London Bridge Inquests

Day 27

June 17, 2019

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Monday, 17 June 2019
(10.07 am)
THE CHIEF CORONER: Good morning, Mr Hough.
MR HOUGH: Good morning, sir. The first witness today is Paul Woodrow.
MR PAUL WOODROW (sworn)
THE CHIEF CORONER: Good morning, Mr Woodrow, please make yourself comfortable, please take a seat and if you can speak into the microphone, that will help us all.
A. Yes.
THE CHIEF CORONER: Thank you.
Questions by MR HOUGH QC
MR HOUGH: Would you please give your full name for the court.
A. Paul Andrew Woodrow.
Q. Mr Woodrow, you appreciate that I'm asking you questions first on behalf of the Coroner and you are likely then to have further questions from other lawyers?
A. Yes, sir.
Q. What's your current post, Mr Woodrow?
A. My current post is director of operations for the London Ambulance Service NHS Trust.
Q. Is this right: you are giving evidence today to provide an overview of the response by the London Ambulance Service to the London Bridge and Borough Market attack?

A. That's correct, sir.
Q. You have made three witness statements, an operational statement and a learning statement, both of January 2019, and a supplemental statement very recently answering some questions from the families of the victims. You may refer to those as you wish.
A. Yes, sir.
Q. First of all, your own career. Is it right that you have worked for the London Ambulance Service for 27 years?
A. It's actually now 28, but I joined the London Ambulance Service in 1991.
Q. Thank you. Have you been a senior operational manager for the last 15 or so years?
A. That's correct.
Q. Have you been director of operations since 2016?
A. That's correct.
Q. In a sentence or two, could you summarise what the job of director of operations is?
A. So I'm responsible for the delivery of patient responses through 999 calls. I also have overall responsibility for the emergency operation centre, so the control rooms. In addition to that, I also have responsibility for non-emergency transport service and our emergency preparedness resilience and response functions.

Q. Thank you. Is it right that you personally didn't have an active role in the response to the London Bridge and Borough Market attack?
A. That's correct, sir.
Q. But is this also right: that you have considered the various logbooks, call records and so on, in order to provide an overview on behalf of the service?
A. Yes, sir.
Q. May I begin with the management of a major incident, which you deal with in your operational statement from page 5. Is it right to say that a number of policy documents govern the response of the emergency services to a major incident?
A. That is correct, sir.
Q. First of all, is there something called a London Emergency Services Liaison Panel Major Incident Procedure Manual?
A. That's correct.
Q. Does that deal with subjects such as the functions of the services, principles for co-working, scene management, command and control and so on?
A. That's correct.
Q. Are there also the Joint Emergency Services Interoperability Principles, documents focusing on cooperation and joint decision-making between the

emergency services?
A. That is correct.
Q. Does the London Ambulance Service itself have an Emergency Preparedness Resilience and Response Framework?
A. It does.
Q. And is that a document, in simple terms, concerning the structures in place to ensure compliance with various statutory duties?
A. Indeed.
Q. And that, I think, includes management roles and sections about planning and exercising and so on?
A. Yes.
Q. And finally in terms of policy documents, is there a substantial incident response procedure document of the London Ambulance Service?
A. There is.
Q. Does that amount to a detailed plan dealing with numerous aspects of the service's response to various types of major incident?
A. That's correct.
Q. Covering subjects like the declaration of a major incident, resources, command and communications, and so on?
A. Correct.

Q. Looking at page 6 of your witness statement, paragraph 3.2.1, can you tell us what the definition in the NHS of a major incident is?
A. So a major incident within the NHS is any occurrence that presents significant risk to health of the community, or by the number or types of casualties would need special arrangements to be implemented to manage.
Q. That, I think, is similar to other public authority definitions of a major incident?
A. It is.
Q. Now, we've heard any one of the emergency services may declare a major incident; is that right?
A. That is correct.
Q. And at that point, when a major incident is declared, the other services will be informed and provide support?
A. Correct.
Q. There may or may not be declarations by multiple services?
A. That's also correct.
Q. May we put on screen, please, {WS5040/216}. Now, this is a page from the incident response procedure document, and do we see included in it at paragraph 1.7 a series of operational objectives for the London Ambulance Service in a major incident?
A. That is correct.

Q. And as well as the overriding objective of saving life, do we also see that they include providing treatment at the scene?
A. Yes.
Q. Establishing triage arrangements?
A. Yes.
Q. Providing a focal point and communications for medical staff?
A. Yes.
Q. Nominating and alerting hospitals and arranging transport of casualties to hospitals?
A. Correct.
Q. We can take that off screen now and put on screen, please, {WS5040/8}. If we focus on paragraph 3.5.2 of your witness statement, do you set out here the resources which should be sent to the scene by the London Ambulance Service after any major incident has been declared?
A. Yes, so what it actually sets out is the initial predetermined attendance, so it's not a finite number of resources but on declaration that minimum predetermined attendance would be dispatched.
Q. And that minimum initial attendance do we see includes 20 double-crewed ambulances, eight officers, one tactical advisor, command support and team, HART, and

TRU medics and so on?
A. That's correct.
Q. We can take that off screen now.
You have referred to control rooms when you talked about your role. Does the London Ambulance Service have a control room called the emergency operations centre?
A. Yes, sir, it actually has two emergency operations centres. One of them is based in Waterloo, SE1, and then we have one based in Bow, in east London.
Q. Now, there is also reference in the various documents to a special operations centre. How and where and when would that be set up?
A. So we have as a recommendation from the 2005 terror attacks, there was a recommendation that we create special operations centres, so in the declaration of a major incident the control of that incident can be moved into a separate control pod. So we have a room with a number of pods. We have one of those located at each of our control rooms and when we have major incident declarations, part of the action is to take the management of that major incident out of the main control room, because you'll understand that despite the major incident we're still getting high numbers of 999 calls for the rest of London. So that allows the main control room to deal with business as usual, and then we

move the major incident centre out into the special operations centre.
Q. As to the responsibilities of the special operations centre in a major incident, may we have on screen {WS5040/31}. We're looking at paragraph 6.4.5 of your statement. Do you set out a series of responsibilities for the SOC in a major incident?
A. That's correct.
Q. Including coordinating the incident centrally, liaising with the tactical commander, deploying resources to the scene, nominating hospitals and so on?
A. Correct.
Q. We can take that off screen now.
Operation Plato next. You're aware and familiar with procedures of Operation Plato for responding to a marauding terrorist attack?
A. I am, sir.
Q. We've been through the procedural documents with Superintendent McKibbin, so I can deal with these matters relatively briefly with you. Would you agree that the police are responsible for making a declaration of Operation Plato?
A. Yes, sir.
Q. After such a declaration, will they notify the LAS control room, the emergency operations centre?

A. Yes, so they would initially use what we call ES5, which is an Airwave radio channel that is shared, it's an open channel, a command channel between the Metropolitan Police, the London Fire Brigade and the London Ambulance Service. So we would probably be initially told through that ES5 talk group and then a formal teleconference would be set up and the Metropolitan Police CCC, chief inspector, grip inspector is normally the person that would make that formal declaration of Plato.
Q. We've heard that that's what happened in this case with Mr McKibbin making that declaration?
A. Indeed.
Q. In a marauding terror attack incident, is it right that the police, in consultation with the other services, will establish one or more rendez-vous points in safe locations?
A. Yes, so very early on in terms of a declaration of Plato it would be the police that would nominate an RVP for us at a suitable safe distance away from the incident, and they would nominate those and we would send our resources to those RVPs.
Q. So those would be places to which ambulances could be sent and from which they could be directed, as necessary, by the police and LAS staff?

A. Indeed.
Q. And is it right that locations of RVPs may change during an incident?
A. It is, and indeed they were on that night, sir.
Q. We have heard that procedures for responding to such attacks involve the designation of hot zones and warm zones?
A. That is correct.
Q. What's your understanding of what a hot zone and a warm zone is?
A. So a hot zone, we would not deploy into a hot zone because a hot zone is declared to be there's an immediate threat present through attackers. A warm zone is not necessarily a cleared zone as safe, but potentially more safe than the hot zone.

There is something called limit of exploitation within those documents, and actually in terms of the hot zone it's only specialist firearms officers that will go into the hot zone with the idea of trying to neutralise the threat that indeed is making that area a hot zone.

In terms of the warm zone, that is an area where the tri-service Plato commanders will make joint decisions around deploying assets into the warm zone, but they will also set up what we call limits of exploitation, so how far will they go into the warm zone, based on the

latest intelligence that they received.
Q. So drawing some themes out of that, the hot zone is where threat from attackers is presently judged to be?
A. Yes.
Q. A warm zone is a usually adjacent area --
A. Yes.
Q. -- where often an attack threat has recently been?
A. Yes, and could return.
Q. And could return. LAS staff may be sent into warm zones subject to direction from the commanders at the scene?
A. Correct.
Q. But only appropriate staff and appropriately equipped?
A. Correct.
Q. And LAS staff wouldn't normally be sent into hot zones at all?
A. Absolutely not, no.
Q. The staff which can be deployed into warm zones, is it right that they're referred to as ambulance intervention teams?
A. Yes, so an ambulance intervention team actually is a tri-service, so we have -- the London Ambulance Service has deployed on the streets of London every day teams of people that would help to make up an ambulance intervention team but actually those ambulance intervention teams are also with specially trained

firefighters from the London Fire Brigade and then officers from the Metropolitan Police Service.
Q. We have heard that the London Ambulance Service has specialist medics called HART and TRU paramedics; is that right?
A. Yes, so I can expand on that a little bit. So we do have hazardous area response teams and actually those staff routinely on a day-to-day basis would be deployed to provide support to emergency service colleagues at fire calls. Those staff have specialist training in working at height. They also have specialist training in terms of urban search and rescue and working on water. So that's part of their routine. In addition to that, those staff were also trained to provide ambulance intervention teams for a marauding terrorist attack.

TRU, our tactical response units, are dedicated paramedics that only have the additional training to respond to a marauding terrorist attack, they don't have any of the other specialties that HART has.
Q. When you have a marauding terrorist attack, are teams set up which include ambulance officers of these kinds, so HART and TRU staff?
A. That is correct.
Q. Alongside their fire brigade and police colleagues?
A. Yes, specially trained firefighters and police

colleagues.
Q. And is it teams set up in that way which can be sent into warm zones?
A. That is correct.
Q. Is it right that both HART and TRU medics have additional protective gear for going into warm zones as well as the additional training to which you've referred?
A. They do.
Q. Does their training to which you've referred include physical competency assessments as well as multi-agency live training?
A. It does, sir.
Q. As regards sending those teams into warm zones, will the deployment of those teams follow a joint risk assessment by the police, ambulance and fire brigade Plato commanders at the scene?
A. That is correct.
Q. When the teams do enter a warm zone, what is it the role of the LAS staff to do? What are they expected to do there?
A. So when they're deployed into a warm zone and their limits of exploitation are set, their primary job is to search for casualties, to provide any life-saving interventions, and then they will make a decision based

on the intelligence and the briefing that they've received from the three Plato commanders to either treat and leave, or treat and evacuate those patients.
Q. Now, you describe in your witness statement at 3.6.16 that their work in a warm zone would be rapid triage and basic medical interventions?
A. Indeed.
Q. So not normally more extended and more complex medical interventions?
A. No, there would be no complex clinical interventions carried out in a warm zone.
Q. Next, command and control. We've heard about the standard incident command structure of the emergency services, so gold for strategic command, silver for tactical command, and bronze for operational command, usually on the ground?
A. That's correct.
Q. In responding to a major incident, will the London Ambulance Service have a number of gold commanders?
A. So in terms of declaration we don't have strategic commanders on duty 24/7, but on declaration there would be a paging message and we have gold commanders on call 24/7.
Q. Would there also be one or more silver commanders appointed?

A. Yes, there would.
Q. And a number of bronze commanders for different areas and for different roles?
A. That is correct.
Q. So for instance, is this right, that in this incident there was a bronze medic, Mr Passey, who allocated roles to others?
A. That is correct.
Q. A bronze Plato, Mr Marc Rainey of the LAS, responsible for Plato procedures?
A. Yes, and that was because a major incident had been declared before Plato was formally declared and the Plato commander actually is another layer within that structure, but independent. The Plato commander only makes decisions in relation to the committal of ambulance intervention teams into the warm zone.
Q. We've also heard that there were bronze commanders for particular sectors, including, I think, Mr Beasley, from whom we heard, who was bronze commander for the south sector?
A. Yes, so it would be quite common practice based on geography and the size of the incident footprint to sectorise it if that assisted in the management of that incident.
Q. I think we'll hear in this incident there was a sector

for the area to the south of London Bridge, which covered Borough Market, and then a sector which encompassed the north end of London Bridge where the casualty clearing station was?
A. That's correct.
Q. May I move on to training for major incidents, which you deal with from page 23 of your statement. I can deal with this relatively briefly, because we've heard about the experience and training particular staff had. Is it right to say that in general terms, frontline staff receive training on management and procedures in major incidents?
A. It is, sir.
Q. Is there also separate training for staff in the emergency operations centre?
A. That is correct.
Q. And additional major incident training for those who take on roles of dispatching LAS resources to the scene?
A. That's also correct.
Q. Are there also specific training courses for command roles at the three levels of gold, silver and bronze?
A. That's correct, sir.
Q. With, I think, periodic revalidation in each case?
A. Indeed.
Q. A few matters about communications next, please, which

you address from page 26 of your statement. Is it right to say that the staff on the ground and the emergency operations centre can communicate by various means with each other and with others?
A. Indeed.
Q. First of all, do LAS staff have Airwave radios like the police and fire service?
A. Yes, we all share a common radio system, the Airwave radio system.
Q. On that system are there specific channels for LAS staff to communicate with each other, to which others don't normally have access?
A. Yes, that is correct, sir.
Q. Is it also the case that during a major incident, additional channels can be established, allowing members of the different emergency services to communicate about that particular major incident?
A. So there is a channel which is known as ES5, Emergency Service 5, which is an Airwave talk group. That channel is open 24/7 and is monitored 24/7 in each other's control rooms, and that is a common radio channel for the services to communicate, but it would be commander ops that would communicate; it wouldn't be routine assets that are deployed out operationally.
Q. I see. So you have a standing channel --

A. Yes.
Q. -- for communication at command level between the services, predominantly for major incidents?
A. Indeed. All critical information, if it comes to light on an incident before a declaration, so it's there to ensure critical information can be passed across the services.
Q. But then is it in addition possible to set up further channels for staff at ground level to communicate about a particular major incident?
A. So we would initiate additional talk groups for London Ambulance Service staff, but the Metropolitan Police Service and the London Fire Brigade would not be able to hear those transmissions; it's only ES5 from the command channel.
Q. Now, in a major incident is a strategic coordination group set up hosted by the Metropolitan Police?
A. Yes, it is.
Q. Is that hosted in their special operations room, about which we heard?
A. Yes, in Lambeth.
Q. And who from the LAS, by role rather than individual, attends that group?
A. So the lowest level of officer that would attend that would be a silver level tactical commander, but more

often than not we would send a strategic commander level.
Q. Would that person also be accompanied by a member of the control room staff from the LAS to act as a communication link to the special operations centre of the LAS?
A. Yes. And contained -- that is correct, sir, and contained within Lambeth SOR or, as we call it, GT. The London Ambulance Service have a command point terminal located in SOR. So our control representative will have access to the running CAD and suchlike.
Q. As well as communication by radio between the services, you've told us that in a marauding terrorist attack incident, early on a tri-service conference call will be set up?
A. That is correct.
Q. Until representatives of the ambulance service, the police and the fire brigade are physically together?
A. Yes.
Q. Is it also right that staff -- command staff will also be physically located with each other at the scene, including bronze commanders at rendez-vous points?
A. Yes, or at casualty clearing stations, so the joint -- the JESIP principles are that the three services congregate at a location where the three services can

talk together through individual face-to-face means.
Q. In addition is it right that there are forward command points at which Plato commanders can be together and make those joint decisions you told us about as to designation of warm and hot zones and deployment of staff into them?
A. Yes, so for Plato declaration the forward command point would be a separate entity purely dealing with the committal of resources into the warm zone, but obviously they would have the information before committal around the location of the casualty clearing stations or the casualty collection points if that was the structure that was in place.
Q. Final point about communications: is it right that the London Ambulance Service also uses pager messages to alert key management staff to the declaration of a major incident?
A. That is correct.
Q. Do those operate a traffic light system of a green message for information only, an amber message to request state of readiness and provide availability, and red for immediate action required?
A. That's correct.
Q. Having dealt with those general matters of background, can we now turn to the response to the London Bridge

attack which you address from page 16 of your operational statement.

