that vital information was retained in a form which was easily accessible. This allowed, it was said for "the speediest and most effective disruption and prevention of terrorist threats".

103. It might be thought that some form of record keeping is essential to proper review and I did not detect any dissent from Witness G from that proposition. If a desk officer decides not to prioritise a target, any reviewer, at the time or later, would no doubt wish to know about the decision and the reasons for it, even in short form. The evidence never revealed how under the old or new systems, Security Service supervisors or the legacy team could do their job effectively, if the officer was absent from their desk for any reason at the time of the review.

104. I note that the desk officers tasked with reviewing what was known of Khan and Tanweer in this case do not appear to have had the benefit of decisions recorded contemporaneously, with reasons. Witness G accepted that there was no contemporaneous record setting out the extent of the significance placed by desk officers on the repeated visits by D and E to Khyam in February and March 2004; indeed he found nothing to suggest that D and E had 'feature[d] in their minds during Crevice'. Witness G himself had to visit retired desk officers at their homes to discover as best he could what they had done and why.

105. The evidence on this issue is necessarily limited and I must guard against the temptation to press upon any organisation any unnecessary layer of bureaucracy. It would be most unfortunate if desk officers were distracted from their vital task of protecting the public by the requirement to fill in forms. I also bear in mind that that the systems now in place may have gone some way to addressing my concerns.

106. My conclusions, therefore, are that as far as the categorisation of targets and the structure of decision making are concerned, I feel these are very much areas best left to the experts. I have not heard enough evidence to justify making any criticism of the present system of prioritising targets. The ISC has now been alerted to problems in the past and will be in a position, in closed session, to exercise careful supervision of the process. Accordingly, I make no recommendation that procedures be examined to establish if there is room for further improvement in relation to assessing the risk posed by an individual or in relation to more formalised structured decision making as such.

107. However, I am satisfied there may be some scope for improvement in the record-keeping relating to categorisation decisions. There was very limited recording of the decisions in relation to D and E available to any reviewer and I heard little if anything from Witness G on how the system has improved in this respect. Given the importance of these decisions, and the uncertainties and inconsistencies in the evidence, there may well be a case for a better recording of decision making. With the advantages of modern technology, it should not prove burdensome. Only significant decisions need be recorded and then only in short form, possibly by a computer entry.

108. I feel unable to accept Mr Eadie and Witness G's assurances that all is now well, without more. I was assured last year that there was no need for me to consider the issue of preventability and I was referred at that time to the ISC's reports, which we now know contain significant errors.

109. In this respect, therefore, I still have a concern. I should like the Director General to allay that concern given the possibly dire consequences of a flawed decision which cannot be properly supervised. If, as Mr Eadie assured me, all is well, it will take the Security Service no time at all to deal with this recommendation, which I am satisfied does meet the Rule 43 criteria.

R2. I recommend that procedures be examined by the Security Service to establish if there is room for further improvement in the recording of decisions relating to the assessment of targets

The Intelligence and Security Committee

110. The ISC has an important statutory function of overseeing the Security Service. The ISC was established by Parliament and reports to the Prime Minister. Through the Prime Minister, it reports to Parliament.

111. The evidence of Witness G and the documents examined in the course of the Inquests revealed a number of inaccuracies in the ISC's otherwise detailed and thorough reports. Some are more significant than others. The errors include the ISC's comments on the assessment process referred to above, the error in relation to whether it might have been possible to identify Saddique *** (surname not Khan), a small number of dates relating to telephone calls, the initial confusion over photographs, and the suggestion that the WYP had failed to respond to a Security Service request concerning Hasina Patel.

112. I am sure the members of the ISC who contributed to the various reports will be as concerned as I was to learn about these errors. It is unfortunate to say the least that a body established by Parliament to review the work of the Security Service, in closed hearings, reported inaccurately in these regards and that these points were not corrected. Witness G seemed to accept that proposition.

113. It remains unclear how the inaccuracies came about and why they were not corrected. It may be that some were the result of the Service's poor record-keeping and at least one inaccuracy according to G was "because we didn't brief them correctly." It is essential that the ISC receives accurate information from the Security Service so that it can properly hold the Service to account, and report to the Prime Minister, Parliament and the public. It is, therefore, essential that great care is taken to check the draft reports for mistakes. Witness G accepted that the draft of the 2009 report was very important and had been sent to the Security Service to be checked for accuracy. He said it was checked to a very great depth, but "not at a very high level".

114. I consider that, technically any recommendation on this front is outside the remit of a Rule 43 report. I recognise that it is too much of a leap to move from my concern at what happened to a concern that this gives rise to future risk of death.

115. However, I remain concerned that in 2010, I was addressed on the basis that a statutory body had conducted, effectively, the very exercise upon which I was being asked to embark. I then discovered that the statutory body, the ISC, may have been inadvertently misled and thus that its reports may not have sufficiently addressed some of the central issues before it. I have been assured, however, and I accept that the ISC is well aware of the evidence given in these inquests by Witness G in so far it relates to their proceedings.

116. Nevertheless my concern remains. I express my expectation, therefore, that consideration will be given to whether procedures can be improved to ensure the accuracy and completeness of information provided by the Security Service to the ISC. Further, I consider it desirable that consideration by given to whether procedures can be improved to allow the Security Service to review draft reports of the ISC more effectively, with a view to ensuring that it has

not inadvertently included any inaccurate or potentially misleading information.

Liaison

117. On the evidence, the gathering of intelligence around the country and the liaison between the Security Service and the various police forces has changed beyond recognition and brought with it considerable benefits. There were brief submissions on the possibility of greater integration of databases and a closer system of information sharing, but very little evidence on this topic. Many issues arise including the statutory responsibilities of various bodies. I foresee many problems in making a recommendation on this topic and I decline to do so.

Computer software

118. There was some evidence on the question of the quality of the software supplied to the Security Service. G gave evidence that "it can be very difficult" to "dig into" the files and computer systems at the Security Service to try to find out if a particular person has previously come to their attention. Witness G was pressed on the ease with which the Security Service could, today, retrieve all references to someone with the surname Khan. He explained the difficulties given the large number of people bearing the name Khan. Inputting even the name Siddique Khan, for example, may not produce helpful results.

119. Changes are being made all the time. Given the speed at which technology is developing I would have been worried if Witness G had said there were no changes still to be made. The software must presumably change on a fairly regular basis.

120. Although it was accepted that the capacity to search on computer systems is easier today, I was asked to consider if there remains a problem about searching for and collating material. The answer is simple: I am not in a position to explore this issue any further. This is an area where I again feel I must leave it to the experts. I have no doubt the officers of the Security Service will themselves bid for the best possible software to do their job. I can only express the fervent hope that they are given it. Their job is too important for them to be hampered by outdated technology.

Emergency Response

Introduction

121. The devastation wrought by the bombings represented the worst traits of humanity but the response of numerous individuals bears testament to many

of our best qualities. At each and every scene ordinary men and women, whether victims of the attack, passers by or those acting in the course of their professional duties, reacted with extraordinary courage, composure and compassion. The demands upon the emergency responders were great and, regardless of their experience, whether probationers or seasoned professionals, whether fire-fighters, paramedics, or policemen, off duty or on, all were equal to the task.

122. None of my comments or recommendations, therefore, should be interpreted as indicating any opinion that the individuals who responded on behalf of their organisations fell short of what was expected of them; far from it. Each organisation should be proud of their employees who, when presented with an uncertain, complex and traumatic set of circumstances did all that they could to ensure that lives were saved.

123. The Provisional Index of Factual Issues that I identified in May 2010 placed considerable emphasis on investigating the response of Transport for London ("TfL"), London Underground Limited (wholly owned subsidiary of TfL) and the emergency services. It is this aspect of the inquiry that has resulted in the majority of the recommendations that I have made. In accordance with Rule 43, my recommendations focus on the present and the future and not upon issues which have been resolved.

124. Although considerable progress has been made over the last six years, each organisation has accepted that there are lessons to be learnt from 7/7 and improvements to be made. Much of the credit for such progress rests with the 7th July Review Committee of the London Assembly ("the 7th July Review Committee") as well as with each of the organisations. The 7th July Review Committee's three-volume report (published in June 2006) addressed numerous issues and made important and detailed recommendations, particularly in respect of communications. The majority of these recommendations have been implemented. In addition, and independent of the London Assembly's Review, all of the organisations analysed their performance on the day and from their reviews significant advances have been made. However, despite substantial progress, there remains more that could and should be done.

125. When the three bombs were detonated on the tube at 08.49 there was, inevitably, confusion throughout the control centres of London Underground and the emergency services. A certain level of chaos is inevitable but one of the main functions of the first responders is to create order out of such chaos. Two questions dominated – what had happened and where had it happened? Answering these questions was problematic for three reasons. First, the location of the three explosions in the tunnels meant that there were limited eye witnesses as to what had occurred. Second, communications in the tunnels were limited. Third, the widespread disruption caused by the

explosions resulted in an avalanche of incoming calls overwhelming radio operators and causing congestion on all radio and telephone communications. It took time to identify and extract the most significant and important information from the plethora of reports which were received (in addition to the usual daily demands upon the emergency services and London Underground), so that the agencies could respond appropriately.

126. The responsibilities of London Underground's Network Control Centre (now known as the Network Operations Centre) included ensuring that incidents on the Underground were properly managed. Over the first thirty minutes after the explosions, the Network Control Centre received a multitude of information that was consistent with bombs being detonated, but was also consistent with other possible causes, including the rupture of a high-tension cable or the loss of a Bulk Supply Point. However, it was clear to the Emergency Services from a relatively early stage that a bomb or bombs had been detonated. It was also clear to Network Control Centre that a serious incident had taken place (resulting in a decision to bring all trains into platforms at about 09.14, as the first step to an evacuation). Yet, it was not until approximately 09.40 that the Network Control Centre was sufficiently certain that the incidents were terrorist related so as to order an evacuation of the entire network. It is surprising that, making all allowances for the inevitable confusion and chaos at the beginning of a major incident, the Network Control Centre was not sure of the facts earlier.

127. Throughout this period there were competing demands on the Network Control Centre. It sought to answer the two questions of what had happened and where, as well as seeking to ensure that the many thousands of passengers aboard numerous trains were safe and accounted for. To meet these competing demands the Network Control Centre needed to receive, assimilate and disseminate information effectively. However in July 2005 operators in the Centre passed information by word-of-mouth and recorded it on a handwritten log. This meant that operators were distracted from answering calls and, therefore, were not kept updated with relevant information. The information they did receive was not communicated to others in a timely and effective fashion.

128. Such issues have now been addressed by the implementation of new technology, including a digital logging system known as Nimrod and improved telecommunication systems. However, the difficulties encountered by the Network Control Centre do not appear to have been solely technological. The evidence indicated that there was a lack of adequate sharing of information between the emergency services and TfL's control rooms. While this was manifest in different ways in the evidence, three particular instances stand out.