First of all, how many emergency calls relating to that attack did the London Ambulance Service receive that night?

A. So between the first call being received and 23.00 hours we received 134 calls to multiple locations within the London Bridge area, giving multiple locations and multiple types of calls in terms of the information we received.

Q. We'll begin with the first of those, {DC5184/1}. Mr Woodrow, I'm going to go through the chronology using the 24-hour clock because it is easiest when we have an event going overnight.

Do we see here the first call, CAD 4497, a call made at 22.07.31 and answered 22.08.41?

A. Correct.

Q. And if we go over the page {DC5184/2}, we can see that it concerns a French lady who had been injured on the bridge. We think that refers to Christine Delcros. You tell us in your witness statement the priority level given to this CAD. What priority level was given?

A. The priority was given as what we call a category 2. So the first questions that are asked are to ascertain whether the patient is breathing and whether the patient

is conscious. Depending on those two answers, that would eliminate -- if the patient was given as breathing and conscious, that would take away a category -- a red 1 response. Red 2 was triaged, and that gives us a response time of 8 minutes.

Q. We can take that off screen now. Is it right that there was then a further series of calls with the next several calls in the sequence all concerning injuries to people on the bridge?

A. That's correct.

Q. Then may we have {DC8209/27}, please. We can see, I think, from this combined log document that a number of emergency resources were dispatched to the scene at 22.11.

A. That's correct.

Q. And we can see from that document that AP62, Mr Rutherford, an advanced paramedic practitioner, was dispatched at that time?

A. Yes.

Q. Mr Beasley, the incident response officer, with call sign IR51?

A. Yes.

Q. A double-crewed ambulance with, in fact, three staff, Ms Whale, Ms Mallett and Mr Browne, G330.

A. Correct.

Q. Then over the page, please, to page 28 {DC8209/28}. N151, Mr Armstrong, a fast response unit medic, and NE02, Gary Green, another sole practitioner?

A. Yes, he was on motorcycle.

Q. So those were the initial resources dispatched to the scene at 22.11?

A. Correct.

Q. And then {DC5207/1}. We can see here a call made at 22.10 answered at 22.11 which is I think the first call about a stab victim in the Mudlark, who we understand to be Helen Kennett.

A. Correct.

Q. Then {DC5197/1}, please. Also at 22.11, a call answered -- made by a person in a taxi who passed a stab victim who we think was Mr Livett?

A. Correct.

Q. So some early calls about stabbings at 22.11?

A. Correct.

Q. Your page 18 of your witness statement, you record that at 22.13, the Helicopter Emergency Medical Service was dispatched to the scene?

A. Yes, although they were not actually in a helicopter; they were based in a car.

Q. Yes, we've heard from Dr Lambert that they were activated at 22.14.

A. Correct.

Q. Then {DC8209/28}, please. We can see the records for Mr Armstrong, N151, which show that he was at the scene at 22.13.

A. Correct.

Q. I think he was the first member of LAS staff on the scene.

A. Correct.

Q. Then is it right that from 22.15, calls started being received about stabbings in Boro Bistro and on Borough High Street?

A. Correct.

Q. We can give an example of those, {DC5221/1}. You will see a caller who is reporting in the middle of the page at 22.15, saying there are injured people in Boro Bistro, a market area downstairs from London Bridge?

A. Correct.

Q. And {DC8209/195}, please, also at -- a call detail record with reference 4570, call answered at 22.16, and a reference to the -- a female bleeding severely in Boro Bistro. I think that was passed on by the Metropolitan Police Service.

A. Correct.

Q. So those are the first communications about Boro Bistro

and injured people there, both from members of the public and the Metropolitan Police?
A. Yes.
Q. And {DC8209/27}, please. We can see by reference to the records for G330 that the first ambulance on the scene arrived at 22.16.
A. Correct.
Q. They went to the assistance of the casualties on the bridge.
A. Correct.
Q. And carrying on with the chronology, you, I think, are aware that the attackers were shot in Stoney Street just before 22.17?
A. Correct.
Q. Then may we go to {DC8209/36}.
A. Yes.
Q. And we can see an entry at 22.17, recording that the Metropolitan Police Service were treating the matter as a terrorist incident.
Just above halfway up, ES5, that's the channel you were referring to before --
A. Yes.
Q. -- "Treating as terrorist incident".
A. Yes.
Q. Now, we've heard at 22.17 Mr Rutherford, the advanced

paramedic practitioner, arrived at the scene and began moving north up Borough High Street triaging patients as he went.
A. Correct.
Q. For the lawyers, his arrival time is at {DC8209/27}.
May we look at a map for his route, please, {MP0004/1}. This is a map of the scene. The crashed van and Boro Bistro courtyard, which I think you're aware, is at the north-east end of this plan; do you see?
A. Yes.
Q. And we have heard from Mr Rutherford that he proceeded up Borough High Street from the London Bridge station end towards where the van had crashed, triaging people as he went, including outside Lobos, which you see marked?
A. Correct.
Q. Then 22.18, if we go to {DC8209/36}, we can see that near the bottom communication that the Metropolitan Police had declared a major incident and were now making a conference call to the LAS.
A. Correct.
Q. If we go to the transcript of that call, {DC5234/1}. Now, this is a call from the Metropolitan Police to the LAS, and if we go to page 2 {DC5234/2}, we can see

towards the top of the page a running CAD, 8810, reference is provided; do you see that?
A. Yes, I can.
Q. The information passed on that this was a declared major incident?
A. Yes.
Q. And also the information passed on that it had been declared Operation Plato?
A. That's correct.
Q. We know that that declaration had been made at 22.16.
A. Correct.
Q. Then {DC8209/37}, please, we can see the second entry up from the bottom, 22.19, does Mr Rutherford, the APP, make a major incident declaration at the scene or, rather, pass that on to the control room?
A. Indeed.
Q. According to his evidence, he'd actually made the declaration a couple of minutes earlier.
A. Correct.
Q. Also at 22.19 was a tri-conference call established with the Metropolitan Police Service and the fire brigade, or efforts made to start one?
A. Correct.
Q. So, pausing there, it's now just before 10.20, and the ambulance service has received calls about both injuries

on the bridge and the stabbing injuries, including stabbing injuries in the Boro Bistro area?
A. Correct.
Q. The incident has been declared a major incident and a number of staff are already on the scene.
A. Correct.
Q. It's been declared Plato and the conference call is being set up.
A. Correct.
Q. Now, we've heard that the police tactical firearms commander, Inspector Spittlehouse of the British Transport Police, arrived at the scene at around 22.20, and shortly afterwards set up a forward command post near the Bunch of Grapes pub; do you understand that to be right?
A. That is correct.
Q. Was he also joined in that area at, I think, 22.29, by a Metropolitan Police tactical firearms commander, Inspector Stumpo?
A. That is my understanding.
Q. And thereafter did Mr Spittlehouse take the role as commander for the warm zone and Mr Stumpo as commander for the hot zone?
A. That is correct, from what I've read.
Q. Looking at your timeline on page 19 of your statement,

was the tri-conference call formally established between the three services at 22.22 --
A. That is correct.
Q. After initial efforts? Then may we go to {DC8209/40}, it's 22.23, and about a third of the way down can we see a report from AP62, Mr Rutherford:
"... multiple patient stabbed and shots fired [query] by police."
A. Correct.
Q. And he makes a METHANE report, which we understand is a standard type of report made in a major incident?
A. He attempts that, sir, yes, on the information he has.
Q. Identifying a number of casualties and their locations, including outside Lobos?
A. Correct.
Q. By 22.23 we understand Mr Rutherford had reached Boro Bistro, the location we looked at on the map, and was then directed away from that area by armed police?
A. So he was up on London Bridge and was in the area of the steps that went down into the courtyard where he was asked to evacuate off the bridge with colleagues.
Q. We can bring up on screen a transcript from body-worn footage, {DC8318/1}. This is a transcript of body-worn footage of PC Norton. If we look at the entry from 21.23 immediately after the officers have been working

on Sara Zelenak recognise that she was clearly dead, Mr Edwards, who was in the same area as Mr Rutherford, said:
"There's not enough resources here, I'm going to have to tag her as dead."
And then a couple of entries down, Mr Edwards speaks to a colleague, Mr Carlson, and these words are said:
"I have P1s down there, we've got a dead here, there's another cardiac arrest down there."
Then Mr Carlson says:
"Can I suggest we need to RVP, OK. There are multiple deceased."
Then they are interrupted by people shouting "Move"?
A. Correct.
Q. Then over the page, please, {DC8318/2}, Mr Rutherford then runs to the top of the stone steps above Boro Bistro and shouts down the steps:
"Right, everybody, move! Come on, get out! Get out! Now, out now!"
And so on at the people down below, and then officers shouting "Out now" and "Go" and so on.
A. Correct.
Q. So is this right from your understanding: that Mr Rutherford and his colleagues had reached the area immediately above Boro Bistro, there was some

information suggesting that there were casualties down below, but as that started to be discussed, these staff members were directed away from the scene by armed officers?
A. Yes, and I believe that was shortly after AP62, Keir Rutherford, had reported hearing more gunfire.
Q. We know that there was second rounds of gunfire from the police in Stoney Street at around that time.
A. Correct.
Q. Is this also right: that Mr Rutherford moved away, and when doing so, became aware of some further casualties in a very severe condition outside Tito's Restaurant on London Bridge Street?
A. Correct.
Q. As a result, did he shortly after arrange triage and evacuation of those individuals?
A. Yes, he did.
Q. And in fact was it as a result of that triage and evacuation that emergency care could be provided to some people in a very grave state?
A. That is correct, sir.
Q. May we return to the chronology on your page 19. We can take that document off the screen.
22.24, was a red pager message sent to senior managers declaring a major incident at 22.24?

A. That is correct.
Q. And that, for example, is recorded in the log of Dr Wrigley, the gold medic commander?
A. Sir, Dr Wrigley was the gold medic on call that night, correct.
Q. For the lawyers, her log entry is {DC5037/2}, but we don't need that on screen.
Then may we go to {DC8209/41}, continuing with the chronology. 22.25, just above the middle of the page, can we see there a report was made at that time from Mr Rutherford, AP62, saying that the scene is not safe because multiple gunshots had been heard?
A. That's correct.
Q. And he was asked to get himself to safety.
A. Correct.
Q. Does that reflect what had just happened a minute or two previously as he had been directed away after those rounds of gunfire?
A. That's correct.
Q. Then 22.27, did Mr Beasley, the incident response officer, arrive on the scene near the Post Office to the south of the bridge?
A. That is correct, sir.
Q. For the lawyers, the record of his arrival time is {DC8209/27}, and in his log at {DC5029/3}, we've already

gone through those with him.

At the same time, 22.27, was a rendez-vous point established by the police?

A. There was an initial rendez-vous point at Elephant and Castle, that's correct, at that time, sir.

Q. So that was a first rendez-vous point, which was a little distance away from the area of the attack?

A. That is correct.

Q. Around 22.29, were a number of injured casualties on Borough High Street, including PC Marques and PC Guenigault, evacuated out of the area by police officers?

A. That is correct.

Q. So at this time some of those who had been injured were starting to be evacuated away from the area by the police?

A. Correct.

Q. 22.30, was the specialist operations centre of the London Ambulance Service, that special adjunct to your main control room, set up?

A. That's correct, it was opened and staff were removed from the main control room to take their positions within that special operations centre.

Q. Obviously that's a process that takes a little time at the start of a major incident, but it is necessary to

have that dedicated control room?

A. Yes, it is.

Q. May we now have on screen {DC8317/1}. This is another body-worn video transcript of PS Wood, and do we see at 21.30, which is a time, in fact, an hour out, real time 22.30, that Inspector Jackson of the police is shouting that he doesn't want anyone going into Borough Market.

A. That's correct.

Q. And PS Wood making a communication asking for information about where there are casualties so that they can get LAS staff to those casualties; do you see that?

A. Correct.

Q. So that's what's going on at 22.30, the police are evacuating some people from the area, but telling others that nobody is to go into Borough Market?

A. Yes, that -- it's a first indication that that area is deemed a hot zone by three of our staff being asked to evacuate off the bridge and then obviously Inspector Jackson saying that the Borough Market area itself is not safe.

Q. Take that off the screen.

22.32, was Adelaide House, an area at the north end of the bridge, nominated as the casualty clearing station?

A. So it was nominated as one of the casualty clearing stations, that's correct, sir.

Q. We've heard that over the time that followed, ambulances gathered there and triage arrangements were established?

A. That's correct, sir, after multiple RVPs were set up, which included one at close proximity to Adelaide House, north side of the bridge.

Q. Then if we can put on screen {DC8209/45}, five entries up from the bottom or so we can see an entry referring to the ES5 channel again, referring to a rendez-vous point at Park Street and Bridge Road.

A. Yes, so that's an additional RVP nominated.

Q. And that's a rendez-vous point which was rather closer to the scene than the Elephant and Castle one?

A. Yes, this was by Southwark -- in proximity to Southwark Police Station.

THE CHIEF CORONER: And that's 22.35.

MR HOUGH: 22.35, sorry, yes.

Around the same time we understand that Mr Beasley, who was still in the area of the Post Office to the south of the bridge, was informed of an unattended victim under the bridge. If we can look at some body-worn transcript in relation to that, please, {DC8317/2}. Real time 22.34, can we see PS Wood approaching Mr Beasley, referring to "two victims just

down there who have been stabbed", Mr Beasley asks if it's safe to come up. Mr Wood says:

"Yeah, as far as ... it's all in Borough Market. If they come straight up there. Stop at the 1st police car. There's two injured parties there. And you've got another one under the bridge."

So he seems to be referring to some injured people on the road and then another one in an unspecified location under the bridge.

A. It would appear so, sir.

Q. And then a further communication from PS Wood over his radio referring to victims without London Ambulance Service under London Bridge by Borough Market and at the south side of London Bridge.

A. Correct.

Q. So Mr Beasley at that point is informed of an unattended victim under the bridge but without much detail about location?

A. That's correct. I mean, there was -- Mr Beasley was getting multiple bits of information, obviously coming over the radio in relation to RVPs, in relation to information he was getting from members of the public and then obviously from colleagues from other emergency services.

Q. We can move forward a few minutes to 22.41 and look at

{DC8209/48}, an entry about a third of the way down from Mr Beasley, IR51:

"Info from police incident commander -- containment established for Borough Market area -- patients believed there but not approved to move forward yet."

A. That's correct.

Q. Was that Mr Beasley reporting in that some police containment was being established for the area of Borough Market, but he wasn't able to move in?

A. That's correct, it hadn't been deemed safe to move in.

Q. And that there were some patients who were believed to be in that area?

A. That is correct.

Q. Meanwhile, we know over this period evacuations of the Borough Market area by police officers were continuing. We, for example, heard that Gavin Stacey was evacuated from the Market Porter at 22.38; were you aware of that?

A. Sir, I was aware of the patients that were being evacuated by first response officers on the scene before the Plato declaration.

Q. From 22.45 we've heard that police began bringing casualties up from the Boro Bistro courtyard with James McMullan evacuated at 22.46, Sébastien Bélanger at 22.47, Marine Vincent and Marie Drago at 22.50.

Were you aware, have you become aware, of those

casualties being evacuated from the Boro Bistro courtyard at the bottom of those stone steps from around that time?

A. I know that to be the case now, sir.

Q. Continuing with the chronology, if we can go to page 51 of this same document, {DC8209/51}, the entry just above the middle. We can see here an entry in the log referring to multiple patients being evacuated from London Bridge to a rendez-vous point outside Adelaide House. Does that reflect the standing instruction that patients were to be evacuated to Adelaide House at the north end of the bridge?

A. At that time, yes, that's correct, sir.

Q. That's 22.49. We've heard that a number of those who were evacuated from the area were sent to that point at the north end of the bridge?

A. They were.

Q. And was that because that point, at the north end of the bridge, had been designated as an appropriate, safe but reasonably close area from which to clear casualties?

A. It was dedicated a cold zone and in proximity to the incident.

Q. And the log reports that the LAS is intending to useless resources to evacuate those on the bridge to the rendez-vous point at the north end?

A. Yes, and indeed in actual fact what happened, there were patients that were evacuated to the casualty clearing station north of the bridge, and as Mr Beasley received more officers, they set up a casualty clearing station at St Thomas Street south side of the bridge and patients were also evacuated and treated and removed from that casualty clearing station to hospital.

Q. At 22.53 did Mr Rainey, the bronze commander, get to the scene?

A. So he did. He was directed to the rendez-vous point north, which was King William Street near Adelaide House.

Q. If we go to {WS1370/37}, please. Can we see that he records in his log being on the scene at 22.53, and liaising with a colleague about the location of the tactical firearms commander or commanders?

A. Yes, so he was liaising with the bronze medic loggist who referred to the log to give the information to Marc Rainey on the location of the FCP.

Q. Can we then see 10 minutes later he located to a rendez-vous point at St Thomas Street?

A. That is correct.

Q. That's the Bunch of Grapes pub, I think, that area?

A. That area.

Q. Continuing with the chronology and your timeline at

page 20, did the operational gold commander arrive at the London Ambulance Service headquarters at 22.55 to take up strategic command?

A. That is correct.

Q. And was a vehicle called the mass casualty equipment vehicle dispatched at 23.01?

A. Correct.

Q. What sort of equipment would that have had on it?

A. Triage, heavy dressings, stretchers, carry sheets. So simple equipment, but equipment that would be required to move large numbers of casualties.

Q. At 23.12 we have what I think is the first evidence of the hot zone area being designated. Could we put on screen {DC8319/1}, 23.12, a body-worn video transcript, refers to Inspector Stumpo making a transmission, or being heard over a transmission saying:

"Can I just make it clear, our hot zone to be Stoney Street, up to Winchester Walk, round Montague Close [some inaudible words] and Borough High Street ..."

So that is indicating, is it, that the covered area of Borough Market and a number of the surrounding streets including Borough High Street were to be treated as a hot zone?

A. That is correct, despite the previous messages, yes.

Q. Continuing with the chronology, 23.16, we understand

that explosives officers arrived in Stoney Street and checked the attackers, confirming at that stage that there were no viable explosive devices on them?
A. On the attackers, yes, that's correct.
Q. On the attackers themselves. We'll later hear about the van being considered a possible explosive threat?
A. Yes.
Q. Then 23.25, if we look at Mr Rainey's log again, {WS1370/37}, if we look at the entry at 23.25 does Mr Rainey record that he is now with the tactical firearms commander, that he has had a briefing, that Borough Market is a hot zone, the south side of London Bridge and Borough High Street a warm zone, Stoney Street, Winchester Walk, Cathedral Street, hot zones.
A. That's correct.
Q. He is reflecting there that the Borough Market area is being treated as a hot zone, including the streets immediately around it, but Borough High Street and the south side of London Bridge is a warm zone?
A. That's correct.
Q. Now, also at 23.25, returning to your timeline, at that time were pager messages sent to a number of dedicated hospitals which would be receiving patients?
A. That's correct.

Q. So while we have Mr Rainey at the Bunch of Grapes pub liaising about what are the hot and warm zones for staff to be sent into or avoid, at the same time, work is going on to clear casualties from the north end of the bridge to the various hospitals?
A. Yes, and officers were dispatched to act as liaison officers at each of those hospitals, sir.
Q. And centrally, messages are being sent out to the hospitals to assist in that clearing process?
A. Yes, sir, the major incident declaration would have been given to the hospitals as soon as the major incident was declared. This pager message was to dispatch more officers to act as liaison officers at each of those hospitals that were receiving patients from this incident.
Q. Returning to Mr Rainey's log, can we see that at 23.31 he confirms Plato resources were available on the scene. What's the meaning of that reference?
A. So that's the dedicated TRU staff and the HART teams ready to form up to make the ambulance intervention teams.
Q. So 23.31 he has those teams, or at least some of those teams, available to him?
A. He does.
Q. Then at 23.37, do we see that he records a discussion

with the tactical firearms commander about options, including consideration for a warm zone recce, and then he refers to the presence of some fatal casualties in Borough High Street.
A. Yes, so that was Mr Rainey discussing deployment of ambulance intervention teams to do a reconnaissance mission for patients within the warm zone.
Q. That's what's being discussed at that stage, potentially sending some teams forward in that way?
A. That's correct.
Q. And then {DC8209/61}. I'm sorry to keep skipping around but this is, I am afraid, the only way to go through the chronology properly.
A. Okay.
Q. Two-thirds of the way down the page, we can see a reference to Borough Market still being considered a hot zone and Borough High Street being a warm zone?
A. That's correct.
Q. So that that information which Mr Rainey had recorded about the designated hot zone and warm zone comes through to the control room at 23.37?
A. That's correct.
Q. If you go back to his log now, {WS1370/37}, at 23.46, do we see that he records a TRU, tactical response unit, staff arriving from the north rendez-vous point, teams

being made up and told to stand by?
A. Correct.
Q. Does that suggest plans being made to divide teams before sending them into warm zones?
A. Correct.
Q. That was 23.46.
A. Correct.
Q. Then is this right: at 23.50, shortly after that, there was a report of a potential IED in the van?
A. So there was at that time, although there was previous information that -- in evidence Keir Rutherford mentioned around the possibility of an explosive device in the van, but at that time, sir, it was discussed and, I believe explosive officers were asked to attend the van at that time.
Q. You can see Mr Rainey records that in his log at 23.50, the consideration that fuel cans in the van might be a threat.
A. Yes, sir.
Q. Then 23.54, do we see he records that the van has been made safe?
A. Correct.
Q. Then over the page to page 38 of the same log {WS1370/38}, do we see at 23.56 Mr Rainey recording a discussion about getting clinical staff into the

market area because there's some concern that patients may be inside?
A. Sir, that was a discussion exactly in that regard, sir. There was concern that Mr Rainey wanted to commit teams in for live patients and it was still a hot zone, but concerns were raised around the amount of time taken to commit.
Q. Just to be clear, Mr Rainey, according to this log, isn't sitting back because an area is designated a hot zone: he is expressing his desire to get staff in as soon as he can?
A. Yes, correct.
Q. And just to be clear also, that at this stage it wasn't known, was it, whether all casualties had been extricated from the area of Borough Market itself, obviously a much larger area than the Boro Bistro courtyard?
A. Yes, so it was all -- it was all connected as one large area with multiple establishments in that area, so the concerns were that there was a possibility that there were patients that still needed to be treated within that area that weren't deceased.
Q. If we go to {WS0923/4}, please. Now, these are notes by Inspector Stumpo, one of the police tactical firearms commanders. Can we see he makes a record at 23.58:

"140 MOP [members of the public] evacuated out of the west side of Borough Market."
A. Yes, sir.
Q. So at this time active evacuation of substantial numbers of people from Borough Market was going on?
A. Yes, sir.
Q. And back to Mr Rainey's log, please, {WS1370/38}, at 00.01, so just after midnight, into 4 June, can we see that ambulance intervention teams had been designated, including those of the names in the teams?
A. That is correct.
Q. A total of seven teams, the fourth of which includes Gail Collison from whom we heard?
A. Correct.
Q. And then can we see at 00.03, Mr Rainey records the first team, team 1, being sent into Borough Market from Borough High Street?
A. Yes, so if -- within that log you can actually see the joint decision model which describes the scenarios that they were talking about and the decisions to be made, and Mr Rainey, despite Borough Market being a hot zone, still declared as a hot zone, he discussed with the ambulance intervention teams that despite being a hot zone based off intelligence would they be prepared to enter in as part of these AITs, and it was that

discussion then that commenced committal of teams into the hot zone.
Q. I'll ask you about that a little more later.
00.20, team 2 is put on standby?
A. Correct.
Q. While team 1, as we can see from the preceding entries, was clearing a number of other areas and checking that they didn't have casualties?
A. Correct.
Q. Then 00.25, there's a reference to team 2 not being committed because of a blue-on-blue risk. What do you understand that decision to reflect?
A. So there were multiple reports around that time of still outstanding assailants, one armed with an assault rifle and blue-on-blue was the danger that ambulance intervention teams could be caught in crossfire between the assailants and officers that were in there to try to neutralise that threat.
Q. And if we look at page 39 of the same log, please, and rotate it so it's the right way up, {WS1370/39}, can we see that over the period that follows between 12.30 and going towards 1.00, a series of further teams were deployed?
A. They were.
Q. 00.40, can we see that team 1 reports that two x-rays,

or attackers, were deceased --
A. Correct.
Q. -- outside the Wheatsheaf public house? And then 00.52, on the right-hand side of the page, can we see Mr Rainey reports that team 4 was on standby?
A. Correct.
Q. Then page 40, please, the next page of the log {WS1370/40}, at 01.05, do we see that that team, Ms Collison's team, was tasked to crashed van and the surrounding area?
A. Correct.
Q. So while other teams had been tasked to specific areas, this team was being tasked to the crashed van and the area immediately surrounding it.
A. Correct.
Q. Then 01.12 you see a report from team 4 of an adult female deceased outside the Mudlark public house.
A. Correct.
Q. We understand that to be Kirsty Boden?
A. We do.
Q. Then 01.13, this entry, refers to discussion with the tactical firearms commander about Southwark Cathedral and a lead assault team being sent to use explosives as a method of entry to search the cathedral, which was still a hot zone?

A. Yes, it was part of Borough Market, which was still deemed a hot zone, but yes, there was an intervention team sent into Southwark Cathedral.
Q. Is it your understanding that the area of Boro Bistro, which of course was right next to the cathedral, was also a hot zone at this point?
A. That's correct.
Q. So it was at this point in time that team 4 was going through that area of Boro Bistro, still a hot zone, looking to identify any casualties?
A. That's correct.
Q. We can take that off screen now.
Meanwhile, had a further casualty clearing station been established at Liverpool Street?
A. It had.
Q. And a survivor reception centre at the Andaz hotel?
A. That is correct, for P3 patients.
Q. Were casualty figures reported, then, over the time that followed from the various casualty clearing stations?
A. That is correct.
Q. Going back to your timeline on page 22, at 01.46 was the gold medic, Dr Wrigley, told that both casualty clearing stations were now clear of patients?
A. That is correct.
Q. And was it from 02.10 that teams at the scene began to

be stood down?
A. That is correct.
Q. Was the incident reduced formally from a major incident to a significant one at 02.50?
A. That is correct.
Q. And then finally stood down as a significant incident at 04.51?
A. Correct.
Q. May we look, please, at {WS5040/33}. You told us before that the number of ambulances and other staff deployed to the scene in a major incident was an initial minimum. Do we see here a summary of the resources which were in fact deployed to the attack area?
A. That is correct.
Q. Including 20 double-crewed ambulances, 22 solo responders, 7 operational commanders and various other specialist staff?
A. Correct.
Q. And {WS5040/38}, do we see here a summary of the various 999 calls that were made, reflecting a diversity of reference to road traffic collision, stabbing injuries and other medical incidents?
A. Correct.
MR HOUGH: Thank you very much. I've now dealt with the chronology. Would that be a convenient time before

moving on?
THE CHIEF CORONER: We'll break there, Mr Hough, and we will sit again in 15 minutes' time.
(11.29 am)
(A short break)
(11.48 am)
MR HOUGH: Mr Woodrow, now that we have dealt with the chronology in detail what I propose to do is to go through a number of issues and ask for your assistance with them, broadly following the order in which they are addressed in your third witness statement which you prepared in response to questions from the representatives of the families.
So the first issue concerns calls coming in and when it was appreciated that there were casualties in Boro Bistro courtyard. First of all, before the London Bridge attack began, what was the level of emergency call traffic that day?
A. So it was a Saturday and it was a busy Saturday for us. Up until the point of this incident starting to unfold, the control room had taken 4,400 emergency calls that day, which is significantly up on what we would expect for that time of day.
Q. We've seen that from 22.07 multiple calls were coming in, the first referring to a road traffic collision, but

shortly afterwards some referring to stabbings, yes?
A. Yes, there were numerous calls with numerous descriptions of events.
Q. Now, where, as in a case like this, you have multiple calls coming in about the same incident, is there a standard practice to link in subsequent calls and create a common or running CAD log?
A. Yes, that's a common practice across all of the emergency services where we're getting large numbers of calls, essentially in the same geographical area. We try to link those calls to ensure that we're not sending multiple resources uncontrolled into different calls. We try to link the information to ensure that we've got a working CAD which is describing events.
So, for an example, in routine business where you might see a simple two-car road traffic collision, because of mobile phone technology now you might get 20 calls to that road traffic collision and obviously what we try to do is to link as much of that information to say that it's a duplicate incident and send resource to that one particular incident if it can be identified that they're linked.
Q. Thank you.
Would the location of casualties be entered on to that running log as a result of the emergency calls

made?
A. So where we could link locations they would be. It's not automatically the case that the exact location of those incidents would be transferred across to the running log. That's a process of having to analyse information and trying to link those calls into the -- what we would describe as the running CAD.
Q. Now, we've seen that the LAS were informed of potential casualties in Boro Bistro at 22.16.
A. Yes.
Q. As we've heard, Mr Rutherford, Mr Edwards and Mr Carlson arrived on the scene in the following minutes, moving north up Borough High Street, reaching the area above Boro Bistro at 22.23. As we've heard, Mr Carlson saw a casualty receiving care in Boro Bistro at about 22.23, and we've heard from his evidence that he told the officer in the courtyard that medical assistance would be with him soon.
A. That's what I've read, yes.
Q. Could we look, please, at {DC8209/40}. We can see here on the running log HT59, which is Mr Carlson's call sign, reporting three patients in cardiac arrest. That's at 22.24.
A. Correct.
Q. Is it your understanding that those would have been

patients in the Boro Bistro area?
A. I think there were a number of patients, not all in the Boro Bistro area, but a number of patients that Mr Carlson had come across.
Q. You have told us that it was at that point that they were directed away from the scene.
A. By armed police, yes, that's correct.
Q. Yes. And that they then continued the work of triage and evacuation elsewhere?
A. Correct.
Q. Meanwhile, as you've told us, further resources were being sent to rendez-vous points at first of all Elephant and Castle, and then the second nominated rendez-vous point of Park Street and Bridge Road?
A. Correct.
Q. And we know that Mr Beasley was closer to the scene at the Post Office from 22.27?
A. Correct.
Q. So that's the context.
Given that we have reports of casualties in the Boro Bistro courtyard, and Mr Carlson aware that some of them were actually being worked on by police officers, could any more have been done to ensure that those officers, those people in the courtyard, were told that London Ambulance Service staff couldn't get to them?

A. So there are a number of ways that that information could have got them. There was information that rendez-vous points, once Plato had been declared, the rendez-vous points were not set by the London Ambulance Service, they were provided to us for the RVPs by the Metropolitan Police Service.
There clearly was interactions with emergency service colleagues on the ground both north side and south side, and also we have talked about ES5 being a command channel which is open to all three services.
So there are a number of options where questions can be asked, but clearly there was communication issues in relation to information from people that were actually below street level in terms of understanding where resource is. I accept that.
Q. So specifically at 22.23 some staff, three members of staff, were in an area and at least one or two of them became aware that there were casualties in the Boro Bistro area actively being worked on, requiring LAS support if possible?
A. Clearly.
Q. Yet even as late as 22.45, 22.46, 22.47, nobody had got the message to those people in the courtyard that ambulance staff couldn't get to them for any reason?
A. Yes, and I think this needs -- it needs to -- it's

important that we put some context around this because there were multiple locations within the general area of SE1. So, as I've described earlier in my evidence, we received 134 calls between 22.07, and there were numerous interactions between police services and the LAS on CAD. So we had to take it into the context of what we actually had. We had large numbers of calls not just to that particular area of Borough Market but there were multiple locations within that overall facility that were describing very similar things. We had patients that were severely injured in lots of locations in that area.
So I'm trying to say in the context of what was a very chaotic scene, where there was a lot of conflicting information, there were clearly issues in terms of the environment that people were working in. It has created some confusion as to where resources were, where exactly patients were and how we could get to them.
Q. From 22.27 onwards, we've heard from Mr Beasley that ambulances started gathering to the south; that there were ambulance staff 100 yards or less from the location of Boro Bistro. Or it may be a bit more than 100 yards, but a very short distance to the south.
A. So Mr Beasley in his role as bronze sector was aware

that there were patients presenting in multiple areas south of the bridge and he makes a request to our emergency operations centre that ambulances need to come forward to him at his location where he is, St Thomas Street; that he is requesting additional equipment, such as orthopaedic stretchers and carry sheets, so that people could be evacuated. So it was Mr Beasley that was calling those ambulances forward for patients that were presenting to him and colleagues in that area south of the bridge.