129. First, the Network Control Centre was overly dependent upon the British Transport Police ("BTP") to act as its liaison with the other emergency

services. At an early stage the emergency services were in receipt of information that, if shared with the Network Control Centre, would have enabled London Underground to establish quickly the true cause of the incidents. For example, in respect of the attack at Aldgate, the London Fire Brigade's ("LFB") log recorded a suspected bomb at 09.03; at approximately 09.10, a City of London Police ("COLP") officer informed his control that there had been a bomb in a carriage; at 09.11, a BTP Inspector reported that there were people who would die if they did not get immediate care and, at approximately 09.17, the same Inspector informed his control that there was clear bomb damage to one carriage. The Network Control Centre expected such information to be channelled through the BTP, but none of this critical information was, in the event, brought to its attention.

130. Second, there was no representative of London Underground at the Gold Meeting at New Scotland Yard at 10.30, because the Network Control Centre was unaware that the meeting was taking place. This is surprising given that three of the atrocities had occurred on the network for which it was responsible.

131. Third, CentreComm (TfL's control room for its subsidiary, London Buses Services Limited) was unaware until 09.53, after the explosion on the Number 30 Bus, that the incidents on the Underground may have been the result of terrorist attacks. This was despite CentreComm sharing a dedicated control room with MetroComm (the Metropolitan Police Service's traffic control room), which had itself access to the relevant information on the computer aided despatch system ("CAD"). However, on the evidence, London Bus Services Limited (and by extension TfL) should not be criticised for allowing the buses to continue to operate in central London prior to the explosion on the Number 30 Bus. There were no reasonable grounds for suspecting that the bus network would be subject to an attack, even if CentreComm had known at an earlier stage that bombs had been detonated on the Underground. Further, given the disruption on the Underground, the buses played a vital role in keeping London moving and in moving as many people as possible out of the affected areas and possible danger.

133. Nevertheless, despite the pressures upon the Network Control Centre during the early stages of the incident, it took appropriate steps to notify the LFB and the LAS that their attendance was required. The Network Control Centre contacted the LFB at 08.58 to request their attendance at Aldgate and at King's Cross and, at 09.07 sought their attendance at Edgware Road. At 09.03 the LAS was contacted by the Network Control Centre to attend Aldgate and Edgware Road. The BTP requested ambulances at King's Cross at approximately 09.04. However, as with the Network Control Centre, the control rooms of both the LFB and the LAS encountered difficulties on 7/7.

134. In respect of the LFB, while by-and-large their control room coped with the increased radio traffic, there were delays in deployment of resources to

King's Cross and, to a lesser extent, Edgware Road. Should an incident occur in a tunnel on the London Underground, the LFB apply a tried, tested and trusted system of 'split attendance' in which three appliances are mobilised to the primary underground station and a single appliance to the secondary underground station. In July 2005, to assist in any deployment, the LFB operated a computer mobilising system known as ProCad. This matched potential addresses for an incident on the information provided. Addresses would include the possibility of a split attendance being required, such as "Liverpool Street tunnels, Aldgate Station". This system worked effectively in respect of the incident at Aldgate, where the first appliance arrived at 09.00, but it was less successful in respect of the incidents at King's Cross and Edgware Road.

135. The ProCad system for King's Cross included forty four different possible addresses; one of which was Euston Square Underground Station (because it had tunnels which linked to King's Cross). In a conversation between the Network Control Centre and the LFB there was a misunderstanding that was not corrected. This resulted in the LFB's mobilising a split attendance with Euston Square as the primary station and King's Cross as the secondary station (rather than King's Cross as the primary station and Russell Square as the secondary station). Consequently, three LFB appliances were initially deployed to Euston Square, a single appliance was deployed to King's Cross (arriving at 09.13) and no appliances were deployed to Russell Square. It was not until 09.42, nearly an hour after detonation of the bomb that a second appliance arrived at King's Cross. In the interim, further appliances continued to be deployed to Euston Square, where their services were not required.

136. A combination of human and computer error also contributed to delays in deployment of LFB resources to Edgware Road. Edgware Road Underground Station is in two separate locations; the Circle and Hammersmith line station is located on Chapel Street and the Bakerloo line station is situated on the Edgware Road. Opposite Chapel Street, on the other side of the Edgware Road, is Praed Street. At 08.58 the LFB was initially alerted by a member of the public to a suspected gas explosion at Praed Street. Unbeknown to the LFB at the time this reported explosion was actually the explosion on the westbound Circle line train, as the tunnel ran under Praed Street.

137. At 09.07 the Network Control Centre contacted the LFB Control, requested their attendance at Edgware Road Underground Station, and provided the address of Chapel Street. It also made specific reference to the Circle and Hammersmith line. Initially, the LFB did not mobilise any further resources. They believed this was a duplicate request for attendance to the suspected gas explosion at Praed Street. However, once it was established that the Network Control Centre's request was not a duplicate request, resources were incorrectly mobilised at 09.13 to the Edgware Road Bakerloo line station, in part because the ProCad system did not include Chapel Street amongst the possible matches for Edgware Road Underground Station. The

first LFB appliance arrived at the correct Edgware Road Underground Station at 09.18.

138. Since 7/7, the LFB, in conjunction with London Underground, has taken important steps to rectify the deficiencies that were inherent in the ProCad system. The most significant of these is the introduction of a unique reference number system for every Underground station and every tunnel on the network in order that the exact location of any incident can be precisely identified. I understand that the LAS has also implemented the same unique reference number system to assist its attendance at any incident on the Underground.

139. While all the emergency services struggled to some extent to cope with the sheer volume of radio and telephone calls, the evidence suggests that the difficulties experienced by the LAS's Central Ambulance Control were particularly pronounced. Although the LAS did not encounter any technical deficiencies with its radio system on 7/7 there were flaws in the way in which the radio system was operated. A single radio operator was assigned to two radio channels for all four incidents as well as being responsible for logging all the incoming communications. There were three consequences of this. First, Central Ambulance Control may not have heard messages from ambulance staff at the scene as a result of the sheer congestion on the radio. Second, even if the messages were received, a number of critical messages might not have been acted upon as quickly as they should have been. Third, even when critical information was recorded, it was either recorded on two different electronic incident logs or on scraps of paper rather than on a singular systematic logging system.

140. Compounding these problems were delays in setting up the Gold Control Room to manage the incident (I shall return to the Gold, Silver and Bronze command and control system for major incidents). On a day-to-day basis the Gold Control Room was actually used for managing non-urgent ambulance activity across the capital. However, upon the declaration of a major incident, it was intended that staff specially trained to manage a major incident would 'take over' the Gold Control Room. On 7/7, attempts to manage the incident through the Gold Control Room were delayed, because the specially trained staff members were unable to log on to the computer system and access the computer aided despatch system. Until this was resolved, it restricted the ability of the Gold Control Room to manage the response to the incidents.

141. The evidence indicates that these problems adversely affected certain aspects of the LAS's response to the bombings. Not only were communications between the scenes and Gold Control hindered but it was also accepted by the LAS that there were some delays in the deployment of ambulances and equipment. At Edgware Road, despite requests for more ambulances at 09.16 and 09.24, the Ambulance Incident Officer at the scene considered that the resources available to him were, for a time, insufficient. At

King's Cross the first ambulance was despatched at 09.16 and arrived at 09.20. Yet, despite the declaration of a major incident at 09.21, the second ambulance was not despatched until 09.28 and did not therefore arrive until 09.38. At Tavistock Square, the first ambulance arrived at 09.57. It had "self-activated" en route to Russell Square. A fast response vehicle arrived shortly afterwards, but it was not until about 10.40 that the second wave of ambulances was electronically despatched.

142. Since 7/7 the LAS has made wide-ranging changes to address such issues, and has made significant investments in the Central Ambulance Control room and Gold Control room. Whereas previously the infrastructure in place was sufficient to manage a single sited incident, the LAS now has the capability to manage multiple simultaneous incidents by reconfiguring its control rooms. It has also invested in new technology and upgraded systems. To guard against any delay in the deployment of resources, the LAS has introduced a pre-determined attendance upon the declaration of a major incident. This ensures that a minimum of twenty ambulances and ten officers will be deployed as a first response to the scene of a major incident.

143. As with the LAS, the BTP has invested heavily in improving its control room infrastructure. The BTP had two control rooms operational on the morning of the bombings. The central control room (known by its acronym as 'MICC') which was located at 55 Broadway deliberately adjacent to London Underground's Network Control Centre and a specific incident control room, (known by its call sign 'Alpha Zulu') located at Tavistock Place. This was opened the day before 7/7 to cater for the G8 Summit in Gleneagles. In the initial stages of the incident, the BTP's central control room was inundated with radio and telephone calls. These increased to unprecedented levels and overwhelmed the four radio operators. The decision was taken at approximately 10.30 to switch the management of the incident to the specific incident control room, which was fully operational by 11.30. Since the London bombings, the BTP has introduced a First Contact Centre to filter non-emergency and emergency communications, has increased the relevant control centre staff by one-third and reconfigured its technology to ensure that any switch of the management of an incident from the central control room to the specific incident room can occur within a matter of minutes.

144. COLP experienced a similar surge in incoming radio and telephone communications. Like BTP, there were insufficient numbers of controllers available to manage the exceptional number of transmissions. The burden upon the control room staff was reflected in the rejection of a request at 09.46 from an officer at Aldgate to open a designated incident radio channel. In July 2005, the minimum number of staff in COLP's control room was five controllers and one supervisor. Following an internal debriefing it was considered appropriate to review the staffing levels and the minimum number of staff has now been increased to seven (including two supervisors).

145. The G8 Summit in Gleneagles that took place between 6th and 8th July 2005 did not in any way deplete the policing resources available in London on 7/7. On the contrary, London was in fact better prepared to respond to any incident. First, the available policing resources in London were higher than usual, because additional police support units were at the disposal of the MPS and were in fact deployed to good effect at Aldgate. Second, similar to the BTP, the MPS' Special Operations Room was already up and running to manage any problems which occurred during the summit. Thus, at approximately 09.45 the Special Operations Room was in a position to take control of all the radio communication and CAD records for both the MPS and the COLP in order to manage the response to the bombings.

146. The use of the Special Operations Room is just one example of the evidence that indicated a high level of co-ordination and liaison across the three police forces. The protocols and procedure in place between the police forces for managing 'cross-jurisdictional' incidents were applied effectively. This may be a reflection not only of a lengthy history of working together, but also of the fact that the MPS and the COLP share the CAD system, whilst the BTP (although they do not use this system in managing their incidents) had access to it in their control room.

147. My observations about the police response will not include consideration of whether the COLP had good reasons to invoke the ACCOLC procedure. I decided in May 2010 that this was outside the scope of these inquests. In any event, that issue was thoroughly addressed by the 7th July Review Committee.