Q. I think we can see Mr Beasley's report, if we put on screen {DC8321/1}. Is this a transcript recently made of Airwave communication with the emergency operations centre?

A. That's correct.

Q. And if we look at the third entry in the transcript, can we see Mr Beasley reporting to the emergency operations centre that he had been approached by a firearms team and adding:

"... we need LAS down the staircase I believe, just on the south side, I believe it's still unsafe though, active shooters."

Yes?

A. That's correct.

Q. And then do we see the emergency operations centre

reports:

"Yeah roger that so the current situation we have been told is that it's being evacuated south side and borough road ... and everyone to be moving north, so if it's not safe ... I probably won't send anyone into you yet, but get them to [the] RVP ..."

Do you see that?

A. Yes.

Q. And then Mr Beasley reporting his location at St Thomas Street being covered by a firearms team, as he described to us.

A. Yes.

Q. So that communication, I think, was made at or shortly after 22.30; is that right?

A. Correct.

Q. And that tallies with a body-worn video transcript from Mr Woods at 22.34 which I think we looked at?

A. Correct.

Q. Now that suggests that Mr Beasley was aware of some casualties in an area we know to be the courtyard area of Boro Bistro; is that right?

A. So I think he was aware of casualties in that general area, not that specific area, but Mr Beasley was subject to lots of information being passed to him, given the nature of the incident and what was presented to

Mr Beasley when he arrived south side of the bridge.

Q. Given that he had casualties in a place which wasn't safe, as he understood it, as far as you know, was there anything more that he or the emergency operations centre could do to get messages to people in that area via, for example, police officers to say: ambulance staff are nearby, they can't get to you, can you get out to them?

A. So I believe in the context of the night and what was happening at that particular time, there was real issues in terms of bandwidth with the amount of information that was coming in. There were multiple communications going on between EOC, the tri-service conference call was live and actually ran for the duration of this incident, so there were multiple discussions coming across, but clearly there was this issue around a very wide area, lots of information, and actually we were trying to rationalise that information.

Borough Market and Borough High Street was one generic area. You have to take into the context that some of the responders that went there would not have had an intimate knowledge of that area, they wouldn't know individual locations within that general area, and obviously the FCP had been established at 22.20 and there were conversations. So contextually, you know -- and I've reflected on this, how can we -- this is

an area about how can we, despite all the communications channels that we've had that we didn't have previously, the use of ES5, the tri-service call, how do we better manage as partner organisations, I think, you know, we've heard in evidence that the Metropolitan Police Service had 400 CADs to this with lots of different information. It's how can we link that information up in a more timely way to be able to get better situational awareness of the scene that we're dealing with.

Q. As we've heard, two groups of people in the LAS were aware of casualties potentially requiring urgent treatment in the general area of the Boro Bistro courtyard, even if they didn't understand the precise topography. That was Mr Rutherford, Mr Edwards and Mr Carlson, and then it was Mr Beasley and anyone with him.

Neither of those groups got the message to the people in the courtyard that ambulance staff couldn't get to them. Now, as far as you can see, looking at what happened, was that a failure of the systems for communication, was it a failure of the judgments of individuals, admittedly under great pressure, or was it just one of those things that could happen again tomorrow?

A. So I wouldn't describe it as a failure per se. I think what we had is we had a scene that was incredibly chaotic, there were people that were fearing for their own safety, members of the public, and despite the patients that we had within the Boro Bistro area, we had a number of patients that were severely injured in lots of other areas.

So despite what was happening in that general area, there was, you know, people doing really good work, trying to treat critically ill patients in other parts of that vicinity. It was a very dynamic situation. The information that we were receiving around firearms being discharged, IEDs, improvised explosive devices, all of that information was coming in, and that created in that first early development of that incident, it hindered our ability jointly to get full situational awareness on that situation.

Q. Is there anything that can be done to stop that happening again?

A. So obviously I have personally reflected long and hard over this issue. It is of regret that there is any loss of life when we're exposed to such incidents.

It is a very difficult issue, because I think we have -- we have a certain level of resource within our control rooms that's put there to manage routine

business, and we don't have an army of additional resource that we can call on in the first 20 minutes of a major incident being declared: we have to try to manage in those early stages of the incident with the staff that we have on duty and then we put into place, as you can clearly see, through paging and through a number of other systems, to recall people back to duty.

But in the very early stages of these incidents, and I was an ambulance incident commander at 7/7, they really are chaotic and it's just the fact that we do not have an army of people there to be able to filter all of that information, and that's where I think we as an organisation, and I think with partner agencies, need to understand how we can actually get that information, get a common understanding and get some coordination earlier on in an incident and obviously we as an organisation, along with partner agencies, as a result of this process and other debriefs, will clearly take that on board and seek to see how we can improve that, but it's not an easy position and in terms of the response on the night, by the time all this happened, we had relatively few resources that had actually managed to arrive on the scene because of a Plato declaration because they were all being pushed

into RVPs as part of that national guidance for the management of an MTFA.

Q. But the problem here wasn't a lack of manpower on the scene: your staff on the scene knew, in varying degrees of specificity, where the injured people were, but for reasons you've explained, they understood that to be a hot zone where they couldn't go and were being directed away by firearms officers.

A. Yes.

Q. The problem surely wasn't one of lack of people, but not getting the information through the police to those in the courtyard.

Now, is there a way that -- is there any way that that kind of problem can be avoided in future, of people in inaccessible locations being told quickly of the limited access to them so that if they can be moved, they are moved to critical care?

A. So I think, you know, we will have to look at whether we, despite all of the additional things that we've put into place to try to improve communications across emergency services, quite clearly there were issues around communicating pieces of information on that night.

Whether we need to consider -- the principles of JESIP are that there is coordination there from an early

stage. I've described that the way major incidents are managed, it takes time to get those mechanisms in place, it takes time to get personnel from all over London in to focus on an incident.

So whether it is that we have to describe a way of physically having assets 24/7 located together where actually within one space there is visibility of everyone's resources, the different communication channels that are coming through from our individual CADs, whether we need to seriously think about whether we need to locate those people not on an on-call to duty and let's bring people in, but to have them there 24/7 would be something that we need to consider.

Q. So there might, for example, be a value in having LAS operators permanently stationed in the Metropolitan Police's special operations room?

A. Correct, with London Fire Brigade colleagues, would be worth considering.

Q. So, for example, in a situation like this, after a communication is made by someone like Mr Beasley, saying that there are casualties he can't get to, that person in the control room can say to police colleagues right next to them "We've got casualties we can't reach, can word be got to them so that they can be moved if necessary".

A. So I think there is that physical communication that can happen, but I also think in terms of identifying physical assets and the whereabouts of those assets, you know, that could be explored where you've got the visibility of all the assets on the scene in one place as opposed to across the three separate organisations.
Q. Could that include more use of technology to give precise locations of each service's assess so that they can be seen in a single place and a single operations room?
A. Yes, so certainly we've been talking about the use of drone technology to provide better situational awareness of where casualties are and coordination of that, those scenes.
Q. And what about the use of -- potentially of GPS technology to identify the location of different ambulances and paramedics so that the police know where they all are at any one time?
A. So there is an ability to do that in a small scale with the current Airwave radio programme with the new emergency services network radio programme, then clearly that is a feature that we would be able to use, and that is in -- the process of bringing in that system is underway.
THE CHIEF CORONER: Can I -- obviously one can understand

how GPS might work, that would give you the location of a device. So, for example, if someone has a radio, you would know where that device was.
A. Yes, sir.
THE CHIEF CORONER: But in terms of, supposing you've got somebody who doesn't have a radio, it's become detached whilst they are attending to someone. You may not know where they are if it's reliant upon the technology.
A. Yes, so I think radio technology is not the answer in isolation, but clearly where you can use GPS positioning through radios, that would be an added resilience to the identifying of resources.
MR HOUGH: Next, Mr Rainey, please, and the steps he took. We've seen that he arrived at the scene at 23.25, and he became aware very shortly afterwards that there may be people who had died in the Boro Bistro area; is that right?
A. So he recalls being told there were deceased people in that general area, yes.
Q. From 23.37 there were discussions about committing teams into the area where the attack had taken place because Borough High Street itself was by that stage a warm zone?
A. So I believe -- well, officially it was declared a warm zone, the reality is Borough High Street was a warm zone

for the duration of that incident until the incident was stood down, because of the patients that were presenting in that area and its proximity to the hot zone, which was the Borough Market area. So, yes.
Q. The AIT teams were committed over a period, as we've seen, between just after midnight and about 1.00 am.
A. Yes, so the decision to commit teams is not made by the LAS in isolation: it's the three commanders are making those decisions (a) the declaration of hot zones and warm zones is led by the police service in those circumstances, so it's not set by either the fire brigade or the London Ambulance Service. The decision to commit is based on a joint assessment and a joint risk analysis based on the latest intelligence available, and a decision is reached using the joint decision model, as Marc Rainey evidenced in his log, the outcomes of those discussions and the outcome in relation to the decision that's taken.
Q. Now, the teams were sent in to a number of areas from about midnight which were hot zones, or part hot zones?
A. They were hot zones.
Q. How did it happen that against the protocols, against the textbooks, AITs were sent in to hot zones?
A. So the decision was initiated by -- or the discussion was initiated by Marc Rainey. You can see in

Marc Rainey's log that just before midnight, Marc Rainey is raising concerns about the length of time to commit teams into areas where he believed there might be live casualties.
There was a discussion that took place and Marc Rainey discussed with the individual AITs whether they would be willing to volunteer to commit to the hot zone under the protection of armed police, so they were informed volunteers to deploy into the hot zone, which as we know under the joint operating procedures is not normal standard practice.
Q. So before they started going in, just after midnight, Mr Rainey had to speak to all those teams, explain the situation to them, and ask whether they were prepared to volunteer to go into the hot zones?
A. Yes.
Q. Did they all agree to?
A. They did.
Q. So all those LAS staff which we saw -- who we saw listed in the log, they all agreed, and reasonably quickly, to go into danger zones?
A. Well, they were asked before they were deployed, because in evidence there were a number of teams that were created and then there were decisions about where those teams would be deployed, so it wasn't a case of just

having a mass group there and asking whether they would volunteer. They were asked around what they were going to be deployed into, what the risk assessment was, and they were each individually as teams asked whether they would be willing to volunteer into -- commit the hot zone?
Q. They all agreed?
A. They did.
Q. And then over the period, as I've said, from midnight until 1.00 am, the teams were sent in to various places in stages; is that right?
A. They were, and the reason that was happening is that was still a very dynamic situation because there were a number of reports that were coming in while teams were committed. So one of them was around an active shooter still being in the area. There were reports of shots being fired in a different part of Southwark. There was the Southwark Cathedral issue that was being discussed and we've heard from evidence previously this morning that military teams were deployed in to do a sweep of that area.
So whilst the teams were being committed into the hot zone, there was lots of discussions round, that was still very dynamic and that was why the zone was hot. It was deemed to be unsafe.

Q. So part of the decision about the timing of sending teams into individual areas was how dangerous or potentially dangerous they were considered to be?
A. Yes, and that was very dynamic in terms of information that was coming through.
Q. Was that decision also informed by a view of whether there might be living casualties in the various areas?
A. Yes, so that's what we prioritised, where we thought the areas where living casualties would be, and the information that Marc Rainey had is that the area you've described, the courtyard area, had deceased patients in and it was obviously proximal to Southwark Cathedral.
Q. Now, we know that the area of Borough Market itself is large --
A. Yes.
Q. -- and was still being evacuated very late in the day, as we saw from that note of Mr Stumpo's?
A. Correct.
Q. We know that the Boro Bistro courtyard had been very substantially evacuated before 11.00 pm.
A. Correct.
Q. And that by this point there weren't any living casualties there.
A. That was the understanding of Mr Rainey.
Q. And that understanding is right, as far as you're

concerned, isn't it?
A. Yes.
Q. So is the priority decisions, the set of priority decisions, which involved sending staff into Borough Market first, and to Borough Market rather later, a set of decisions that you, looking back on it, would agree with and say were justified?
A. I would.
Q. So is the time taken to reach casualties in a hot zone in this situation a function of first of all an assessment of how dangerous the different areas were and, secondly, a function of an assessment of how much good could be done to help living casualties?
A. Well, given the fact that actually the joint operating principles say that you do not deploy into the hot zone at all with ambulance intervention teams, it was a decision that was there to try to preserve life as much as possible.
Q. May I move on, now, to debriefs and lessons to be learned, and you deal with these in your learning statement. After the attack, was material gathered from various sources to inform London Ambulance Service and enable lessons to be learned?
A. Yes, it was.
Q. Were commanders' logbooks reviewed?

A. They were.
Q. Were hot debriefs carried out immediately after the incident in which staff were asked for their instant reflections?
A. Yes, so the hot debrief happens immediately after the incident is stood down, so on that evening personnel that were involved in that incident were directed to our station in Deptford, New Cross Road, and that's where the hot debriefs were undertaken on that night.
Q. Can we look at {DC5058/1}, and we see these were recorded in a log of notes.
A. That's correct.
Q. Page 2, please {DC5058/2}. Can we see, for example, that staff with various call signs gave records of what they had done and their immediate reflections?
A. Yes.
Q. So, for example, G330, the first ambulance on scene, the staff from that ambulance gave their reflections of what they had seen and those were all noted down?
A. Correct.
Q. We can take that off the screen. Then in the early part of July 2017 were structured or cold debriefs carried out for various staff?
A. They were.
Q. I think they were separate debriefs for, first of all,

control room staff, frontline staff, specialist staff and so on?
A. Correct.
Q. We can look at an example of one of those, {DC5054/1}. Can we see notes of the cold debrief of operations staff with the comments of the various individuals deployed to the scene? Do you see that?
A. Yes.
Q. And then {DC5054/5}, do we see that a whole series of points emerging from that debrief are recorded, including issues about training, issues about adequacy of equipment, positive and negative points?
A. Correct.
Q. Then can we have {DC5049/1} on screen, please. Was a debrief report produced as a result of this debrief process?
A. Correct.
Q. And at {DC5049/5}, please, do we see there that it summarised the response, including the resources deployed to the scene, which you have summarised already?
A. Correct.
Q. Then page 6, please {DC5049/6}, a list of the numbers of casualties, a total of 45 casualties of varying priorities conveyed to treatment centres?

A. Correct.
Q. And the treatment centres set out there.
Then the recommendations begin at {DC5049/8}. Is it right that they include a wide range of topics, including, as we see here, the first recommendation concerning training for call taking and automatic dispatch of assets?
A. Correct.
Q. May I look at a number of these recommendations which are, perhaps, particularly pertinent. Page 10, please {DC5049/10}, recommendation 10, do we see here that there's a recommendation for reiterating reporting lines during major incidents?
A. Correct.
Q. And does that refer to, in the text underneath, concerns having been expressed on various matters including a lack of clarity on hot, warm and cold zones in the early stages of an incident?
A. Correct.
Q. Was it the assessment of the debrief process that there was a lack of clarity about where the various zones were, at least in the early stages?
A. There was, and staff, as you will have heard in evidence, would have dictated, as would be normal practice in the very early instance of an incident, on

where those zones were before they were formalised.
But as you can see through the debrief process, there was a fair amount of confusion around the safety of the overall scene in the early stages of the incident.
Q. Then {DC5049/11}, please, recommendation 13. Do we see there a recommendation for a technical upgrade to allow radio handsets to be tracked?
A. That's correct.
Q. Did that reflect any concern about locating staff at the scene with precision so that those staff could be directed and others be told where they were?
A. So there were two areas for consideration there, certainly that was one of them, but also the ability for us to, within what was a very hostile environment, was to be able to track members of staff and where they were within the incident ground.
Q. And page 13, please {DC5049/13}, recommendation 20, there's a recommendation about the use of immediate casualty evacuation methods to remove patients and the public from immediate danger, and the text refers to concerns about confusion over rendez-vous points and conflicting instructions at the scene; do you see that?
A. Yes, I can.
Q. And the text also refers to staff having been told to

avoid hot zones but there being a lack of clarity about the routes to be used?
A. Yes, because the declaration of those zones was very dynamic and then obviously staff have concerns that they were, from rendez-vous points, being pulled forward into potential hot zones, and they were some of the issues the crews on the night raised.
Q. So does this recommendation reflect concerns in the debrief process about the challenges of removing both patients and members of the public from areas of danger?
A. Correct.
Q. {DC5049/14}, please, recommendations 22 and 23 involve action cards and live exercises being suggested because of confusion caused due to the scene being run as two separate sectors; do you see that?
A. Yes, I can.
Q. And it refers to a degree of sector isolation between the two sectors by which the scene was being managed?
A. Yes.
Q. Was that another difficulty raised by the debrief process which you were trying to address by those changes that are identified there?
A. That's correct.
Q. Then {DC5049/17}, please, recommendations 33 and 34 concern specialist staff, including HART and TRU staff,

and do we see that the concerns refer to confusion in directing those staff to rendez-vous points and to difficulties in identifying the forward control point?
A. Correct.
Q. Were those other problems raised in the course of the debrief process?
A. They were.
Q. Is a degree of confusion in the finding of rendez-vous points and the forward control point a common feature of incidents of this kind?
A. So I think it needs to be put into the context that whilst we're talking about the declaration of an Operation Plato incident, that's the first time Plato has been declared for what was a marauding terrorist attack in London, and as I've said in the very early stages, there was literally hundreds of messages coming in describing different things.

So RVPs were being changed as a matter of course, and that's for good reason, but also the identification of hot and warm zones which, you know, it's very difficult when you're trying to allocate resource early into the scene and try to get -- I keep referring to situational awareness and situational awareness is difficult within a routine major incident that's got one static site. Where we had this, which had multiple

locations with multiple areas of danger, to get that overall situational awareness when so many things were changing dynamically, both through information from the control room but through personnel on the ground, that inevitably led to confusion and it wasn't until those command structures and the FCP became fully populated that you start to see some discipline and you start to see what the job states should happen start to take shape.
Q. So, in reality, is all the effort that goes into the debrief and learning process in part an effort to find procedures which will minimise the chaos that is present to a certain degree of necessity?
A. Yes, I think -- yes, the whole idea of those debriefs is to understand the difficulties that personnel had on the ground, it is to identify lessons, it is to see how can we better improve not just the LAS as an organisation, but we work very closely with emergency service partners, so, you know, this was all fed into multi-agency debriefs and, indeed, to -- as far as the ambulance service was concerned, was fed into a national debrief.
Q. There are perhaps two headline issues that have been raised in the course of these Inquests concerning the LAS. I think you're aware of them and I've asked you

about them. First of all is locating and assisting casualties in areas which are either inaccessible or dangerous, and, secondly, there is the problem of identifying danger areas and potentially getting assistance into them.

Now, looking at those separately, you have accepted that to address the first problem, identifying people in those areas, there would be a value in having some LAS staff permanently located with the Metropolitan Police special operations room; yes?
A. I think that's definitely worth exploring, yes.
Q. And you've also indicated that there may be a value in exploring technical improvements either that are going through at the moment or could be considered in future to allow the location of LAS assets to be more precisely identified and passed on to others?
A. So I think the identification of assets but also to use technology to be able to identify patients in the exact locations within a general area of danger and have early visibility of that would help, because I think one of the issues, Borough Market is a big area, and obviously there were multiple establishments in there. There was information coming, but some of that information was conflicted. The area wasn't deemed to be safe and that's right from the beginning of the incident there

are multiple messages before you start getting official declarations, and we've heard from previous evidence around people being told to stay out of Borough Market.

So we do need something additionally that can help us to identify where people are in exact locations when they are at different levels, you know, might be with constricted views. How can we get a helicopter view of that location so that when we're deploying ambulance incident teams in as per the jobs, we have more intelligence about where people are and actually analysing the risk to whether we deploy assets in to provide support or indeed we just need to, if there are assets there, just extricate them out to resources that are in a safe area away from that particular zone.
THE CHIEF CORONER: And this is where you mentioned the potential use for a drone going in and looking around the area --
A. Yes, sir.
THE CHIEF CORONER: So it could go in, have a look, feed back the information straightaway.
A. Start transmitting from cameras around where we've got them.
THE CHIEF CORONER: Yes, and you've got those images. So I think Mr Hough asked you about the other, which was first of all locating assets, which is one point, but

then you are saying also deploying other technology to help you actually search for where people are?
A. Yes.
MR HOUGH: Is there also scope for improving communications about the extent of warm and hot zones in a more formal way in those early stages?
A. So my personal reflections are the FCP, which was the forward command point, it took some considerable time for three services to be able to engage in those discussions, and clearly we are looking as an organisation about how we can improve that so that those risk assessments and analysis can be done in a more timely manner. And, indeed, you have seen throughout the incident debrief that we did that that issue was raised around the identification of FCPs and specialist assets being mustered to those FCPs.

What we did with that information is obviously the Plato SOPs are a national document, it's adopted nationally, we fed those issues in, and my understanding is that there has been a refresh of those joint operating principles in relation to MTA incidents and certainly one of the things that we are implementing within the London Ambulance Service to speed up the deployment of AITs is to remove the reliance for a recall to duty Plato commander to be paged and

recalled to duty from home, and actually train the HART duty managers and the tactical response unit duty supervisors to undertake that role to commit and deploy AITs in the first instance, so removing the need for a recognised bronze Plato commander to be recalled to duty to take those decisions.
Q. So potentially get somebody to the scene in that role before the time Mr Rainey was able to get to the scene on this occasion?
A. Yes, clearly. My reflections are it took too long to make decisions to commit and that's one of the ways that I think we, as an organisation, will improve that by giving that authority to duty managers and not a bronze Plato.

So we would still recall bronze Plato commanders to duty to go in and overtake that duty on their arrival, but not to delay a commitment to deploy AITs because we are waiting for someone to be recalled to duty.
Q. Any other way that those decisions to get the AITs into zones of potential danger can be speeded up?
A. So I think it is an area, it's a fundamental area that I think, you know, us as an organisation and our emergency services colleagues need to, as a result of this process and, indeed, our own debriefing processes, to see whether there is anything more that we can do to

speed up the deployment of AITs because they are the critical resource once the hot zones and the warm zones are deployed.

The management of those zones aren't for non-specialist operational staff, they are for the specialist assets and therefore we've got to find ways of deploying those staff with the specialist skills in a more timely manner if it is at all possible.
Q. Finally this: your staff, on those individual teams, with considerable courage all agreed to go into danger zones?
A. Yes, so my reflections of the events of two years ago span many dimensions. For me, as someone that works for the ambulance service and has been a paramedic and delivered clinical care, to see people lose their life in such circumstances is clearly distressing. I am the accountable director for the London Ambulance Service and it is incumbent on me to ensure that we do as much as we can to learn so that we do learn from these.

This is not around individual blame. These were a set of very difficult circumstances and I know the purpose of today is to try to provide answers to family. I think it does have to be put into the context that we had not only staff that were actually prepared to go and commit themselves into a hot zone when quite clearly at

that time there were military personnel landing on London Bridge and sweeping through, so the area was by no means safe, and, actually, in the early stages of the incident we had a small number of staff that just actually were arriving to go to a road traffic collision and actually just got caught in the terrible events that unfolded in those early stages. You know, they worked in really difficult circumstances and actually there were a lot of patients that were severely injured that night that actually did make it to hospital and did survive.

And I think there is a caution about with hindsight, you know, criticising individuals. You know, the staff did a great job, a fantastic job in very difficult circumstances and of course there will always be learning, and actually these Inquests are part of that process. So I'm proud of my staff who put themselves in harm's way on occasion to deliver patient care to people that were severely injured.
Q. My question is directed slightly elsewhere. Despite that courage, it happened on that night that police medics got to people first.
A. Yes.
Q. And I think you're aware that it often happens that police medics are those who get to people first.

A. Yes.
Q. But police medics aren't trained to do some of the more complicated procedures which can potentially save life in stabbing, and indeed ballistic injury situations; correct?
A. Yes, although I would put a note of caution that under the JOPs, when you're committing -- so I think the police medics and the emergency services as a whole did a fantastic job in difficult circumstances, but there would be minimal intervention when we were committing teams into a warm zone, and there would not be complex interventions be incoming. There is a thing of treat and leave, which is, you know, you try to address haemorrhage and address an airway or you do minimal interventions and extricate the patients out.
Q. I appreciate that's the theory, but on the night, police officers and police medics stayed with people in Boro Bistro, working on them for 10, 15, 20, 25 minutes, they didn't just treat and leave, and that was because of the circumstances. But that may often be the case or may sometimes be the case.
Would there not be some value in having some police medics trained to a higher level capable of delivering more complex treatment, not LAS staff but police officers, for exactly that sort of situation, not

limited to terrorism but to other situations where the police inevitably get to the situation first?
A. So I think I wouldn't discount that, but certainly we -- that would need to be a discussion between organisations around what the benefits would be of uplifting the level of training that police medics get, so if there's learning to be had in terms of upskilling anyone in terms of getting treatment to the patient, just in terms of the circumstances that people find themselves in, then clearly we need to explore whether there is anything further that needs to be done in that regard.
MR HOUGH: Thank you very much. Those are all my questions.
THE CHIEF CORONER: Mr Patterson.

Questions by MR PATTERSON QC

MR PATTERSON: Mr Woodrow, I ask questions on behalf of families of six of those who were killed on the night, of which five of those were killed in and around the courtyard of the Boro Bistro.
Can I begin, please, with that topic of the three hours that transpired between the attacks in that area and the entry into that area of those LAS paramedics, because it's plain, isn't it, from all the evidence that in the early stages, LAS paramedics wouldn't go in, so Mr Edwards, Mr Carlson, even though they were both TRU-trained specialist paramedics; yes?

A. So they were TRU paramedics, yes.
Q. And you agree that they were aware of the casualties but wouldn't go into that area?
A. So they deemed the area to be unsafe so did not enter that area, no, they suggested to RVP.
Q. And the advanced paramedic Mr Rutherford didn't go into the area; yes?
A. That's correct.
Q. And we'll come to Mr Beasley in a moment, who was the senior bronze figure at the scene, and that recording that shows that he was aware of casualties in that general area, you told us, that 10.30 radio call, yes?
A. So I think he was aware of casualties, yes. I'm not sure he was specifically aware of --
Q. Precisely, yes.
A. -- precisely where they were, but I think he was aware that there were casualties --
Q. Downstairs?
A. -- down a set of stairs south side of the bridge.
Q. After 10 minutes the three [attackers] had been killed at 10.16, yes, on Stoney Street?
A. Yes.
Q. But not a single paramedic stepped foot in that area for something like three hours from the time of the attack until after 1 o'clock in the morning; is that the

picture?
A. No, that's not the accurate picture. There were --
Q. Were there any LAS figures in that area prior to that time?
A. Well, so there were resources that were allocated but the area that you described was an unsafe area. It wasn't that resources weren't going in there; the area was unsafe.
Q. Yes, but can you name a single person who stepped foot in that area prior to the HART team at something like 1 o'clock in the morning?
A. So it was the ambulance intervention team, so at 12.05 when ambulance intervention teams were committed into that area and then, as you say, the last team to be committed was just around 1 o'clock.
Q. Yes, so can you name a single LAS individual who was in that courtyard prior to 1 o'clock in the morning?
A. Well, there wasn't.
Q. There wasn't, right.
So the Plato procedures kicked in, yes?
A. So the declaration of Operation Plato was made, yes.
Q. And there were these highly trained paramedics that were available. How many in total were present at the scene ultimately that night?
A. Well, when we committed the seven teams, we had 21

trained TRU personnel.
Q. 21. One of them gave evidence that she had managed to get from Isleworth to the scene by potentially something like 11.20?
A. Correct.
Q. And then obviously we can do the maths, there's quite a period of time, isn't there, between 11.20 and something like an hour and a half, or an hour and three-quarters later when they stepped into the courtyard, yes?
A. So I wouldn't altogether agree with that, because --
THE CHIEF CORONER: I think, to some extent, Mr Patterson, you're setting out the timetable, or the timing gap.
MR PATTERSON: Exactly.
THE CHIEF CORONER: And I'm conscious that it may well be the witness is trying to answer a slightly different question to the one that you are posing because certainly with your initial question you said was there a three-hour gap between the shooting and people going in?
MR PATTERSON: Yes, that's right.
THE CHIEF CORONER: And we got there eventually that in fact there were resources deployed, but I think he accepts that actually no one did go in until just after 1 o'clock, and it's really -- I am looking at you but my

comments are really directed at the witness to actually answer the question, but it may well be that other things flow from it.
Q. Yes, and we will be coming to reasons and danger and confusion and all of in due course, I'm just trying to get the headline times.
It looks, does it not, as though certainly some of those HART teams were there in the area from about 11.20. That was the evidence we had from the HART paramedic who gave evidence to the court; does that sound about right?
A. It does, and we also had the Operation Plato commander from the LAS on scene at the FCP, at the Bunch of Grapes public house from around 23.25.
Q. And the van, you told us, was declared clear before midnight at 23.54, was the time you gave.
A. That's the information contained in Marc Rainey's log.
Q. And although there might be considerations as to whether you suspected that the courtyard is clear, you can't be certain that the courtyard is clear of casualties until you go in, can you?
A. No, sir, clearly the decisions to deploy the teams were made at the tri-service FCP and they were made on the latest intelligence and information that was available not just to Marc Rainey but his counterparts in the

police service and the fire service.
Q. But these highly trained paramedics -- we will not be making the most of their usefulness, will we, if we delay their employment?
A. So, sir, I think I reflected on the arrival of Mr Rainey after he had had the initial discussion. It was Mr Rainey that was raising concerns around the length of time it was taking to deploy those specialist assets into the defined warm zone and actually there was a discussion around the need to deploy assets, if possible, into the hot zone because of concerns.
Q. Mm, but with all their training, with all their expertise, with all their kit and bearing in mind that many other paramedics don't have those features, we don't want to hold them back such that they're only really going in for a sort of formal declaration of life extinct, do we? We want to be really making the most of these features, of their resources; would you agree?
A. Sir, I have reflected that whilst it took time to deploy those assets in, the process under the joint operating procedures to deploy those was followed, so the zones were not set by London Ambulance Service commanders, they were set at the FCP by police service commanders in terms of the zones, and there was discussions around the delay to deploy those resources into those zones which

subsequently led to personnel willingly volunteering themselves to go into the hot zone to look for casualties to be treated.
Q. I mean, was it a hot zone or was it a warm zone? We don't have any clear entry that we can find in any of the records as to whether that courtyard is categorised as a warm zone or as a hot zone?
A. Well, I agree, because I have searched evidence to say -- the specificity around the Boro Bistro is not there, but when you talk of Borough Market, you talk about Montague Close, you talk about Southwark Cathedral was all deemed to be a hot zone, in actual fact, past midnight, the boundaries of the hot zone actually get increased and actually Borough High Street and London Bridge turns into a hot zone because there was reports of active shooting. So the zones were changing.
Q. Would you agree that these decisions are very important, because there's a degree of prioritisation as to which areas they then go into, because we have team 1 going in at something like, I think you told us midnight, around about 12.00?
A. 00.03 there was a decision to deploy.
Q. But then about an hour before they go into the courtyard, even though the van had been cleared back at 11.54, over an hour earlier.