148. Whilst the initial confusion and chaos within the control rooms was similarly replicated at the four bomb scenes, those present at the underground stations and in Tavistock Square were also confronted by the horror of human cruelty and the anguish of human suffering.

149. The first to respond to the dead and the dying were often fellow passengers. A number of these passengers had varying degrees of first aid training, ranging from basic first aid certificates to formal military and medical training. This training not only enabled essential treatment to be provided (such as applying improvised tourniquets and makeshift bandages) but it enabled them to remain calm and collected in the face of potential panic, chaos and desperation.

150. In the light of the considerable assistance which so many individuals gave to those with traumatic injuries, I recommend below that TfL reconsider whether it is practicable to provide first aid equipment on underground trains. I have also been informed that the LAS runs an active and successful first aid training programme for young adults, but that attempts to include such training on the national curriculum or as a mandatory requirement of the driving test have been unsuccessful. While I do not make any specific recommendation in this regard, I wish to lend my support and encouragement

to the laudable attempts within the National Health Service and beyond to increase the number of qualified or certified first aiders.

151. At each of the Underground stations, the London Underground staff demonstrated great courage in assisting passengers in the tunnels. Their efforts were invaluable. The evidence showed that the rigorous training undertaken by London Underground employees paid dividends. The train drivers of each of the bombed trains attempted to make Mayday calls, staff at the stations as well as the train drivers sought to ensure that the traction current was discharged and, as I have already mentioned, in the station control rooms swift steps were taken to ensure the emergency services attended promptly.

152. The individual members of each of the emergency services who attended at the scenes were equally courageous. On arriving at the scenes the situation was uncertain and hazardous. There was proper concern that the emergency services could be tackling a Chemical, Biological, Radiological and Nuclear ("CBRN") incident as well as the prospect of secondary devices. On arrival at the underground stations, they were confronted with hundreds of soot-covered walking wounded, all of whom required assistance. At Tavistock Square, the destruction in the road was before their eyes.

153. However, amongst the tragedy on 7/7, there were two fortuitous events. First, while on any given day London's Air Ambulance ("LAA" commonly referred to as "HEMS") usually had one team on duty, which comprised a single HEMS physician and paramedic with specialist trauma training, on the morning of the bombings, LAA was holding a clinical governance day. This enabled them to deploy a total of 27 physicians and paramedics across the four bomb scenes. Second, the explosion on the No. 30 bus occurred outside the British Medical Association building. This allowed many physicians (ranging from general practitioners to highly specialised surgeons) to aid the victims of the attack. Evidence of the invaluable expertise provided by the all these clinicians at the scenes has emphasised not only the importance of pre-hospital clinical care, but also the importance of ensuring that London has the requisite emergency capability to provide such care for any future major incidents. I address this further below in my recommendations.

154. The confusion and chaos at each of the bomb scenes provides the relevant context for analysing and assessing the emergency response. At any major incident, the speed at which order is brought to bear is integral to its effective management. The 6th and 7th Edition of the 'Major Incident Procedure Manual' produced by the London Emergency Service Liaison Panel ("LESLP") provides that most major incidents will have four stages: the initial response, the consolidation phase, the recovery phase and the restoration of normality. The Manual prescribes a 'Command and Control' structure to manage major and large-scale incidents. To manage such incidents members of each of the

emergency services are assigned as 'Gold', 'Silver' and 'Bronze'. These titles indicate 'strategic', 'tactical' and 'operational' roles.

155. On 7/7 such command structures were effectively not in place until close to, or after, the 'golden hour' (the initial response stage) had passed. That is by no means a criticism, because there is always likely to be a time lag between an incident's occurring and appropriately senior personnel arriving at the scene. However, the importance of effective inter-agency liaison and good communications at the earliest opportunity should not be under-estimated.

156. It is also well known, particularly as a result of the report of the 7th July Review Committee, that there were considerable failings in radio and mobile communications. Such failings were ones of both capacity and coverage. The unprecedented volume of radio and mobile telephone communications caused congestion on the airwaves because of a lack of capacity. The emergency services and London Underground were further inhibited in their communications by restrictions on the coverage of their radio systems.

157. First, there were limited means of communicating in the tunnels. The train radios on the bombed trains did not work, most likely as a result of the damage caused by the explosions. The explosions probably also damaged the tunnel telephone systems. Consequently, the train drivers used other means to raise the alert. At Aldgate the train driver used his mobile phone; at Edgware Road the train driver used the signal phone and at King's Cross a train driver travelling in the driver's cab made his way on foot to Russell Square. Second, while London Underground, LFB and BTP staff had radios that worked in the sub-surface stations, the coverage only extended down to the platforms and not into the tunnels where the bombed trains were located. Third, effectiveness of the BTP's sub-surface communications was further impeded by that fact that the channel used in such communications, 'channel 2' did not function at all between 08.50 and 09.23; a malfunction which may or may not be attributable to the bombings. Fourth, the MPS, COLP and the LAS did not have radios that worked underground. Fifth, the analogue radio systems used by the emergency services and London Underground were not interoperable and this limited inter-agency communication other than by face-to-face discussion.

158. These problems meant it was extremely difficult to convey timely and accurate information and requests for assistance and equipment both between agencies at the scenes and from the scenes to the control rooms. While ultimately the paucity of communications did not cost lives, it did impede effective management of the scenes. In particular, the absence of working radio systems in the tunnels meant that the emergency services were dependent upon a system of 'runners' to communicate requests for equipment (including medical supplies) to those above ground and / or to the control rooms. Thus, the considerable demands upon the emergency services led to

shortages of resources and equipment, and the communication failings led to delays in meeting these shortages.

159. Since the bombings, the emergency services and London Underground have introduced across the capital TETRA digital radio systems which function above and below ground, including in tunnels. AIRWAVE is the digital radio system used by the emergency services (including the police) and CONNECT is the system used by London Underground. While the two systems are not interoperable, the AIRWAVE system relies upon the CONNECT infrastructure to work throughout the one hundred and twenty five London "subsurface" stations (known as 'section 12' stations for historical reasons) and into the tunnels. The 7th July Review Committee carefully monitored the implementation of the digital radio systems and the installation of CONNECT and AIRWAVE on the London Underground was completed on 1 October 2008.

160. The benefits of AIRWAVE and CONNECT as compared to the previous analogue radio systems are numerous. Not only has the coverage of the radio systems and the clarity of communications improved, but also the available capacity has increased, thereby reducing the prospect of radio congestion (although there remains scope to improve AIRWAVE capacity at some underground stations). It is advantageous that all of the emergency services use AIRWAVE handsets and can therefore take advantage of 'talkgroups' to improve inter-agency liaison and communications. While the LFB use AIRWAVE on their main-scheme radio and senior officers have handheld AIRWAVE radios, they do not for good operational reason use AIRWAVE on the Underground. However, they continue to use improved analogue radios whose coverage has been extended from the platforms into the tunnels. Finally I have been assured that both AIRWAVE and CONNECT are more robust and resilient than the systems that were in place on 7/7.

161. As I made clear in my concluding remarks when handing down my verdicts on 6th May 2011, one of the issues I considered in relation to all the deceased, and in particular the individuals where the evidence initially suggested that the issue might arise, was whether they might have survived if the emergency services had reached them more quickly. The expert evidence of Colonel Mahoney was instructive. Bearing very much in mind the caveats he gave and the severity of the injuries suffered by some of those who survived, the medical and scientific evidence in relation to all fifty two victims led to only one sad conclusion: on the balance of probabilities each of the deceased would have died whatever time the emergency services had reached and rescued them. However, unlike section 8(3)(d) of the Coroners Act 1988, the provisions of Rule 43 as amended are triggered where a Coroner has a concern to prevent future deaths on the basis of the evidence she has heard, and it is not necessary for that concern to be based on a concern that similar deaths will occur. In light of the quantity of evidence I heard about the emergency response, even though I have concluded that any 'delays' in

emergency response did not contribute to any deaths resulting from 7/7, I do have some concerns that circumstances creating a risk of other deaths will occur or will continue to exist in the future. Accordingly, I make the recommendations below in relation to the emergency services.

Inter-Agency Training

162. The 7th July 2005 Review Committee concluded that communications within and between the emergency services 'did not stand up on 7 July'. It further observed that individual emergency service personnel could not communicate effectively, in some cases with each other and, in other cases, with their control rooms. The Committee's concerns were reflected in a number of its recommendations. In particular, certain recommendations (such as recommendations 12, 12A, 13, 13A) reflected the obvious need on the part of the emergency services, in the event of an emergency, to establish speedily what has happened in order that their emergency responses could be effectively and properly coordinated.

163. There have been substantial improvements brought about by the introduction of the CONNECT and AIRWAVE radio systems. However, the evidence revealed not merely failings in the communications systems then in place, but some basic misunderstandings between the emergency services as to their respective roles and operations, for example, failure by some emergency personnel to appreciate and understand the obligation on the part of the first LAS staff in attendance to act as ambulance incident officers as opposed to becoming involved in the treatment of casualties.

164. There was evidence of substantial confusion at all four bomb scenes. This was acknowledged by many of the witnesses. At Aldgate, it was not clear to the LFB which of their staff considered themselves to be the initial incident commander. Two members of the LAS declared a 'major incident' at Aldgate in ignorance of each other's declaration. The MPS did the same at Edgware Road.

165. Individual emergency responders encountered delay and difficulties in trying to ascertain what the nature of the incidents were, or what resources were required, and there were significant differences in the way in which each emergency responder endeavoured to address common issues, such as the use of radios where there was a possible risk of detonating secondary devices.

166. At King's Cross, the position was particularly acute. There was evidence of a lack of communication between incident commanders on the surface and those in the tunnel, of the lack of proper contact between King's Cross and Russell Square stations, and of how one senior commander was unaware of the location of the Joint Emergency Services Control Centre, set up on platform 8.

167. This is not a new problem. Following the King's Cross fire of 18th November 1987, Desmond Fennell QC (as he then was) recommended (at recommendation number 23) that 'the emergency services shall review the exchange of information between themselves and London Underground during an incident, both at their controls and at the site'.

168. In some instances, the problem may have lain simply with a shortage of appropriate incident tabards. The issue of whether there was a proper use of rendezvous points ("RVP's") is addressed below. In other cases, it may have been due to confusion or lack of information on the part of individuals, for example, the London Underground member of staff was who was unable at Edgware Road to provide the LFB incident commander with any useful information as to what had happened.

169. The evidence demonstrates, therefore, a need for a review of the extent and scope of inter-agency training. Such training is vital in helping to reduce confusion and in fostering a better understanding of the emergency services' respective roles. I do not understand any of the organisations represented before me to differ from this broad statement of principle.

170. There is already extensive inter-agency training (whether by way of 'table-top' or 'real-life' exercises) at more senior levels of management, such as at 'Gold' and 'Silver' levels. However, the evidence also indicated that there was considerably less inter- agency training available for those 'frontline' members of the emergency services tasked with responding to the initial chaos, carnage and confusion of a major incident.