A. But I must stress, sir, it's not an independent decision for the LAS to deploy. It is based on latest information that's coming into the Tactical Firearms Commander that is at the FCP, the London Fire Brigade representative who is at the FCP, and the ambulance Plato commander: the three of them are digesting the latest analysis and intelligence and jointly agreeing in which way to deploy those assets and what there is they're going to deploy them in. It's not an individual decision for the London Ambulance Service under the doctrine contained that we were working to.
Q. So was there any delay in waiting for a firearms officer to accompany any of these paramedics? Or was that resource available at an early stage?
A. So, there were firearms officers available.
Q. So that wasn't a problem. And, typically, is it one-on-one needed before you can go in? Can you have one paramedic with one firearms officer, or are there any rules as to numbers?
A. Well, so the ambulance intervention teams are three LAS, specially trained LAS personnel. They would be accompanied by London Fire Brigade personnel to assist them with specialist training, and then they would take cover from armed police.
But that is not -- in the warm zone that is not

a reason not to deploy because there aren't armed officers. So if you've got your fire and rescue colleagues and the London ambulance, not having armed police to go and do recovery within a warm zone is not a determinant. But what we were talking about at 00.03 was deploying assets into what had been classified by the police service as a hot zone.
Q. We understood that hot zones were a complete no-no?
A. So --
Q. Paramedics can never go into the hot zone?
A. No, they can't.
Q. So the rules weren't being followed in that respect?
A. So there were discussions had about the length of time so, indeed, the rules were broken.
THE CHIEF CORONER: I think that's why you told us there would have been these discussions between the --
A. Yes.
THE CHIEF CORONER: -- before each team deployed --
A. They were asked, yes.
THE CHIEF CORONER: -- they were asked whether they were happy to volunteer?
A. Yes, whether they would commit into a hot zone, so they were informed volunteers.
THE CHIEF CORONER: Yes.
MR PATTERSON: If they declined to give consent, would that

be the end of that deployment?
A. Well, we would clearly look -- we were deploying teams, as I've said, the personnel that the LAS contribute to each team is three people. If team 1 had a discussion with Marc Rainey and one person in team 1 said: I'm not prepared to be deployed in a hot zone, we would then seek from the remaining tactical and HART staff whether we would have another willing volunteer to deploy themselves into the hot zone.
Q. So on a given day, a typical Saturday night, how many of these specialist paramedics do you have available in London?
A. So we are bound by national specification for our HART teams, so 24/7 we have to have two teams of six, that's for HART provision --
Q. So a total of six.
A. Sorry, two teams of six.
Q. A total of 12?
A. Pan-London 12, and we have a minimum of 10 tactical response unit staff.
Q. And there's no distinction between the two types: both of these types of specialist paramedics can do the tasks that we are focusing on?
A. Yes, so those two groups of staff have that particular skill, yes.

Q. So a total of 22 who are available typically on a given day?
A. Yes.
Q. And when a major incident is declared, we saw that automatically a given number of resources is allocated to the scene, 20 ambulances, you told us.
A. Yes, so that's known as -- on declaration as a predetermined attendance.
Q. And that includes a HART team or teams?
A. Yes.
Q. So automatically they will be, what, called to the scene, or ...?
A. Well, depending, because if they're deployed, because obviously they are deployed to other types of incident so as part of that predetermined attendance, the emergency operations centre will look for available vehicles and HART, if they're deployed onto another particular call, there would be a conversation about how quickly they could be released but they would be dispatched as quickly as possible as part of that predetermined attendance, yes.
Q. So it's an automatic dispatch rather than any judgment or discretion?
A. No, they are part of the predetermined attendance.
THE CHIEF CORONER: Mr Patterson, I note the time. Would

that be a convenient point for us to break?
MR PATTERSON: Yes, certainly.
THE CHIEF CORONER: We will sit again at 2.05 pm.
(1.01 pm)
(The Luncheon Adjournment)
(2.05 pm)
THE CHIEF CORONER: Yes.
MR PATTERSON: May it please your Lordship.
Mr Woodrow, do I understand accurately from your evidence earlier today that in fact when one of these specialist paramedics deploys into one of these dangerous zones they don't, in fact, have to be accompanied by an armed police officer at all?
A. So the evidence that I gave you earlier in terms of the MTFA JOPs say that when a decision to deploy into warm zones and within those warm zones when an agreed limit of exploitation is agreed between tri-service commanders that the presence, the mandatory presence of armed support officers to provide cover should not be a reason not to deploy into a warm zone.
Q. So that these specialist paramedics can go in just, I think you said, accompanied by an escort from the London Fire Brigade; is that right?
A. So the London Fire Brigade provide specialist staff for working in those areas and they make up the team with

the London ambulance personnel, and the JOPs state that when decisions are made to deploy into warm zones only that the lack of firearms-trained officers to provide support should not be a reason not to deploy those AITs into a warm zone.
Q. So it may be that the situation is such that the risks aren't so great and that a paramedic can safely go into a warm zone without an armed officer escorting them?
A. So the JOPs state that that should be a consideration when the three service commanders are analysing all of the intelligence and are analysing risk, and based on those assessments when deploying into a warm zone, not a hot zone, when deploying into a warm zone, the availability of armed police officers, specialist firearms trained police officers to provide cover to those teams, if that's not available, that should not be the only reason for them not to deploy: it should be a consideration, but based on the risk assessment it should not be a reason not to deploy.
Q. Unless we have missed them, we are aware of no documents or records that were made analysing all of these issues and making these decisions about different locations and different priorities as to which area should be the subject of the first team going in and which area should be the subject of a later team and the reasons for all

of those decisions; is that right? Is there -- are there detailed notes explaining all of this decision-making?
A. So there will be management logs for each of those Plato commanders. Marc Rainey's log, I believe, has been presented, and the joint decision model tool that is part of the joint emergency services interoperability principles, that model of decision-making is included in that log and I believe Marc Rainey logs a number of those decisions highlighting what the issue is, what the intelligence is, what the discussions are and what's the final decision, I believe that's been submitted as evidence.
Q. We looked at that log by Mr Rainey this morning.
A. Yes.
Q. There isn't a great deal of detail as to the decision-making though, is there?
A. Well, he's one commander of the three. I haven't seen the joint decision model logs of the other Plato commanders at the forward command point, so I would be unable to comment on what's contained within those. The evidence I've looked at is what's contained in Mr Rainey's log.
Q. You appreciate that the families are very keen to find out, if they can, what the reasons were for the passage

of time and what might, to them, appear to be delays?
A. I clearly understand that, sir.
Q. And one of the paramedics from the HART team came and gave evidence and was unable to assist us with any details as to the reasons for the timing. Was there any delay or disagreement as to timing between the individuals involved, between, for example, those making the decisions and those members of the paramedic teams?
A. So the teams would have just been asked to form up in their protective equipment. They would not have been involved in the discussions that took place between a number of bronze Plato commanders at the forward control point.
So my understanding is Marc Rainey was one of those, there was a representative Plato commander from the London Fire Brigade and there were also representatives from British Transport Police and the Metropolitan Police Service.
Q. Do none of these experienced paramedics have helpful inputs that they could make to the decision-making?
A. Well, sir, the decision-making is made in terms of the JOP is the Plato commanders. They are the ones having those discussions. So that is the command structure that is in there. The specialist teams are the assets that are used to deploy, so the discussions they're

having are about the use of those specialist assets, it's not a situation where you've got 21 specialist paramedics having discussions.

Marc Rainey is the person that was responsible for those discussions with his colleagues and counterparts from other services at the forward control point.

Q. {DC5052/1}, please. There was a debriefing, wasn't there, in relation to what was described as specialist assets?

A. Yes.

Q. And did that include these specialist paramedics?

A. So those that would have attended that, yes.

Q. At paragraph 5, we can see that in this debrief, which was just a few days after the incident on 6 July, the supervisor, the HART supervisor indicated that they received a courtesy call from EOC -- that's, what, the emergency operations centre?

A. Yes.

Q. Advising that it was a Plato incident, they had the expectation that they would be dispatched but not called and "left to sit".

Can you help us: what was the observation or possible criticism that was being voiced there?

A. Well, so I think that's probably one individual's perspective in terms of the supervisor. The emergency

operations centre in terms of when declaration of a major incident and, indeed, Plato is made, will have the holistic view of where the resources are and the attendance that's required, so it could have been that based on that initial decision, that individual was asked to stand by.

Q. So it appears to be suggested here that they were criticising the failure to dispatch them and get them to the scene swiftly in the first place; is that right?

A. Well, I think the individual is saying that there was a courtesy call updating them there was a Plato incident but didn't deploy that particular individual at that particular time.

But that could have been for a multitude of reasons, based on the number of assets that had already been dispatched, and obviously further information coming through. We had two HART teams and 10 TRU personnel on duty.

Q. Over on to {DC5052/2}, please, at paragraph 31, returning to this topic, the HART team that:

"... received the courtesy call advising them of the Plato incident dressed into their specialist PPE ..."

Is that the protective kit?

A. Yes.

Q. "... and then encouraged EOC to dispatch them to the

scene. After multiple requests and calls ... they were dispatched."

Again, this rather suggests that there was a sense of frustration that they weren't being summonsed and brought to the scene when they expected or wanted to make their contribution; do you agree?

A. Well, I would agree that that would be a concern raised. I think what's important to note is that when Plato is declared, we won't just dispatch resources to the scene, we will wait for information on RVPs. There were multiple RVPs, and we do know that the emergency operation centre when RVPs were set were dispatching resources to those locations.

Q. But was one of the points being made at this debriefing that the HART team themselves, these specialist paramedics, would have liked to have been deployed and made use of at an earlier stage?

A. Well, so teams that self-deploy, that want to self-deploy themselves will come through to EOC and say: we've heard there is something, there's an incident that's in progress, just send us. But it needs to be done in a controlled way because a Plato incident has been declared and therefore there needs to be some control and grip on who is allocating the resources and where they're being allocated to. That's part of the

overall management of a major incident that we don't have resources just self-deploying.

Q. But in these early minutes, timing is critical, isn't it?

A. So, sir, in any incident timing is critical, but these resources were not going to be deployed directly into the scene. There needed to be the structure set up in terms of the forward command point with the relevant Plato commanders to do that job, which was to deploy, assess and deploy those specialist teams.

Q. At {DC5052/6}, please. Towards the end of this debriefing it was recorded at paragraph 94:

"HART would like to be deployed earlier."

That was the message that was coming across in this debriefing, wasn't it?

A. So that was a view given in the debrief, yes, sir.

Q. And, indeed, at paragraph 79, on {DC5052/5}, please, one of the other specialist teams, the TRU -- that's the tactical response unit; is that correct?

A. Tactical response unit, yes, sir.

Q. At paragraph 79, in the debriefing it was being said:

"It was challenging for TRU remaining on location/RVP ..."

Is that the rendez-vous point?

A. Yes.

Q. "... people wearing less armour than them are screaming at them to take action."

So was there criticism or urgings at the scene from others to get a move on and to deploy these specialists?

A. Well, there were two individuals that were working on tactical response units and they were sent as part of the response to the first road traffic collision. So they were not dispatched because they were Plato-trained; it's just because they were the nearest resources being sent to the road traffic collision.

Obviously on their arrival the dynamics of the scene have changed, but the fact remains that assets, its EOCs -- when Plato is declared EOC have a set of action cards, our emergency operation centre have a set of action cards, have a systematic way to deploy those assets, to deploy them to the right place and to ensure that we've got the command structure as well covered.

So Mr Rainey was paged and was mobile at 22.27. So EOC were already thinking around the deployment of tactical response units and HART assets in terms of getting Marc Rainey as the Plato commander recalled to duty and to make his way to the rendez-vous point.

Q. Although you admitted to Mr Hough earlier that one of the things you need to look at is getting a Plato commander on the ground, getting a grip, making

decisions at an early stage?

A. So I entirely agree, Mr Patterson, we recalled -- at the time we were recalling Plato commanders to duty that clearly had an effect on how quickly we could get the Plato commanders into a position where those decisions were being made and we've identified that learning and are taking steps to address that.

Q. {DC5049/17}, please. One of the other debriefing documents, and we looked at this earlier, about a third of the way down in the debriefing, this document records that:

"Both the HART and the TRU were expecting more direction and to be dispatched to a dedicated forward RVP for specialist assets, but instead they were sent to a range of [rendez-vous points] alongside the non-protected responders."

So the message that emerged from that debriefing, it seems, was that these specialists were voicing frustrations and criticisms with the management on the night; would you agree?

A. No, I don't agree with that statement. I think what they're frustrated about is around the chaotic scene and the multitude of RVPs and information that was coming out which meant there was no single point where those resources were being mustered to because we have HART

resources at both sides of the river, so some were being deployed to the north RVP, which had been established, and some were being directed to multiple RVPs south of the river. That's the situation that we had. We had a very dynamic situation where RVPs were constantly changing and I think that's a reflection on how difficult they found it.

Once Marc Rainey had arrived on scene and actually had got to the forward control point, it was very clear around Marc Rainey taking those actions and mustering those TRU teams very quickly. There was a cohort of them already at the RVP north of the bridge, there were others at the RVP south, and Marc Rainey's first action is to get them into a state of readiness and get them to the forward control point.

Q. But still we had this period of three hours when nobody went into the courtyard?

A. Absolutely. I've agreed that, sir.

Q. And for the future, the public who find themselves in a terrorist situation and police constables who find themselves in a terrorist situation will need to recognise that delays of this sort might recur?

A. So I think it's important to add that we also had resources there that were non-specialist, that were caught up in that situation. We had a number of

resources originally going to a road traffic collision and ended up putting themselves into a position where they were in a hostile area. I think I've acknowledged in previous evidence that the two areas that are the priority for us as an organisation is how can we more effectively and more swiftly get to the point where we can make decisions around allocation of ambulance intervention teams in a more timely manner.

Q. Now, you told us that you have been for some 28 years with the London Ambulance Service; is that correct?

A. That is correct.

Q. And for 15 years at a very senior level, a senior operations manager; have I got that right?

A. So at different levels, yes, sir.

Q. Can we see, please, {DC8332/1}. The Times newspaper has reported that around about the time leading up to the 2012 Olympics, the Prime Minister himself had concerns about the likely conduct of the service in the event of a terrorist attack. Are you aware of this report, Mr Woodrow?

A. No, I'm not, sir.

Q. And it has been reported that:

"[Mr] Cameron had told the ambulance service that it was unprepared to deal with a potential terrorist incident years before the London Bridge attacks ..."

If we just look down the page, about halfway down:

"The former prime minister accused the service of being unprepared to take risks after a cabinet security committee ran a trial before the 2012 Olympics of a marauding terrorist attack of the type later seen at London Bridge.

"Ambulance officers told the cabinet committee that they had enlarged the 'hot zone' -- the area around any such incident that they were not prepared to let their staff enter to ensure their safety -- as a result of 'lessons learnt' from the [7/7] bombings, according to a source present at the ... exercise."

"During [this] planning 'the prime minister pointed out that there were likely to be people who survived such an attack and would need rescuing' ... and [he] was said to have been 'very angry' at the increase in the size of the hot zone."

And this person, who it seems was present, reported as follows:

"'I will not forget the look on Cameron's face. It was one of the most dramatic meetings I have ever been in '... 'The London Ambulance Service had a "we know better than you" approach which did not go down well. He asked them to reconsider."

Then over, please, onto the next page {DC8332/2}:

"'[The Prime Minister's] view was that paramedics should understand that they might be more at risk than a member of the public, and that they should be trained to deal with these kind of attacks.

"'He considered the idea that the back-up might be miles away [he was] shocked to find they had had years to prepare for such an attack and had not done more'."

Then there were issues about whether there were enough anti-ballistic vests. Then apparently the Prime Minister referred to a particular incident in his constituency in which the emergency services had stood off for hours during an incident when he believed they should have gone in, and then other reporting in relation to what happened at London Bridge.

So, first of all, no doubt you were aware from your experience and your senior position about this exercise that took place prior to the London Olympics?

A. No, I'm not, sir.

Q. Can you help us with that report and that suggestion from someone who was present that there were these issues raised about the approach that was being adopted to going into dangerous or potentially dangerous zones?

A. So I'm not in a position to be able to reflect on that particular report. I had no involvement with an exercise. At the time when we were responding to the

incident at London Bridge in 2017, the LAS had adopted the incident response procedures, the LESLP guidance, which all emergency services in London adopt, the JESIP, joint emergency services interoperability principles and the JOPs for MTFA. They're all national guidance. They're all documents that we are held to account for and regulated by the NHS.

So whilst this refers to something historically before the Olympics, at the time we were responding to this incident in 2017, they were the documents and procedures that we were working to.

Q. But can you help us with this, at least, Mr Woodrow: can you see if any records exist of this meeting, and no doubt you would be happy to disclose them and assist us with anything of relevance along the lines of what that reports suggests?

A. I certainly will undertake to do that for you, sir.

Q. I'm very grateful.

So in your statement, the most recent statement that you have done analysing these issues, you make it plain that in this sort of situation, no emergency resources are to be sent into the area, and that there has to be liaison and there has to be planning and then, if appropriate, deployment. Is that really what it boils down to?

A. No, sir, I think that's not a fair reflection on what I was trying to put across in the statement, sir.

What I was saying is that once Operation Plato has been declared, there are procedures and those procedures are contained with action cards for both operational frontline members of staff, specialist and non-specialist, managers that respond to a declaration of a major incident or Plato incident, and the staff in EOC. What I was trying to say is that those procedures are followed once a Plato incident is concerned, and the way we deploy assets, once Operation Plato has been declared, is different from a major incident declaration that does not have Operation Plato associated to that incident.

Q. But in relation to all this decision-making about whether you do go in or whether you don't and whether you go into area A first or area B later, all of this can make a very significant difference, can't it, to casualties who are potentially still in these different locations?

A. Absolutely it can, and that's why those decisions are not taken independently by any one service. That is why joint emergency interoperability is to get coordinated decision-making and discussions based on all the intelligence that the three services have available to

them at the time when the decisions are being made.
Q. Are there any written criteria that help the decision-makers to make the right decision?
A. Well, I think it's the -- it's depending on the information that is available, it's also around the appetite of risk, and the size of that risk, and then there is a collective discussion and a decision made on deployment decisions. That's not made arbitrarily by one commander: it is a collective decision-making process.
Q. Despite our researches we can find no written criteria that govern this decision-making. Are we wrong about that? Are there written criteria or guidance to help them get to the right decision?
A. No, the joint decision model tool that is contained within the joint emergency service interoperability principles is the recognised process on which these joint decisions are made, and that is documented in the infographic and in the decision log itself, and that is completed by all three members -- four in this particular scenario because there were two tactical firearms commanders present at the FCP.
Q. But as I think you've agreed already, there were no detailed notes made of the reasons why they do go into one area earlier and they do go into another area later.

A. So, yes, all I've been able to provide you evidence on is the log that I was able to see, which was Marc Rainey's.
Q. Mr Rainey's?
A. I have no view of any logs from the London Fire Brigade, the BTP, or the Metropolitan Police Service in terms of their joint decision model and then logged decisions for that process.
Q. In your most report, and perhaps if we can look at this on the screen, it's at {WS5067/1}. If we go, please, to page 8, {WS5067/8} you dealt with Mr Carlson, the suggestion at 2.24, that Mr Carlson, one of those TRU paramedics, made reference to three patients in cardiac arrest, and you tried to work out who that might have been?
A. Yes.
Q. And then you say this:
"The log does not record a location being given to EOC, however, as stated above, had the location of Boro Bistro been given, the EOC would not have dispatched any resources to this specific location due to the declaration of Operation Plato."
Is that correct?
A. So when it refers to "the log does not record", that is the information that Jacob Carlson transmitted across

the radio into EOC, and what that's referring to is when that transmission is made, the report of three patients are in cardiac arrest is in the EOC log, but the exact location of those patients is not included in the log. The point I was trying to make subsequently is that even if that exact location had been recorded in the log, resources would not have been sent directly to that exact location, because Operation Plato had been declared and the procedures once Plato had been declared is to dispatch those resources to the nominated RVPs that are provided to us from the Metropolitan Police Service.
Q. You appreciate, Mr Carlson's evidence was that he was shouting down at one of the police officers that we believe was with James McMullan in that dark corner of the courtyard, below the van; yes? You're familiar with his statement?
A. I am.
Q. And that there was a cry for help, a request for help from Police Constable Miah, I think it was, either him or Police Constable Attwood, who were trying to give treatment to James McMullan, and the paramedic told him that help would be coming, and no doubt in reliance on that they remained for all those minutes that followed at that location, so not bringing the casualty up to the

ambulances for the assistance that was available, and, secondly, no doubt putting themselves, those two officers, at continued risk in that location.
Is it your understanding that this location wasn't reported by Mr Carlson to the LAS, to the EOC?
A. I can't find any specific information where he makes that transmission of an exact location of those patients. I think it's at the time when he is with Keir Rutherford and Gary Edwards and they're asked to move off the bridge by armed police, in that segment of the incident is when that occurs, but clearly Jacob Carlson, for whatever reason, did not report that exact location.
Q. So he promised help, but it doesn't look as though he did anything to provide the help that he had promised?
A. Well, I'm unable to answer why he promised help. All I'm saying, the facts of the matter is that they were told to move off the bridge, they complied with the request, and actually Jacob Carlson went north of the bridge and then continued to triage and treat other patients.
Q. But is it your evidence that even this if paramedic had tried to get help down to the casualty and those police officers, that it wouldn't have been provided?
A. Well, they were asked to remove themselves from the

bridge by armed police because they deemed it to be unsafe and there had been a second exchange of gunfire, which was audible to those personnel.

Q. Well, many, many people remained in that courtyard and not a single one of them gave evidence about having heard that or knowing that they had been instructed to leave.

A. Well, the evidence that I've reviewed does include evidence including Keir Rutherford shouting down the stairs telling everyone to get out.

Q. Yes.

A. So they were instructed to move off the bridge by armed police because the area was deemed to be unsafe.

Q. But you can see no doubt, Mr Woodrow, why the public might find all of this worrying?

A. Well, I can understand why the questions are being asked, sir, yes.

Q. And {DC5156/1}, please. Some months after the attack in this PowerPoint document provided by the London Ambulance Service, if we go, please, to {DC5156/10}, if we can just expand the right-hand side of the page, please, one of the points that was being made was that:

"Run/hide/tell [which was] (the national police guidance) made the tracking of some casualties complex."

What did that mean?

A. So later on into the incident, there were numerous reports coming in from various locations within the hot zone of patients not presenting necessarily with stab wounds but other conditions and we were unable to reach those patients and it was -- in some of the debrief there was concern raised by some of the operational crews that treated those patients that run, hide and tell, the nature of that meant that the location of some of those patients was made more difficult by the fact that people were holed up in various premises and we weren't aware of it.

Q. And so if a casualty does run to find cover, and finds a hidden location out of sight, perhaps, in reliance on what we're all being told, and if they do tell, in other words, they manage to make a phone call radioing for an ambulance, and if they're then waiting in the expectation that the London Ambulance Service will reach them, they may be in for a long wait, mightn't they?

A. Well, clearly what I've described is a set of circumstances where the decision to move forward into hot zone and warm zone areas by the AITs took a considerable period of time from the initial call, and I've acknowledged that that's an area that we need to focus on. This is in relation to comments that were made around run, hide and tell potentially making the

issue to identify patients that might not have been in that zone, because we had patients that were living in residential addresses as well close to that location, where we were struggling to meet their routine needs as well, so that's not in specific relation to any specific patients, but just that run, hide and tell made it more complex.

This is a view, it's not -- it's a view of staff that came out of the debrief.

Q. But evidence that this court has heard was that one of the injured casualties with a very serious stabbing to the neck was Paul Saint-Pasteur, who was attacked in the courtyard and it was 10.56 before he left the area, and a second very serious casualty, Helen Kennett, it was 11.01 before she left the area, and in both cases having remained in that general area near the Boro Bistro and the Mudlark pub, eventually, having not received any help from paramedics, they both left, and if they hadn't left and moved out by themselves, helped by some police constables, they would have had even greater delays, wouldn't they, before they ultimately received very urgently needed treatment?

A. Well, those particular patients that were in that particular area, there was a considerable time before AIT teams were deployed. There were other parts of the

incident ground such as the Globe Tavern where paramedics did go in with armed police and located patients and actually removed those and took them to the casualty clearing station and removed them to hospital. That took a period of time, and this is, as I say, it's a comment around the tracking of some of those patients could have been impacted by run, hide and tell. That's not an organisational view, it's an observation.

Q. Mr McKibbin, the superintendent who made the declaration, the Operation Plato declaration, was asked about this issue, about how long all of this realistically is going to be taking if this is the approach, and he candidly stated that we have to recognise that these things do take time; do you agree with that observation?

A. So I think from my experience, and I've not experienced an incident of this magnitude and the dynamic nature of this incident, but my experience from the management of major incidents is it does take time for command structures to be put in place. I think what we need to recognise is ways that we can reduce those delays so that we can deploy those specialist assets in the quickest way possible in order to do the most for patients. I have alluded several times, not just in my statement but in evidence today, that we are committed

as an organisation to learn with partners how we achieve that.
Q. Would you agree with this, Mr Woodrow: that at the minute, the reality of the practice is inconsistent with the golden hour and the imperative of getting treatment to people at a very early stage?
A. So I think we are, without sounding disrespectful, trying to conflate two things. I think the golden hour is very important once contact has been made and the initial medical interventions that you make with that patient, but that is taking an assumption that you can access that patient in a safe way and without hindrance to do that, and clearly, when we had the type of incident that we had, there was -- and rightly so -- concerns around the safety of the area where some of those patients were contained, and that therefore required structures to be put in place to deploy specialist teams and try to treat patients. That did take time and will always take time. I think my colleague from the Metropolitan Police Service gave an equal commitment that we should work together to see how much we can improve that and I would fully support that.
Q. You will be aware of the details of one of the casualties, Sébastien Bélanger, who was down under that

archway in the courtyard; yes?
A. I am aware, sir.
Q. Are you familiar with the timings and the details of the treatment that he was receiving?
A. I'm not familiar with the treatment that he was receiving, sir.
Q. But he was there for quite some time with a number of members of the public who were trying to assist him, with a number of police officers who were trying to assist him, and eventually, at something like 10.45 or 10.46 they brought him up to the street, and even at that stage they didn't know as they brought him up to the street where an ambulance might be.
Now, I want to ask you about HEMS, because we had evidence that a HEMS doctor, Dr Christopher Lambert, had arrived on Tooley Street nearby by 10.25, and Dr Lambert gave evidence that he was there waiting for instructions for a period of time and that he didn't see any single patient at all until 10.53, and essentially he took the initiative himself and went north, drove eventually round over Tower Bridge to the north bank of the river and offered his services on the north end of the bridge.
Can you help with why the opportunity to make use of that HEMS doctor was not taken for those casualties in the courtyard?

A. Well, for the same reason that the resources -- that area was declared as being unsafe, that's why our personnel moved away from that area. I do know that Dr Lambert was involved, and Dr Lambert would have had one of the LAS paramedics with him as part of that duty that night in the car, and I know there were a number of interactions, but, you're right, they were sent to an RVP to wait further instructions; they were not committed to the scene like we were not committing any of our own specialist resources or non-specialist resources directly to locations within the incident ground.
Q. So for Sébastien Bélanger, for example, there wasn't just a missed opportunity to get up early onto the High Street and take advantage of paramedic resources, there was also a missed opportunity to have the very specialist intervention, perhaps, of a HEMS doctor.
A. Well, that is conjecture, sir. At the time we were deploying resources to the RVP and that would have included HEMS. They don't have authorisation to just self-deploy into those, they are under control of the emergency operation centres when they're deployed.
Q. Now, you looked with Mr Hough at some of the early reports mentioning the Boro Bistro, one at 10.11, making reference to a stabbing, and one at 10.16, making

reference to a female who was bleeding in the Boro Bistro. Another example, please, {DC5224/1}, again at an early stage this is a CAD message that was answered at 22.15, again making reference to the Boro Bistro; do you see that?
A. Yes.
Q. Again making reference to a suspected terrorist attack, and making reference to somebody having had their throat cut, if you look down towards the bottom of the page.
A. I do.
Q. And on to page 3, please, of this document {DC5224/3}, it was made plain what the location was, down towards the bottom of the page, that it was next to the Borough Market, so the name of the location, again, was given, Boro Bistro, and assistance in locating it next to Borough Market; do you see that?
A. I do.
Q. And so there were also requests, weren't there, for the London Ambulance Service to come to the Mudlark, to the pub that was just next to the Boro Bistro restaurant.
A. Yes, sir.
Q. And Mr Beasley, who was the IRO, the incident response officer?
A. Correct.
Q. Who was there some time between 10.20 and 10.27, he gave

evidence to the court that none of this information about those various radio requests, none of that information reached him. Can you help us with why that was?

A. So --

Q. Repeated references to that particular location.

A. So I'm not aware of what radio transmissions. I think Mr Beasley was aware of patients in that location, although not necessarily from radio transmissions. As I've described this morning, we were seeing a huge number of calls, 134 in the first 45 minutes, that were giving us various locations. At the time Mr Beasley arrived, I would not be surprised that actually he was not getting exact locations of those patients from our EOC. I described this morning the difficulty that we have when we're receiving such large numbers of 999 calls and physically trying to tie all that information up and then get that information given to people on the scene in addition to Plato being declared in that time between 22.11 and 22.27 when I think Andy Beasley arrives on the scene.

Q. But especially given the declaration of Plato and the importance that that means, surely it would have been possible for him to have been told over his radio: there are reports coming in of stabbings in and around the

Boro Bistro. Why couldn't something as simple as that have been communicated to him, the man in charge on the scene on the south bank of the river?

A. Well, there were lots of radio communications being sent. What exactly went to Andy Beasley I cannot be sure, but there were lots of radio transmissions being sent at that time and there was lots of information around the location of patients.

So we didn't have just one focused area around the Boro Bistro. I was trying to explain this morning that we were having multiple calls in multiple locations in the London Bridge/Borough High Street area, and that was the difficulty we had in trying to rapidly analyse that information, put it all together, try to link it to a running CAD and then get that information out to people on the ground.

In addition, when Plato was declared, the people in the control room, their focus was then to implement the actions required within the control room and operationally in terms of the set process and steps that we need to take once a declaration has taken place.

Q. {DC5066/1}, please. He told the court that these procedures governed his work; you would agree?

A. They provide guidance to his work, yes.

Q. Page 61, please {DC5066/61}. He accepted that he was

the extraction officer, so the officer who had responsibility for the removal of patients in an appropriate way, for logging the number and location of casualties, as we can see in that first bullet point, that require recovery, to request teams to deal with issues such as, for example, entrapment, and to deal with carrying of patients.

As this summary of his duties sets out, if we look at the end of that section for extraction officers, it makes plain that:

"A dynamic assessment should be made by the [extraction] officer on what those teams need to look like."

So these are multi-agency teams to carry out this work; yes?

A. Yes, I think what we need to be clear here is that these are the procedures that would be used when Plato was not declared. The fact that Operation Plato was declared adds another layer to complexity over this because in actual fact, what Andy Beasley was doing at the time actually was trying to locate patients: they were treating patients, Andy Beasley did set up a casualty clearing station, he did radio for orthopaedic stretchers and carry sheets to identify patients and get them to the casualty clearing station.

The difficulty once Operation Plato was declared is that that changes the dimension of the incident and those assessments around how far and what -- how far you go in based on your risk assessment of safety, and there is evidence to say that Andy Beasley on several occasions quoted that there was gunfire and that there were active shooters within the area that you describe.

So that's why Plato, the first actions in Plato are to page the necessary commander and get that commander going to the scene, because that's now how we will deal with patients in those areas that are deemed to be high risk, is the committal of those specialist teams.

Q. Mr Woodrow, you say all that about the efforts he was making to locate casualties, but he was asked in his evidence:

"Question: Did you apply your mind, never mind note-taking, did you apply your mind to locating the people ...?"