171. Although one person expressed the view in a note to his management that 'the only way to train for these incidents is to get everybody to train for them by doing exercises', I acknowledge the very considerable logistical and financial difficulties in extending comprehensive inter-agency training to all. Nevertheless, the provision of inter-agency major incident training for frontline staff is a matter that should be reviewed by the London Resilience Team, which I understand acts as the Secretariat for the London Regional Resilience Forum and is, therefore, best placed to take such matters forward.

R3. I recommend that the London Resilience Team reviews the provision of inter-agency major incident training for frontline staff, particularly with reference to the London Underground system.

The use of 'plain English'

172. The bereaved families submitted that all the organisations which were represented in the inquest proceedings should give urgent consideration to the use of 'plain English' in managing major incidents. This submission reflected the fact that, in some places, the procedures and plans were bedevilled by jargon. I accept that the proper use of acronyms and mnemonics

(such as 'CHALET' standing for Casualties, Hazards, Access, Location, Emergency and Type) contribute significantly to the important aim of communicating information speedily and helpfully. However, the use of complex acronyms and unnecessary jargon may also confuse and impede communication. It tends to undermine a proper understanding of the roles and intentions of members of the other emergency services, and so hinder the coordination of effort. In a life-threatening situation everyone should be able to understand what everyone else is saying and what they are trying to do. This problem is not new. I note that in the course of his Rule 43 report arising out of the Inquest into the death of Jean-Charles de Menezes (January 2009), Sir Michael Wright observed that, in some areas, police terminology had tended to confuse rather than to clarify understanding. Even longer ago, Desmond Fennell QC recommended in his report that London Underground should rewrite its rule book and its appendices 'in plain English' (recommendation 93(i)).

173. When I raised this issue during the hearings it seemed to resonate in a number of quarters. The reasons are obvious. It might be thought, therefore, that organisations, for which communication is a vital part of their job, would demand from their staff the use of plain English and a fully reasoned justification for any change. The evidence before me suggested that is not the case. Easily recognisable and understood names or titles are changed, for no obvious reason, into ones which are not.

174. However, despite my frustration, it would not be appropriate for me to make it the subject of a Rule 43 recommendation. The confusing use and often mis-use of language does not here meet the legal criteria for a Rule 43 recommendation. It is not a matter, in any event, that is susceptible to being monitored. I prefer, having expressed my concerns, to leave the matter to the good sense of the organisations from whom I have heard, some of whom have already endeavoured to re-write their procedures, as part of their continuing review process. I therefore make no recommendation in this regard.

Declaration of Major Incidents and Network Code Amber/Code Red

175. The declaration by the emergency services of a "major incident" is of particular significance. Although, as the 7th Edition of LESLP's Manual makes clear at paragraph 2.2.2, what is a major incident to one emergency service may not be so to another, such a declaration is expected to trigger the attendance by the other emergency services of a pre-determined response. This should, as was noted by the 7th July Review Committee in its Recommendation 12, assist in increasing the speed with which the emergency services establish what has happened and begin to enact a coordinated and effective emergency response.

176. Recommendation 12, which was concerned with whether the relevant protocols should be reviewed to ensure that as soon as a major incident was

declared by one organisation, a major incident should automatically be declared by others, was not, in the event, accepted by the relevant agencies. Recommendation 12A, in its place, invited consideration of whether there was potential for improving communications between the relevant agencies following the declaration of a major incident by one agency.

177. The evidence clearly established that each of the emergency services did have the necessary procedures in place to inform some or all of the other agencies of their own declaration of a major incident. This was confirmed by the relevant logs, such as the police CAD system, the LFB PROCAD and Mobilising Information system ("MOBIS") and the LAS logs. However, there were delays in the way in which further declarations came to be declared, and confusion in some cases on the part of some of the organisations themselves as to whether major incidents had even been declared.

178. The police CAD system and the current mobilising procedures (for example, LFB Operational Note 412 and the LAS Major Incident action cards) properly allow for speedy communication of such declarations, and the introduction of AIRWAVE and CONNECT is likely to assist in this process. I am also assured that such declarations will lead to pre-determined attendances on the part of all the emergency services and that the technology within the Network Control Centre has been updated.

179. However, although the Network Control Centre properly took steps in accordance with its Network Emergency Plan to alert the relevant emergency services (using direct lines) to the incidents that were reported to it, the fact remains that the flow of detailed *information* to and from the Centre was not as good as it might have been. This was undoubtedly because it was being received piecemeal and from a variety of different sources, and because there was a certain degree of confusion as to what had actually occurred. As I have mentioned, there was a significant degree of reliance by the Network Control Centre upon the receipt of information from other agencies, such as the British Transport Police. London Underground accepted that information was not shared adequately in the first 30 minutes or so after the bombs in the Tube had detonated.

180. I accept significant improvements have been made but remain concerned that shortcomings may persist in the way in which London Underground informs, and is informed by, the emergency services (as well as its own staff) speedily and accurately of any crisis breaking across its network. As the terrible events of 7/7 demonstrated, the tube network forms a vital, and potentially vulnerable, part of London's infrastructure. However, as a Category 2 Responder under the Civil Contingencies Act 2004, London Underground Limited is unable to declare a major incident itself. A further reflection of the lack of integration of London Underground into the Capital's emergency systems may lie in the fact that it was not represented at, or even invited to attend, the pan-London 'Gold' meeting at New Scotland Yard at

10.30 that morning. In my view, this is an issue that falls within Rule 43 and I propose to make a recommendation.

181. The issue of network alerts is closely associated with this topic. A network (as opposed to a 'line') 'Code Amber' brings about a rapid stop to the whole Underground service and consists, in essence, of an instruction by the Network Operations Centre, through the line controllers, for all trains to be brought into the next station and to stay there (or, if already on the platform, to stay there) until further notice. It is a holding position which affords the network time to try to assess the cause of an underlying problem with a view thereafter to a further decision being made whether, for example, to resume service or to evacuate the network. A network 'Code Red' is an instruction for all trains to stop where they are.

182. A network 'Code Amber' was issued on 7th July 2005 between 09.14 and 09.18, and was then disseminated to London Underground staff. No network 'Code Red' was in fact issued thereafter; the network was evacuated very efficiently about 09.40. There was evidence to the effect that the issuing of the Code Amber was brought by London Underground to the attention of a senior BTP officer, that London Underground expected BTP to circulate it to the appropriate agencies, and that the alert may have been disseminated piecemeal thereafter by phone to an unidentified number of emergency responders.

183. Such a network-wide alert should plainly be brought directly and clearly by London Underground to the notice of other transport agencies and the emergency services. The fact that the Underground is being either suspended or evacuated, and that very large numbers of passengers (over 250,000 at any one time during the rush hour) are about to be disgorged suddenly onto the streets of London, are matters that London's emergency and transport agencies need to be informed about and there is a risk to life if they are not.

184. There is still no system in place for the alerting of others to the existence of a network 'Code Amber' or 'Code Red' or of an evacuation. Although, in 2005 London Underground operated a system called "SIMLINK", the automated messages could only be sent to line control rooms.

185. London Underground accepted that it had not been 'sufficiently in the loop for the emergency services procedure'. I agree.

R4. I recommend that TfL and the London Resilience Team review the protocols by which TfL (i) is alerted to major incidents declared by the emergency services that affect the underground network, and (ii) informs the emergency services of an emergency on its own network (including the issuing of a 'Code Amber' or a 'Code Red', or the ordering of an evacuation).

186. There are two other areas in relation to 'liaison/communications' which are worthy of note, even though no Rule 43 recommendation arises in connection with them.

187. The first concerns AIRWAVE's radio transmitting capacity underground. As I have observed, the evidence is that AIRWAVE now provides, with certain limited exceptions, a dedicated and encrypted communications network for emergency responders across London (and, in fact, across the United Kingdom). This includes all deep tube and subsurface London Underground stations, as well as the tunnels, and designated emergency exit points in long tunnels. One limitation in its use, however, is that, unlike the London Underground's own unencrypted CONNECT system underground (on which AIRWAVE 'piggy-backs' but with which AIRWAVE is not interoperable), there are fewer of the base radio devices required to transmit the digital signals for AIRWAVE underground.

188. Although the business case for AIRWAVE in London Underground in 2006 identified fifty-five 'high priority' stations (out of the total number of one hundred and twenty five 'section 12' underground stations) where at least two base radio stations were required, in the event, for financial, technological and contractual reasons, fewer than ten stations were so equipped. The remainder of the 'section 12' stations have only one base radio. The result is that, while those stations and tunnels that have two base radio stations can support up to seven simultaneous group calls on AIRWAVE underground, those with only one base radio can support only three simultaneous group calls. By way of contrast, the minimum number of conversations that can be conducted on CONNECT at any one time is seven, and the maximum is fourteen or fifteen. This may be one of the reasons why Mr. and Mrs. Taylor, parents of Carrie Taylor, were concerned about the capacity and resilience of the new system.

189. I acknowledge that AIRWAVE now permits direct communication between the emergency services and the police, and that three group calls is three times greater than the number of simultaneous calls that could formerly be made on the old analogue systems (which were not inter-operable in any event) used by the various emergency services. It may be that only rarely will there be a need for more than three simultaneous conversations, particularly if users observe the tenets of radio discipline. However, I am concerned at the risk, in the event of a future major incident, of multiple responders attending a 'section 12' station and finding that the communications structure becomes quickly overloaded because it can only support three simultaneous conversations.

190. In such a scenario, it would not be possible for all messages to be transmitted or received, although there exists a means by which a user can press a button to cut into the current traffic so as to warn of an emergency, or to warn other existing users of the radio of the need to vacate the channel.

Further, although emergency response vehicles can be called upon to attend to provide an enhanced capability, such vehicles are not ordinarily expected to be able to arrive within an hour of an incident being declared.

191. A business case supporting an increase in the number of base radio stations is currently being prepared by BTP and others. I welcome this, and I very much hope that funds may become available to enhance AIRWAVE's capability below ground.

192. The second issue concerns the ability of the police and the emergency services to share information simultaneously about an emerging incident. I have referred above to the MPS CAD system to which COLP have full access. The system displays, in typed format, information that is being received by both police services, as well as the actions and messages they generate in response. The advantage of the CAD system is that, unlike, for example, an original radio transmission, the contents of which are not readily recalled, the message or piece of information on the CAD record is instantly available to anyone who wants to review the flow of information, or gain an understanding of the overall incident. It is not, however, a 'command and control' system providing information on all aspects of an incident.

193. The MPS CAD system is relatively well integrated with BTP but the latter do not have full access, in part because they are a national service and the full integration of their dispatch system would be unnecessary and disproportionate. Instead, BTP operators have in their own central control room one or more monitors displaying the MPS CAD system, which they can review and into which they can 'export' their own messages and information. A similar capability is available in the BTP's specific incidents control room in Tavistock Place.

194. The LAS also operated in 2005, and continues to operate, a more limited link, known as CADLINK, by which they and the MPS can send basic messages to each other, which, in the latter's case, will then appear on the CAD system. Messages can accordingly be sent back and forth about particular existing incidents, and new incidents can be recorded. There remains, however, no means by which either agency can see the other's information system. There were, and remain, no comparable electronic links between the LFB and any other emergency organisation or police, or between the LAS and either the BTP or COLP.

195. Members of the emergency services are always made available, in the event of a major incident, to attend the MPS' Special Operations Room where they can liaise more closely with their colleagues. The setting up of the Special Operations Room cannot take place instantaneously (it takes about an hour), and it takes time for the liaison operators to get there. I have already referred to the fact that on 7/7 both the Special Operations Room run by the MPS, and the BTP special events control room were already up and running on account

of the G8 summit. However, such a coincidence cannot be guaranteed, and the manner in which significant information is communicated through the CAD system, especially in the early stages of a major incident, seems to me to be particularly valuable. It is likely to be even more so if radio or mobile communications encounter difficulties.

196. There was evidence from a senior BTP officer of steps being taken to integrate his force's CAD system with those of a number of regional police forces, and of a project in Wales, currently being undertaken by the Welsh Assembly and the Cabinet Office, which is investigating the integration of the BTP CAD system with those operated by a number of emergency responders. I welcome these initiatives, and hope that they will lead to emergency organizations having a better understanding of the overall initial intelligence in major incidents.

Initial Rendezvous Point

197. In his report, Desmond Fennell QC recommended (at number 11 -one of the "most important" recommendations) that rendezvous points be introduced for the emergency services at all London Underground stations. These are typically located at or near the station entrance, and there are also secondary rendezvous points, in case the primary is not available. Desmond Fennell QC also recommended (at number 20 - one of the "important" recommendations) that copies of station plans be made available at agreed locations. These are generally now to be found in red boxes adjacent to the rendezvous points, along with relevant information about the communications system at the station.

198. The location of the station rendezvous points and red boxes are particularly significant to the LFB. This is because they are positioned close to one end of the 'leaky feeder' coaxial cables that have always provided the fire service with its method of communicating, (via channel 5 on its hand held 'fire-ground' UHF analogue radios) onto the underground platforms and, since December 2008, into the tunnels. Accordingly, the first pumping appliance will ordinarily park close to the red box so that it can communicate both with Brigade control, using its vehicle main-scheme digital AIRWAVE radio, and with its fire-fighters over channel 5. This appliance, with its blue lights on, will then become the Incident Command Pump. It and its driver will remain as the focal point for the LFB attendance, at least until a purpose built Command Unit attends. The London Underground station emergency plans thus envisage that the LFB or other emergency service will be met at the station rendezvous point. This should not to be confused with the LESLP's mandated major incident rendezvous point, which is normally established within the outer cordon and is under the control of the police.

199. However, for its part, the LAS major incident plan provided and continues to provide for the first ambulance or response to park as near to the scene of

the major incident as safety permits, to act as 'silver control' and to leave its blue lights on to signify that it is the control point. In 2005 the nomination of any particular rendezvous point appears not to have been obligatory and, in any event, the plan did not and does not dictate that crews should necessarily go the station rendezvous points.

200. However, as a result of there being no one common rendezvous point on 7/7 at which all emergency responders might liaise, the emergency services encountered real difficulties in locating each other's initial responders. Ambulance crews reported to senior management after 7/7 that they had not been directed to specific rendezvous points, especially at King's Cross Underground station. The first commanding fire-fighter at Aldgate recorded that 'it was difficult to know who the incident commanders of the police were and who the incident commanders of the LAS were'. A witness from LAA recorded how difficult it was to gather the relevant commanders together (other than at Aldgate). None of the emergency services was directed to a single point where they could gather basic information.

201. The issue of rendezvous points is important because the best form of communicating is, as another witness observed, 'face-to-face'. However, that requires the agencies to find each other. This in turn requires a better understanding of where each service can be found. The provision of tabards does not, of itself, suffice.

202. Moreover, the evidence indicated that it is vital that, at that rendezvous point, there should be access to someone who can impart an initial understanding of what has been discovered so far, to avoid each emergency service having to take time to find out such information for itself. There was a significant failure, particularly at King's Cross, to ensure that there was a single rendezvous point where, in the very early stages, the first commanders could meet with each other, and with a responsible member of the London Underground staff, to find out what had happened. At the very least, as a senior member of the LAS accepted, there is more scope for sharing of information in the initial 'confused period'.

203. It may be that the problem is less acute now. First, the introduction of AIRWAVE will greatly assist the emergency services in liaising with each other when attending a major incident. Second, under the new unique identifying reference number system, London Underground will be able to specify the exact part of the station concerned, or the particular location in the tunnel system where the attendance is required. Where such a specific location is provided, it may be that the specification of a separate rendezvous point is less significant (although the LFB Incident Command Pump will always go to the station rendezvous point anyway).

204. It is clear that each organisation will have its own unique responsibilities in terms of what it needs to do to acquire and communicate information,

make appropriate risk assessments and decide what to do. Plainly, the location of the rendezvous point must be flexible so as to take account of the circumstances, such as road access, the actual location of the incident, or the risk of secondary devices. Further, the identification of appropriate rendezvous points may be more difficult at more complex stations. However, I do not accept that more cannot be done to streamline and simplify the way in which the emergency services initially liaise with each other at major incident scenes, thus helping them to respond more quickly, with more accurate information, and so hopefully prevent future deaths.

205. What is needed is a system by which a common rendezvous point, whether it be the station rendezvous point or elsewhere, can be decided upon quickly as the focal point for the attendance of all the emergency services attending a likely major incident at a London Underground station, communicated to those agencies and then marked as such. At such a location, a member of London Underground, who need not be the same person throughout the course of a major incident, can then acknowledge the appearance of each of the emergency services, impart the most up to date information that exists to each of them as they arrive, and arrange for them to be accompanied elsewhere in the station as appropriate (as their emergency plans currently also envisage).

R5. I recommend that TfL and the London Resilience Team review the procedures by which (i) a common initial rendezvous point is established, and its location communicated to all the arriving emergency services (ii) the initial rendezvous point is permanently manned by an appropriate member of London Underground.

Traction Current

206. At around 09.17 in Aldgate Underground station, a BTP Inspector, who had earlier declared a major incident and who had twice been to the devastated carriage, came across a group of fire-fighters waiting on one of the platforms. Despite his standing on one of the electrified rails himself, and despite the presence on the tracks of many hundreds of passengers, they informed him that they were not allowed onto the tracks, until the current was officially confirmed as having been discharged. In the event, confirmation was received a matter of seconds later from a member of London Underground staff and, in fact, another group of fire-fighters had already passed along the tracks to the train. None of the fire-fighters who gave evidence recollected the conversation with the Inspector.

207. In any event, the fire-fighters' response would have been understandable. They knew what the brave Inspector and many of us did not know: namely that lines can re-energise. A doctor from LAA who gave evidence before me, had received a severe electric shock just a few weeks before 7/7, when a short circuiting device had been erroneously placed across two pieces of track, thus

re-energising a section that was meant to be off. It is obviously essential that there be a clear yet efficient system for seeking and obtaining confirmation of a lack of power. The matter is complicated by the fact that, within the London area, there are many different types of rail networks and infrastructures operated by different companies, and also by the fact that even if the current for one section of track is off, the next section might not be. Sections can be unexpectedly re-energised either be trains passing over them, or by poorly placed short circuiting devices. There is accordingly no margin for error.

208. On the underground network LAS personnel are expected to seek confirmation from an appropriate member of London Underground at the scene, who will then contact the line controller directly using the phone or, now, the CONNECT radio system. One paramedic, however, described how he asked a member of London Underground staff for confirmation, but received only a vague assurance that a check had been carried out. He was therefore only prepared to step on the rail once the member of staff had done so.

209. By contrast, there are a number of methods open to LFB: its fire-fighters can either seek confirmation locally, speak to the line controller via the 'head wall' telephone, discharge the current by short-circuiting the tunnel telephone wires (and in all such cases confirm the position to Brigade Control), or request via Brigade control that the traction current is turned off. In the last case the Brigade control then passes the request to London Underground's Network Operations Centre, which itself has to speak to the line controllers. In practice however, some fire-fighters appear to have understood that making a request via Brigade Control was the only proper route, perhaps because they would then have the assurance of knowing that the traction current could not be turned back on without their own Brigade Control being informed.

210. BTP officers may seek confirmation locally, but even if forthcoming they will usually seek confirmation from their own control room, which will liaise directly with the appropriate line controller.

211. I am concerned that a uniform system by which all the emergency services, as well as the police, can seek confirmation that the current is off is more likely to promote certainty, reduce delay and therefore minimise future risk to life. Furthermore, of the alternative methods that are available, seeking confirmation from an appropriate station supervisor on the spot is likely to be the quickest, given the rapid connection to the Network Operations Centre.

212. London Underground is currently discussing with LFB how confirmation that traction current is off may be sought. I welcome that discussion. However, I am concerned that more could be done, once confirmation has been obtained from the line controller, to disseminate that fact rapidly to all emergency personnel who are, or who will be, in the station. They all have an equally vested interest in knowing whether the power is off. Although the

possible use of tannoys or the electronic arrival boards was referred to in evidence, I am content to leave the precise means to the experts.

R6. I recommend that TfL and the London Resilience Team review the procedures by which confirmation is sought on behalf of any or all of the emergency services that the traction current is off, and by which that confirmation is disseminated.

Blue light status for Emergency Response Units

213. London Underground operates a unit known as the Emergency Response Unit ('ERU') whose function is to ensure that the Underground network is made safe and services are restored as quickly as possible following a fire, derailment or other emergency. Consisting of five teams, based at four depots, there are a minimum of three teams on duty at any one time. Each team has a van and a rolling stock lorry, preloaded with specialist equipment.

214. Initial reports suggesting a person under train and/or a derailment at Edgware Road station, led the Metropolitan, Circle and Hammersmith Line Duty Office Manager to call the Network Control Centre at 09.02 and request the attendance of the emergency services and the ERU. The ERU became stuck in traffic, however, and the London Underground logs show that at 09.28 it was still in Bishops Bridge Rd W2 requesting a police escort to Edgware Road station. By contrast, the ERU summoned to attend Aldgate was able to get there relatively quickly.

215. The 7th July 2005 Review Committee recommended that TfL grant the ERU automatic access to bus lanes, and automatic exemption from the congestion charge. These recommendations were implemented. The committee also recommended that TfL lobby the government to grant 'blue light' status for the ERU's vehicles. This recommendation has not, however, led to the ERU's obtaining blue light status.

216. The bereaved families submitted that I should make a similar recommendation that the ERU be given blue light status when attending any emergency incident. They observed that such a recommendation would only entail some dozen or so drivers for whom the training implications would not be unduly burdensome.

217. I do not propose, however, to make such a recommendation. I consider that doing so falls outside Rule 43, and I have not heard sufficient evidence of the possible disadvantages. I have been referred briefly to considerable risks attendant upon the use of blue light status. Thus, although I accept the ERU's clearly perform a very valuable role, an extension of the status outside the traditional emergency services may give rise to concerns as to where the line is drawn. The matter has been considered relatively recently, and I do not think it right for me to invite reconsideration. The evidence demonstrates that the

police are prepared to provide escorts to the ERU when necessary, and I trust that this will continue.

LFB Operational Discretion

218. There is one last matter that has been specifically raised in connection with the attendance of the emergency services at London Underground stations, and it concerns the LFB. Difficulties were encountered by the first four-man LFB vehicle (a pump machine) at King's Cross. It arrived around 09.13 as part of a split attendance between King's Cross and, erroneously, 'Euston Square'. Yet its crew was forced to wait until a second appliance had arrived at King's Cross before they were able to use breathing apparatus and thus fully deploy into the tunnels. The second appliance (a pump ladder) did not arrive until 09.42, the delay, acknowledged by the LFB, being brought about by confusion as to the location of the incident.

219. The predicament facing the first crew at King's Cross mirrored that faced by their colleagues at Aldgate (see above) who sought confirmation the current was off, namely the need to balance the understandable and human urge to get involved in a rescue mission against a proper assessment of the risks involved. In light of the protocols on the use of breathing apparatus and the practical reality that a single first attending crew will effectively never be able to deploy underground where there is a risk of a fire until further resources arrive, questions were raised as to whether, in striking that balance, fire-fighters are permitted a sufficient degree of individual discretion.

220. Neither the LFB nor its employees should be unfairly criticised for adhering to policies and protocols. Although criticism of the over zealous interpretation of "Health and Safety" legislation may often be justified, the invaluable role the legislation has played, when properly interpreted, in protecting workers from injury, disease and death should not be forgotten.

221. Any employer, let alone an employer which regularly sends its employees into dangerous situations, has clearly defined duties in law. The LFB must take care to keep its fire-fighters reasonably safe, balancing properly the interests of its crews with the interests of those who require rescuing. The LFB would be in breach of its duty, for example, if having discovered the dangers of deploying a two person crew in breathing apparatus it failed to provide a protocol to ensure proper back up. Arguably, the LFB would be failing in its duty if it failed to train its officers in risk assessment or its fire-fighters to follow orders. If a fire officer allowed individual fire-fighters to follow their instincts and rush into a dangerous situation, ill prepared and ill equipped without proper back up, and lives were saved, no public criticism would follow. However, if the officer did the same and someone died, the officer or their organisation could find themselves in the dock facing criminal charges or in a civil court facing a claim for damages. As one LFB witness put it rather ruefully: 'it all depends on the result'.

222. The answer to this problem seems to lie in the use of judgement, common sense and what the LFB call "dynamic risk assessments". I emphasise the word "dynamic". In this context, the use of the word "dynamic" is a reflection of the fact that the situation confronting a fire officer may change from minute to minute, second to second. Risk assessments and decisions may have to be revisited as protocols are overtaken by events.

223. At King's Cross, for example, given the situation confronting the first LFB crew on scene, the decision to deploy men in breathing apparatus, at the time it was taken, was an entirely reasonable one. It was also entirely reasonable for the LFB to insist that a back up crew should be available before crews wearing breathing apparatus, with limited oxygen supplies, were sent into a danger zone. The necessary back up was requested very swiftly. Unfortunately the problems of the day meant the back up crew did not arrive until nearly an hour after the bomb had exploded.

224. I understand the argument that the first crew could have been permitted to descend to platform level earlier than they were (a little while before the second crew arrived). There were no signs of fire on the platform and many passengers, staff and other emergency responders were plainly able to breathe the air. Thus, it must have become apparent fairly quickly that "the danger zone" was not at platform level and arguably the decision on breathing apparatus could have been re-visited a little sooner than it was. As it happens, the evidence does not suggest the delay in sending fire crew to the platform had any or any significant impact upon the rescue mission.

225. However, any delay in the LFB's response at King's Cross was not caused by the breathing apparatus protocol itself or by any lack of operational discretion. It was caused by the late arrival of the second crew and the speed at which the decision to deploy men in breathing apparatus was changed.

226. Given the improvements made to communications and the use of unique reference points which should prevent delay in future, there is no reason to suppose that there are any systemic problems which persist in that regard.

227. As far as the revisiting of the decision to use breathing apparatus is concerned, the LFB reviews its policies and procedures on a regular basis in the light of operational experience. I am confident it also reviews its training. I would hope that employees are reminded that protocols are designed to save lives. Depending on the dynamics of the situation, which may change rapidly, protocols may be approached with a degree of flexibility, without putting fire crews unnecessarily at risk.

228. I do not, therefore, propose to make any recommendations in this regard. Even if this were a matter that fell within Rule 43, it would not be right for me to express any views on the way in which the LFB approaches assessment of

operational risks and discharges its health and safety obligations. These are matters for it to determine, provided that its policies and procedures do not unnecessarily restrict the discretion of officers on the ground, which I am assured they do not.

First Aid Boxes and Specialist Stretchers

229. I have already referred to evidence of the resourcefulness and quick thinking of those passengers who endeavoured to use improvised tourniquets and makeshift bandages to treat the injured. Many of the witnesses referred to the desperate need for basic medical equipment in the bombed carriages. I also heard graphic evidence of how emergency personnel, in particular the fire-fighters, used boards, blankets, sheets and even pieces of metal to carry the injured and the dying. This was an incredibly difficult task given the treacherous nature of the devastated carriages, the conditions underfoot in the tunnels, and the steepness of the escalators and stairs. Some resorted to carrying passengers in their arms up the escalators and stairs. At Russell Square, that meant a very long climb up the narrow spiral staircase. I do not address here the issue of how medical equipment ran out after the arrival of medical personnel.

230. Although first aid kits were provided in every station, in the station supervisor's office or station control room, and some stations had more than one such kit, there were no first aid kits on trains. In addition, although each station had at least one stretcher, and a number of them stocked carry sheets, there was no provision for the supply of stretchers in a multi-casualty incident. Some members of London Underground expressed the view that the first aid boxes were poorly stocked, or that they were badly located and difficult to find.

231. The 7th July 2005 Review Committee made certain recommendations, at numbers 25 and 26, in relation to the provision of first aid at stations, on trains and on buses, and these were acted upon by TfL. London Underground now stocks multi-casualty first aid kits at over one hundred locations, such as in stations, crew depots, and service control rooms, and the number of available defibrillators has also significantly increased. Furthermore, green emergency dressing packs have been put in place by the Department of Health at key main line rail terminals and at a substantial number of underground stations. These are designed to be made available quickly for use by the injured themselves, by bystanders and survivors or by first-aiders, and contain large numbers of dressings, gloves, scissors etc. Lastly, standing arrangements are now in place for even larger dressing packs to be brought by the LAS in equipment 'pods' to the scene of a major incident. The LAS also has equipment for use by its own personnel in its ambulances and response units, as well as additional oxygen, masks, dressings, torches, stretchers, lighting and other equipment in four Emergency Support Vehicles.

232. However, there remain, for reasons connected to the difficulty in finding space for them, and because of the risk of vandalism and lack of hygiene, no first aid kits on trains. There is none even in the driver's cab where there is already an emergency pod containing carry sheets, a torch and emergency train related equipment. London Underground expressed concern that if first aid kits are provided in the driver's cab, not only will they not be generally accessible, but that there will be an unrealistic expectation that the drivers are fully medically trained to use them.

233. I accept that assistance and medical aid is better provided in a station and by the suitably qualified; so that, in the event of a medical emergency on a train in a tunnel, it is preferable that the train continues to where such aid can more readily be given. Further, there is plainly a limit on the amount of medical equipment that could sensibly be carried on a train. It is not feasible for multi-casualty first aid kits to be installed, for example, and the introduction of the CONNECT and AIRWAVE radio systems means that is more likely that medical equipment can more readily be brought underground.

234. Nevertheless, I am concerned that there remains an absence of first aid kits on trains, perhaps in locked cabinets that can be opened by the driver in the event of an emergency. The evidence demonstrated that it took a considerable time for medical personnel and fire-fighters to reach the carriages in such numbers and with sufficient equipment so as to be able to start treating the injured. In the event of a derailment, collision or other emergency in a tunnel, it may simply not be possible for emergency responders to get rapidly to the train with the station-based equipment that is now readily available.

235. Passengers should, in my view, have access if at all possible to basic medical dressings and tourniquets so that, perhaps, lives can be saved whilst they wait for the emergency services to arrive. London Underground has assured me that the matter will be reviewed again. I welcome that assurance, and so recommend.

236. In relation to the provision of stretchers, some concern was expressed by a number of responders as to whether the stretchers now provided by London Underground (standard and 'scoop' stretchers) are suitable for the particularly difficult conditions likely to be encountered in any major incident in the underground system. I note, however, that following a review of its emergency equipment in November 2006 London Underground replaced all its old stretchers, and they state that the new stretchers are easier to use and more manoeuvrable. This is a technical issue, and not one in relation to which I should be overly prescriptive. It is, nevertheless, an issue that requires re-examination.

R7. I recommend that TfL (i) reconsider whether it is practicable to provide first aid equipment on underground trains, either in the driver's cab or at some other suitable location, and (ii) carry out a further review of station stretchers to confirm whether they are suitable for use on both stations and trains

Triage

237. Triage is the process by which patients in mass casualty incidents are assessed by their medical condition in order to ensure that the maximum medical benefit is provided to the greatest number of patients. In essence, where the number of casualties exceeds the number of medical staff available, the process is designed to try and do 'the most for the most'. It is important to emphasise that the process is not appropriate, and is not applied, where there are individual or small numbers of patients, and medical resources can be directed at each patient simultaneously.

238. The process, which is set out in the LAS Major Incident Plan, relies upon the use of an algorithm (the triage sieve) and is necessarily rapid. It focuses on robust signs of life (for example breathing, rather than the presence of a pulse) and is designed to distinguish between the dead, Priority 1 (immediate), Priority 2 (urgent) and Priority 3 (delayed/walking wounded). In 2005 the first ambulance crew or responder on the scene of a multiple casualty incident was obliged to ensure that the role of 'primary triage officer' or 'bronze triage' was assigned to commence the triage sieve (which may have to done more than once), and that was usually a member of the second ambulance crew. Under the current process, two paramedics will now usually be assigned to be 'bronze triage'.

239. A determination that a casualty is dead is dependent upon a finding that, despite there being an open airway, there is nevertheless no breathing. Once the casualty has been triaged, a triage card is attached which indicates either that the casualty is dead (a white or a black card is used) or, if alive, the priority (P1 is red, P2 is yellow and P3 is green). Then, on the arrival of further resources, patients can be subject to a more refined triage, known as the 'triage sort', based upon respiratory rate, systolic blood pressure and the Glasgow Coma Scale, either in situ or having been moved to a place of safety, such as a casualty clearing station.

240. The rapidity of the triage process does not encourage treatment. Nevertheless, the 'action card', or aide-memoire, designed for use by primary triage officers in 2005 made clear that, in addition to carrying a triage pouch that contained the triage cards, the medic should also have 'a selection of dressings' and devices for keeping the airway open. The action card also made clear that the medic should put an unconscious patient into the recovery position and provide 'basic airway management'. If a patient is bleeding profusely externally, a dressing should be applied. This could be done either

by the medic, by the patient or perhaps by a survivor. Accordingly, it was expected that some medical treatment could be speedily, if briefly, applied. That remains the position today.

241. Nevertheless, there was evidence that one of the paramedics at King's Cross, who carried out the vital role of bronze triage in the carriage, left his equipment bags, consisting of his paramedic and oxygen bags, and his defibrillator, on the platform. He did this partly so that other crews could use the equipment as they came down, and partly to prevent himself from being drawn into the treatment of patients. He was not alone in this. Another paramedic at Aldgate did likewise. It is not appropriate for me to criticise their individual actions and I would not do so even if I could. They performed an invaluable role. There is, however, evidence of a general sense on the part of some paramedics that triaging medics should not become involved in the treatment of casualties. This was reflected in the way in which some paramedics did not take their equipment all the way into the carriages.

242. The Medical Director of the LAS gave evidence, as did the Medical Director of the LAA, that it is useful to have equipment to hand, either for very basic treatment of casualties during triage, or for more substantial treatment once the triage process is finished, or for allowing others on the scene to use the equipment, and because it might be unwise to become separated from the equipment lest the back up treating clinicians do not arrive or are delayed, as was the case in some instances. This is an important issue because concerns were expressed in the course of evidence that some casualties were not treated by the paramedics who were triaging them. Moreover, at Aldgate station there appeared to be a gap between the completion of the triage process in the bombed carriage, and the arrival of sufficient paramedics to treat the injured. Any lack of equipment at that stage could have been particularly significant.

243. The bereaved families submitted that I should make a recommendation in relation to the training that is given on this issue. It is fair to say that there is no evidence at all that any casualty suffered, let alone died, on 7/7 from a lack of basic treatment during the triage process or afterwards. I acknowledge that the risk may be reduced by the fact that the LAS has now put in place a pre-determined attendance to any major incident so that there is now less chance of treating clinicians not being immediately available to provide fuller treatment following triage. However, the evidence about paramedics believing they should leave equipment behind does cause me concern that circumstances exist which might case a risk of death to occur in the future. Accordingly, I consider it appropriate to encourage the LAS to make it plain in its training that triage does not preclude immediate or basic medical intervention (as made clear by Action Card 4), or the taking of equipment to those casualties in need of triage. To ensure consistency of approach, there should be a proper liaison in this regard with the London Air Ambulance.

R8. I recommend that the LAS, together with the Barts and London NHS Trust (on behalf of the LAA) review existing training in relation to multi casualty triage (ie the process of triage sieve) in particular with respect to the role of basic medical intervention.

244. Concerns were also raised in two others areas. First, whether triage cards were properly used to record the administration of drugs and, second, whether the triage algorithm attaches undue weight to the absence of breathing.

245. In relation to the former, the administration of drugs, particularly in the bombed carriage in the southbound Piccadilly line tunnel, does not appear to have been recorded on the relevant triage cards. Indeed paramedics were unable to recall even whether two particular casualties who were treated had triage cards attached at all. In the extremely cramped, ill-lit and dangerous conditions in which the paramedics, emergency medical technicians and doctors were working, such a recording would have been quite impossible. In any event, liaison between the paramedics and doctors at the scene was such that there appears to have been no confusion whatsoever on their part as to what had already been administered.

246. I accept that, in theory, the recording of the administration of any drugs at any stage is to be encouraged, and I observe that there is room on the triage card for such a notation as part of secondary assessment, i.e. at the triage sort stage. However, I consider it would not be right for me to recommend that the administration of drugs must be recorded at all times. The scene of a major multi casualty incident is highly likely to be confused and chaotic, and it may simply not be possible. Moreover, I am not persuaded that the absence of notation is such as to give rise to a risk of death in the future. However, I note that the LAS in its response to submissions on Rule 43 has agreed to look at this issue, and to implement a policy of recording the administration of drugs on the triage cards. I am content to leave it at that.

247. In relation to the latter issue, I do not consider that it would be right to make any recommendation in relation to the triage sieve algorithm. The emphasis on the absence of breathing, as opposed to the absence of a pulse, which is more difficult to detect, seems to me to be entirely rational. Further, the LAS is best placed to decide which factors should be taken into account in assessing any casualty during triage and in thereafter determining the appropriate priority to be allocated.

Other Medical issues

248. The bereaved families suggested that the issue of whether paramedics should, or should not, carry their equipment to the place where they might expect to have to perform primary triage might be resolved by the establishment of a protocol providing for the setting up of forward equipment dumps.

249. I have addressed this issue above in the context of the related issue of whether paramedics should keep their equipment with them for the purposes of providing basic medical attention. I do not consider the question of forward equipment dumps arises for separate consideration in light of the view that I have taken. This is not a matter for Rule 43 in any event.

250. In the course of the proceedings I heard evidence of how there have been very significant advances in military trauma care, particularly in relation to trauma caused by bombs and bullets, as a result of the experiences of the armed forces in Iraq and Afghanistan. Some of that knowledge is now reflected in civilian health care and emergency response, although it is important to emphasise how different the wounding mechanisms are in the military sphere from the usual type of trauma encountered in the civilian environment.

251. Whereas the well established protocol for the examination and assessment of a casualty is 'ABC', that is to say, Airway, Breathing, Circulation, recently there has been an increased understanding of the need for 'CABC', namely Control, Airway, Breathing, Circulation, where there is a risk of catastrophic haemorrhage resulting from explosive-related penetrative injury. 'Control' denotes the overriding immediate need to control major bleeding.

252. I have been invited to make a recommendation in relation to the training of civilian paramedics in connection with bomb blast trauma. I consider that any such recommendation is not now necessary. The evidence established that training in relation to bomb-blast and catastrophic haemorrhage injuries is now included within the basic paramedic training course and within the current refresher training for paramedics and emergency medical technicians (which takes about five days per year). The increased understanding is also reflected in the greater knowledge, and use, in the civilian environment, of combat application tourniquets, which were introduced by the LAS in 2008 to 2009 following a 2007 Inquiry into trauma deaths.

Covering of bodies

253. Some bereaved families also raised concerns about whether there are processes in place for triaging, and then confirming that life is extinct, in respect of casualties whose bodies have already been covered prior to the attendance of the LAS. This is an issue of particular sensitivity, and is derived

from the fear that has been expressed by one bereaved family that their loved one may have been covered by a blanket although not dead.

254. Although I sympathise with the concern that has been expressed, this is not a matter that falls within Rule 43, and I can make no recommendation. I do understand, however, that the LAS is prepared to consider amending its documentation and training on this issue with a view to meeting the families' concerns , and I welcome their approach.

Invasive post-mortems

255. I have already dealt with this intensely sensitive issue in my introductory remarks. This was an extraordinarily difficult decision, which has not been explored at all in the course of the evidence because it is outside the scope I set for these proceedings. In the absence of any evidence, indeed of any proper basis for this matter to fall within Rule 43, it would not be right for me to make a recommendation.

LAA ('HEMS')/Medical Emergency Response Incident Teams ('MERIT')

256. I have already acknowledged the integral role played by LAA on 7/7. In short, the vast experience and considerable skills of those trained in pre-hospital care played a significant role in saving lives and limbs on 7/7. LAA is a registered charity that was formed in 1988. Its primary purpose is to support the statutory emergency services by delivering a senior doctor and paramedic, with expertise and experience in trauma, to patients with severe injuries.

257. Medical Emergency Response Incident Teams ('MERIT') also reflect the increased recognition of the desirability of having experienced clinicians at the scene of major incidents. Historically, hospitals were required to make available doctors or nurses to attend major incidents, known as mobile medical teams. However guidance issued by the Department of Health now requires the national provision of MERIT to replace the mobile medical teams. In London, the LAS's role in the delivery of MERIT is carried out by LAA. I will return to this further below in considering the funding of these services.

258. The specialist skills provided by the physicians who participate in LAA and who participate in MERIT are the exception rather than the rule. Pre-hospital care is not yet recognised as a sub-specialty in the United Kingdom, whereas it is in the United States and other countries. Recognition of pre-hospital care as a sub-specialty is likely to have a number of benefits. Practically, it should increase the training, knowledge and numbers of physicians both at a senior and junior level with relevant expertise. It is likely to benefit the care of patients at major incident scenarios or other traumatic incidents.

259. The decision to achieve accreditation rests with the General Medical Council, and an application to secure accreditation is currently underway. Phase one of the application process has been cleared and, although there have been some stumbling blocks at phase two, it is intended that a re-submitted application should be made very shortly (if it has not already been done so). There is optimism that stage two will also then be passed. There is then a third and final stage to be cleared.

260. There is considerable support amongst the medical community for accreditation of pre-hospital care as a sub-specialty. The application before the General Medical Council is supported by the College of Surgeons of London, the College of Surgeons of Edinburgh, the College of Emergency Medicine and the Royal College of Anaesthetists.

261. The pre-conditions for making a Rule 43 recommendation on accreditation are not, however, met. In any event, it seems to me that accreditation of sub-specialties is properly entrusted to the General Medical Council, which is best placed to assess the merits of any application so as to ensure that if accreditation is achieved, it succeeds in improving medical care. Nevertheless I wish to lend my support to this application and hope that accreditation of pre-hospital care as a sub-speciality will be achieved in the near future.

262. Similarly, it was submitted that I should recommend that the Department of Health consider making available funding for research in respect of emergency preparedness for London. I do not propose to do so for two reasons. First, it seems to me that when pre-hospital care is recognised as a sub-specialty, academic research is likely to follow in any event. Second, for reasons set out below, I consider that any additional available monies would be better spent in ensuring that London has an adequate emergency medical care capability.

Formal Recognition of MERIT & public funding for LAA

263. I have grouped the above two matters together, because I consider that in truth they both reflect the same fundamental and important issue: namely, ensuring that London has a properly funded emergency medical care capability of the type provided by LAA and by MERIT.

264. It was, as I have mentioned, pure chance that on the morning of the bombings, LAA had twenty seven physicians and paramedics at its disposal to attend the various bomb scenes. It seems that a significant limitation upon LAA is funding. Although the National Health Service and corporate donors provide funding, there remains a deficit of approximately £1,000,000 that needs to be raised from other sources. The evidence was that achieving these additional monies is an 'uphill struggle'. A number of the doctors, who are senior physicians, volunteer their services and the LAS seconds the

paramedics. If, however, such funding were to be achieved, the LAA could then support one team of one doctor and one paramedic on duty in any 24-hour period. That team would then that have at its disposal a single helicopter and five fast response vehicles.

265. Despite current financial constraints, LAA has, since its formation, provided an invaluable service to the capital. It has been deployed to numerous major incidents in London including not only the London Bombings, but also the Bishopsgate and Aldwych terrorist attacks as well as the Southall, Paddington and Potters Bar rail crashes. In addition to major incidents, LAA attends on average seven to eight calls per day where its specialist skills are required. In 2009 LAA attended 672 road traffic accidents, 377 falls from heights, 349 stabbings and 69 shootings. However, given its precious resources, LAA, in conjunction with the LAS, has to tailor its attendance to ensure its specialist skills are deployed where they are most needed.

266. The coincidental additional resources available to LAA on 7/7 has led me to consider what might have been the position had only one team been available to deploy. Which of these terrible scenes would have had the benefit of their expertise, and which would have been deprived of the specialist skills provided? Would there have been other physicians readily available with the necessary equipment to tend to the injured as well as administering desperately needed pain relief? In the absence of an attending LAA team, who would have filled the post of Medical Incident Officer (the 'Silver Doctor') who has overall medical responsibility at the scene? Whilst the 6th and 7th Edition of the LESLP Manual provides that the Medical Incident Officer is usually taken to the scene by an Ambulance Service vehicle and that mobilisation of the Medical Incident Officer is the sole responsibility of the Ambulance Service, on 7/7 the post of the Medical Incident Officers at Aldgate, Edgware Road, King's Cross, Russell Square and Tavistock Square was held by LAA personnel.

267. I have been informed by the medical director of LAA that plans have been submitted since 7/7 to a number of emergency planning and health care delivery bodies (such as the Strategic Health Authority, London Trauma Office and London Emergency Planning Office) for LAA to have its capability to respond to major incidents enhanced. The response to such proposals has been limited.

268. The Department of Health's requirement for MERIT to be available nationally has furthered the emergency medical care provided in the capital in conjunction with the service provided by LAA. However, the evidence indicates that there are also financial limitations that restrict the MERIT resources that can be deployed. I understand that to provide a 24-hour MERIT capability in London, a plan has been proposed whereby physicians will receive an annual retainer (currently proposed to be £1,000) to undertake

on-call duties during the year. It remains to be seen whether this proposal will be accepted and implemented.

269. The evidence therefore appears to be that, should London suffer another major incident, it is likely that LAA will only be able to deploy a single team to be backed up by a sole MERIT team to supplement the response. Should further resources be required, a system of volunteers is in place (such as by members of the British Association of Immediate Care). This falls woefully short of the response that LAA was able to muster on 7/7 and this gives me cause for grave concern.

270. I am concerned that London, a major global capital, host to the Olympics in 2012 and a prime terrorist target should find itself dependent upon corporate funding and charitable donations, and upon professional volunteers giving up their limited free time in order to provide life-saving emergency medical care. It is equally concerning that the capability to provide such care is limited. I consider that an increased yet proportionate capability is required. It is for others to assess how that emergency medical care should be provided and whether funds are available. I am acutely conscious of the constraints on public resources and the competing demands. However, if at all possible, emergency medical care for London needs to be properly funded.

R9. I recommend that the Department of Health, the Mayor of London, the London Resilience Team and any other relevant bodies review the emergency medical care of the type provided by LAA and MERIT and, in particular (i) its capability and (ii) its funding.

LAA as Category 1 Responder

271. Pursuant to section 2 of the Civil Contingencies Act 2004, those listed as Category 1 Responders have a duty, amongst other matters, to assess and maintain plans for the purpose of ensuring that if an emergency occurs the Category 1 Responder is able to perform its function to prevent it, reduce, control or mitigate its effects or take other actions in connection with the emergency. Category 1 Responders include BTP, COLP, the MPS, LAS and the LFB, all of whom fulfil their duties by directly contributing to LESLP and the Manual that it publishes. LAA is not a Category 1 Responder.

272. Some of the bereaved families submitted that I should recommend that LAA should be made a Category 1 Responder. To do so would require Ministers to exercise the formal powers of amendment under section 13 of the Civil Contingencies Act 2004. After careful consideration, I do not propose to make such a recommendation because this issue is outside the proper scope of Rule 43. Furthermore, I note that the list of those who are Category 1 Responders is primarily limited to local authorities, the emergency services and health bodies; LAA does not fall within these groupings.

273. However I was somewhat troubled by evidence of the extent to which LAA appears to have been excluded from the emergency planning process. In particular, the LAA, although referred to in the current LESLP Manual, has not been asked to consult formally on the forthcoming 8th Edition. Further, the reference in the 6th and 7th edition of the LESLP Manual to LAA somewhat belies their importance. They are mentioned under the chapter headed 'Helicopters' in which it is explained that LAA may be required to transfer casualties to hospital some distance from the scene or to attend any casualty requiring advance trauma life support. While both of these functions are, of course, accurate, the role of LAA on 7/7 was far more involved with, and integral to, the overall emergency response.

274. LAA has a valuable knowledge of major incidents as well as a high proportion (approximately 20% – 30%) of doctors with military backgrounds accustomed to working in war zones. Such expertise ensures that LAA is well placed to contribute to London's emergency planning. Although I understand that there is a close and productive relationship between the LAS and LAA, I consider it is desirable that the LESLP should consult LAA and thereby recognise and harness their expertise in the emergency planning process.

Retention of Documentation

275. Throughout these proceedings I have received continuous support and co-operation from all of the organisations and agencies involved. This has been particularly apparent in the disclosure process, as a result of which I was provided with of thousands of documents.

276. While those representing some of the bereaved families rightly recognise the efforts of the organisations and agencies involved in these proceedings in complying with their disclosure obligations, I have nevertheless been asked to consider making detailed recommendations regarding the retention of documents relating to any future major incident, so that such documents can be collated, stored and then disclosed to any future inquiry.

277. Such a recommendation would fall far outside the proper scope of Rule 43. In any event, I do not consider that it would be appropriate to be prescriptive regarding record keeping and disclosure. All of the organisations and agencies before me were plainly aware of their obligations, and I am satisfied that they properly complied with them. In these circumstances a recommendation is neither warranted on the facts nor allowed by law.

Conclusion

278. Given the exceptional circumstances of the case and the legitimate public interest in these inquest proceedings, I am today publishing this report, having previously obtained the agreement of the Lord Chancellor (to whom I am indebted), with whom a power to publish a Rule 43 lies under rule

43A(3)(a). I am also sending a copy of it to the persons identified and provided for in the Rules.

279. By virtue of Rule 43A(1), as a recipient of this report you must provide me with a written response to it, containing details of any action that has been taken or which you propose to take in response to those parts of this report that are addressed to you (as set out in Annex B), or an explanation as to why no such action is proposed. This has to be provided to me within 56 days beginning with the day on which this report is sent. If you wish to request longer than this period to respond, you should write to me requesting an extension of time and giving reasons, as soon as possible.

Yours sincerely

The Rt. Hon Lady Justice Hallett DBE

cc.

Interested Persons
Prime Minister
Lord Chancellor & Secretary of State for Justice
Secretary of State for Transport
Secretary of State for Communities & Local Government
Clerk to the Intelligence & Security Committee
Greater London Authority
Mayor of London

Annex A – The Deceased

Adams, James
Badham, Samantha
Baisden, Lee
Beer, Philip
Brandt, Anna
Brewster, Michael Stanley
Cassidy, Ciaran
Chung for Yuen, Rachelle
Ciaccia, Benedetta
Daplyn, Elizabeth
Downey, Jonathan
Ellery, Richard
Fatayi-Williams, Anthony
Foulkes, David
Frederick, Arthur
Gluck, Karolina
Gordon, Jamie
Gray, Richard
Gunoral, Gamze
Harris, Lee
Hart, Giles
Hartley, Marie
Hyman, Miriam
Ikeagwu, Ojara
Islam, Shahara
Jain, Neetu
Jenkins, Emily
Johnson, Adrian
Jones, Helen
Levy, Susan
Ly, Sam
Mather, Shelley
Matsushita, Michael
Mayes, James
Moffat, Anne
Morley, Colin
Mozakka, Behnaz
Nicholson, Jennifer
Otto, Mihaela
Parathasangary, Shyanuja
Rosenberg, Anat
Russell, Philip
Sharifi, Atique
Slimane, Ihab
Small, Christian
Stevenson, Fiona
Suchocka, Monika
Taylor, Carrie
Trivedi, Mala
Webb, Laura
Wise, William
Wundowa, Gladys

Annex B – Summary of Recommendations

No.	Recommendation	Addressee
R1	I recommend that consideration be given to whether the procedures can be improved to ensure that "human sources" who are asked to view photographs are shown copies of the photographs of the best possible quality, consistent with operational sensitivities.	Secretary of State for the Home Department Director General of Security Service
R2	I recommend that procedures be examined by the Security Service to establish if there is room for further improvement in the recording of decisions relating to the assessment of targets.	Secretary of State for the Home Department Director General of Security Service
R3	I recommend that the London Resilience Team reviews the provision of inter-agency major incident training for frontline staff, particularly with reference to the London Underground system.	London Resilience Team
R4	I recommend that TfL and the London Resilience Team review the protocols by which TfL (i) is alerted to major incidents declared by the emergency services that affect the underground network, and (ii) informs the emergency services of an emergency on its own network (including the issuing of a 'Code Amber' or a 'Code Red', or the ordering of an evacuation).	Tfl London Resilience Team
R5	I recommend that TfL and the London Resilience Team review the procedures by which (i) a common initial rendezvous point is established, and its location communicated to all the arriving emergency services (ii) the initial rendezvous point is permanently manned by an appropriate member of London Underground.	Tfl London Resilience Team
R6	I recommend that TfL and the London Resilience Team review the procedures by which confirmation is sought on behalf of any or all of the emergency services that the traction current is off, and by which that confirmation is	TfL London Resilience Team

	disseminated.	
R7	I recommend that TfL (i) reconsider whether it is practicable to provide first aid equipment on underground trains, either in the driver's cab or at some other suitable location, and (ii) carry out a further review of station stretchers to confirm whether they are suitable for use on both stations and trains	Tfl
R8	I recommend that the LAS, together with the Barts and London NHS Trust (on behalf of the LAA) review existing training in relation to multi casualty triage (ie the process of triage sieve) in particular with respect to the role of basic medical intervention.	LAS Barts & London NHS Trust
R9	I recommend that the Department of Health, the Mayor of London, the London Resilience Team and any other relevant bodies review the emergency medical care of the type provided by LAA and MERIT and, in particular (i) its capability and (ii) its funding.	Secretary of State for Health London Resilience Team