And his answer was "No".

A. I can't comment. What I know in evidence is there was a significant number of patients treated at the casualty clearing station at St Thomas Street. Those patients were triaged, treated. Some of those were severely injured and they were removed to hospital. So to say that they were not actively extracting patients -- now,

they might not have done the physical extraction because we do know that some of those patients were extracted by members of the public and they were extracted by police service colleagues that were on the scene, but the process for triaging, treating those patients and getting them to hospital was carried out in the way that is described within the incident response procedures.

The issue around those patients in areas, not just the Boro Bistro but other areas within Borough Market, that was an issue that Operation Plato and the zoning of those issues, whether they were deemed to be safe or unsafe, and we have had evidence from some of those colleagues when they were at that particular area by the van that they were asked to evacuate that area and that's why the Plato commander was dispatched to coordinate the response into those zones using specialist commital teams.

But it's not Mr Beasley as the bronze sector or bronze extraction, according to the IRP procedures, to make deployment decisions to go into unsafe areas, that's what Plato command joint tri-service officers at the forward command point do.

Q. He accepted, eventually, that he was responsible for logging, as this document records, that he was as the extraction officer responsible for logging the number

and location of casualties that require recovery. Now, you would agree that that is a very important and desirable thing in a marauding terrorist attack like this?

A. Well, so I would say his actual role in terms of bronze extraction within these procedures are that actually, as bronze sector, he takes on a number of roles, so he's trying to discharge three roles until he gets further officer support allocated to those roles.

Q. Yes. The importance of finding the casualties barely needs to be set out in writing. It's blindingly obvious that it's vital to find out where the people are who need urgent help, isn't it?

A. So, I'm not being difficult and I'm not trying to disagree with you, the complexity of this incident was that Operation Plato had been declared above, we had the resources that had been told to evacuate the area. That changed the way -- that information was very dynamic in terms of the reports were coming through the MPS control room, the reports that were coming in through BTP, it was a very dynamic situation and the way to deal with that was not through Andy Beasley, it was to mobilise the Plato commander, put the joint operating procedures that are in for an MTA once it was been declared, and that would be the way to extract those patients.

So I think it would be very difficult for Andy Beasley, given what he was confronted with when he arrived, to be able to undertake all of that information when we've heard that the Met Police had 400 CADs in relation to this incident, we had 134. He just physically wouldn't have the capacity to be able to note everything, and there were patients being presented to him and information coming from people on the ground as well.

Q. So if not Mr Beasley who was in charge, who should have had responsibility for locating casualties?

A. So Mr Beasley was, as bronze sector, locating casualties and treating casualties. So whilst we're focused, and I fully understand why we are focused on that particular area, there were a large number of patients that were involved in that incident with severe injuries that were treated at casualty clearing stations that were set up by Mr Beasley, Mr Lesslar and other colleagues and there were equally patients treated at the casualty clearing station north of the bridge.

The responsibility for locating patients within the areas of high risk, warm and hot zones, was for the joint Plato commanders to make at the forward control point and using the committal of specialist teams to do that.

Q. You've told us that they don't arrive and get started until some time after 11 o'clock?

A. Yes.

Q. When we are well beyond golden hour?

A. Yes, and I think we've acknowledged the difficulty with the golden hour in terms of a patient that is accessible and needs rapid treatment and indeed we saw patients that had the minimal of treatment delivered to them when they were presented to LAS personnel and they were removed to hospital and the right hospital as quickly as possible, but that is on the assumption that you can make safe access to those patients and it was deemed in that particular area not to be safe to commit non-protected staff into that area to deliver that care.

Q. {DC7820/1}, please. We have been told that this is an Operation Plato, something called a call taker aide-memoire; is that correct?

A. Yes.

Q. And is this an aide-memoire so that when a person who is operating -- who is receiving incoming calls, has a report of a marauding terrorist attack, they will have these reminders in front of them so that they can elicit as much relevant information as possible from the caller?

A. Yes, that is the idea. Once Plato has been declared and

those cards are distributed, it is designed to help call-takers, because I think what's important to realise is that although the management of the incident is taken out of the main control room and put into our specialist operation centre, any subsequent 999 calls in relation to this incident will just be targeted to the first available call handler that is available in the emergency operations centres, and that could be a call handler sitting in our control room at Bow. So it's not necessarily going to be apparent to those particular people that locations are important, which is why these action cards are, or aide-memoires are distributed once Plato has been declared.

Q. And in that middle section under the heading "Documentation. Listen, ask, record & communicate", the very second bullet point that they are reminds to deal with is how many casualties and the exact locations, for example room numbers or where in the building if it is that sort of marauding terrorist attack. So identifying where the casualty is is crucial, is it not, in the early minutes of any of these sorts of attack?

A. It is, but in the very early minutes of this attack, Plato had not been declared and these aide-memoires would not have been distributed to staff. So in the very early stages of this incident, call handlers were

just taking routine 999 calls and trying to get as much information down as they could.

Q. You told us about the various CAD messages and the influx of information, and you were asked about linking the information as to locations and, as I understand it, what you were saying was that with every subsequent incoming 999 call where further locations are being reported by members of the public, that that isn't being recorded and added to the main CAD to expand upon the knowledge of where these casualties are positioned.

A. Well, that's what I was saying is the process is that once we've got ourselves a running CAD, the actual dispatch or the computer system will recognise that it's in the broad location of the running CAD. What we have to physically do manually, though, is to try to analyse that information and understand whether that is directly linked to the running CAD, or if it's a completely unrelated incident, and what I was trying to explain this morning was given the volume of 999 calls in a very short space of time, that process to duplicate those calls and get the information associated with the running CAD took a period of time.

Q. If all of this were to happen tomorrow, hopefully the CAD would be updated with the additional details as they came in of further locations and geographical places; is

that right? Have the changes now been made so that this problem doesn't recur?

A. So we have highlighted to EOC staff the importance of locations. We haven't -- this is a problem that, you know, we as a service are struggling with, because when you get high volumes of CADs with lots of information which is conflicting, so there were some people, just like we had responders that weren't familiar with the area, we also had a lot of information that was not consistent. I'm accepting that there were a number of CADs that mentioned Boro Bistro and said it was in Borough High Street near Borough Market, but we also had lots of information that was inconsistent, people not knowing where they were.

We just physically do not have the resources currently to have a large cadre of people waiting for an incident like this to happen to enable us to process that information, because the separate 999 calls will be going in to just the first operator that's made available, and they're generating information which then goes into a dispatch group, and that information has to be examined by the allocator, try to work out whether it is a linked incident or whether it's an unrelated incident, and that takes time, and that's one of the issues, apart from the deployment of ambulance

intervention teams, that needs more work for us.

Q. Superintendent McKibbin gave evidence that these issues about geography and locations and visibility and topography, as he described it --

A. Indeed.

Q. -- were not new and that particularly in the 2008 Mumbai attacks the lessons to be learned from that incident had fed into his training, which had involved exercises, more than one, between the Metropolitan Police and your organisation, all before the night in question.

A. So it is a difficult problem and this has brought it into stark view again, but it is not a problem that is easily resolved.

I think also you have to take it into the context that when we were receiving these calls, 999 calls from the rest of London didn't stop, so although I keep talking about 134 calls in that particular hour from 22.00 to 23.00 we took well over 400 calls that were all requiring emergency responses. So it has to be taken in the context of the operating environment and the resource levels that we have on a day-to-day basis, which requires us to take time when you get these extraordinary events to try to pin all that information together and make sense of that and get some situational awareness, which I was describing this morning.

Q. Superintendent McKibbin gave evidence that those training exercises that had taken place with the London Ambulance Service had addressed issues as to extraction, so that this whole business about locating the casualties and extracting them, all of that would have been gone through in the training with the London Ambulance Service before the London Bridge attacks. So it was nothing new.

A. Well, except that training exercises are one thing where you practice principles. What you can't do is ever set the procedure that will actually address all the issues you face on the night or on the day when you are faced with dealing with that incident. I've also heard Superintendent McKibbin telling -- giving evidence and explaining the chaotic scenes there were and the conflict of information that was happening and, indeed, the size of the incident ground and the multiple locations contained within that, and actually the requirement for time to build up a picture that gives you the situational awareness in terms of getting a command and grip of it, as he described, and then actually committing teams within those areas.

I think, you know, we have to look at it in the reality of what occurred that night. It was very dynamic and whilst hindsight is a wonderful thing and

there are lessons that we can learn, undoubtedly -- and I've been very open and honest about where those lessons need to be focused on -- we do have to take it in the operating context on the night where I believe my staff did a really good job and as a result of what they did we had over 40 patients, 19 of which were critically ill, were removed from that scene and taken to hospital and survived.

So whilst the loss of life is regrettable, and there are lessons to learn, I think we have to understand there was an awful lot done that night for patients in really difficult circumstances, but nevertheless, learning needs to take place.

Q. But Mr Woodrow, your senior LAS management figure on the south side of the bridge in those crucial early minutes, Mr Beasley, hadn't even been trained in Operation Plato --

A. No, so ...

Q. -- he told the court?

A. Sorry?

Q. He told the court?

A. Yes, so he was an incident response officer and he was not, at the time of that incident, was not the cadre of officers that were trained to be Operation Plato commanders, and I've described the process of recall to

duty for those commanders to oversee Operation Plato deployments. Mr Beasley wasn't one of those officers.

Q. He said in his evidence that it would have been helpful if he had been aware of Plato guidelines for dealing with marauding terrorist attacks, and he said that would have been helpful but he is not trained in Plato so he couldn't respond to it. Those were his answers when he gave evidence to the court?

A. So in relation to your first point, the incident response procedures that we publish for managers and staff in our organisation does describe Plato and active shooters, it does describe what will happen when an Operation Plato is declared. I accept that Andy Beasley was not trained. I think what Andy Beasley was relating to that if he was a Plato commander then perhaps something more could have been done in terms of deploying ambulance incident teams in a more timely manner. I think that's a point that we as an organisation have acknowledged and we're putting steps in train now to ensure that those HART supervisors and HART managers do have that training to deploy those people.

Q. Superintendent McKibbin, who has drafted a lot of the documentation about guidance for Plato incidents, stated that the first LAS person at the scene needs to be able

to deal with these situations if they arise. You would no doubt agree with that evidence?

A. Well, what I agree is that we have a first predetermined attendance which includes people that are able to make the decision at the forward command point that can deploy ambulance intervention teams more timely.

Q. Would you agree that the first LAS person on the scene needs to be able to deal with these situations if they arise?

A. No, I don't agree with that, sir, because it could be, actually, just an ambulance crew or a member of staff in a single response, such as a motorcycle.

So it would be impossible for us to train 3,500 people to become Plato commanders with the level of training they need, the level of exercising, the revalidation they need, that would just not be practical. So what we have done is look at ways that as part of the predetermined attendance to a major incident, which is assets that are already on duty, whether we can use those assets and train those people to be able to deploy in a more timely manner.

Q. So if there was an attack tomorrow the first person on the scene who might for the first hour have bronze extraction responsibilities might yet again, like Mr Beasley, be somebody who is untrained in Operation

Plato, in marauding terrorist attack procedures?
A. No, that's not what I'm saying, sir, what I'm saying is our tactical response unit supervisors and our HART teams, which are on duty 24/7, we have a national specification and we're held accountable to ensure that we provide that level of provision seven days a week, 365 days a year, we're talking about those people being trained to give the authorisation to deploy and commit ambulance incident teams. So whilst it might not be the first person on scene, HART and TRU are part of a predetermined attendance to a Plato attack and a major incident and therefore we've decided to train those people to take the deployment decisions before the arrival of the bronze Plato commander.
Q. Mr McKibbin's understanding had been that all responding agencies at all grades were aware of what a marauding terrorist attack was and what it meant to be involved in a response to it.
From what you've said it sounds as though your agency at all grades was not aware of what a marauding terrorist attack was and what the response should be.
A. Well, the fact that Mr Beasley relates to Operation Plato would mean that he does have some awareness about what a marauding terrorist attack was, and, as I have said, every member of staff is issued with guidance and

action cards which are very clearly defined around actions in a normal major incident and then additional actions to be taken or the additional things to be aware of once Operation Plato has been declared.
Those guidance cards are distributed to each member of staff and each manager and signed for to say that they've been received.
Q. Mr Beasley told the court that he wasn't aware of the casualties in the courtyard and that to this day he was unaware of the courtyard where all this activity took place. Does the London Ambulance Service take seriously the importance of learning lessons from attacks like this?
A. So, sir, as the director of operations, I do take this incredibly seriously and this process has been very helpful in terms of highlighting issues, deep-rooted issues that I had to dig further and further in to find evidence on to highlight these issues. So the ambulance service as part of the London emergency services takes this very seriously and we are committed and I've produced evidence in terms of learning that we've undertaken since those incidents, that learning is ongoing and, as you know, there was a subsequent number of attacks that year, so the process of learning doesn't stop. We seek to continually improve, and this process

will be another process that helps us to achieve that in conjunction with our emergency service partners.
Q. If all that's correct, Mr Woodrow, why is it that your senior figure on the scene, on the south bank for about the first hour, was unaware to the day that he gave evidence about the courtyard where five of the eight people who died were killed?
A. Well, I can't answer why Mr Beasley does not know about that at this time because it's been subject to a great deal of investigation in the organisation, and I think I've evidenced the amount of debriefing and multi-agency debriefing we've done that have looked at the range of issues that we're discussing here today.
Q. We had evidence that police officers were calling up from the courtyard about help, that didn't reach him. We've had evidence of those CAD messages asking for help to the Boro Bistro, that didn't reach him, he told us. We've heard evidence about the tri-service telephone call at 10.22 that remained open for quite some time, you told us, that didn't cause the officers in the courtyard to be notified of the presence of the resources.
We've heard about the ES5 channel, that command channel that was open to the LAS and the police, and again, despite that, still the message didn't reach the

police officers in the courtyard about the presence up on the High Street of these ambulances. There was a failure, wasn't there, in any procedure or system to give early notification to those police officers about where the ambulance resources were; would you agree?
A. Well, what I would say is that actually where the resources were was where we were being directed to place those resources. So the RVPs were set as part of the declaration, so it wasn't that we were withholding information: we were complying with requests to send resources to the RVP. I acknowledged this morning in evidence that there were indeed issues around people in that particular area of Borough Market that were trying to tend to victims to understand where those resources were, but actually we were sending those resources to the RVPs we'd been directed to send them to.
Q. Yes, but you can't shift responsibility onto members of the public or police constables down on that courtyard to know: well, there must be an RVP, therefore I can safely bring my casualty up onto the street confident that there will be an RVP?
A. Sir, I wasn't shifting responsibility: there was clearly a breakdown of communications in that stage around where the resources were, but what I'm saying is that there were a number of channels that were open for agencies to

exchange information, because the first information that we got around a potential terrorist incident came across on the ES5 Airwave channel. I can't find any evidence of any request on ES5 asking our special operations centre what the location of the ambulances were. I've looked for those transmissions and I cannot find them.

So there were channels open for those questions to be answered and I can't answer why all of those channels weren't used and I accept -- and I accepted this morning -- that's another key area that we need to learn and perhaps it is something that we need to permanently co-locate in a special operations room to ensure that we do coordinate all that information and we do have visibility of each other's assets. I've acknowledged that this morning and I would be happy to explore that with emergency service partners, as I've said this morning.

Q. Mr Woodrow, Mr Hough took you to a document, a debriefing document, that made it plain that your own people didn't even have a clear understanding of where these RVPs were.

A. Well, no, I think that's actually not quite what that document said. I think there was confusion around RVPs because there were multiple RVPs, multiple RVPs given for our resources to muster at because of the dynamic

situation that we were facing, and there was information coming in of various threats such as IEDs, active shooters, even descriptions of outstanding active shooters armed with assault rifles, and therefore, RVPs were very much being moved around and there was a lot of communication around trying to confirm where those RVPs are. I think it's just the nature of the chaotic scene that we were trying to deal with, that as the threats seemed to move, RVPs were being moved to try to keep responders, and that's not just LAS responders but responders in general, safe from immediate risk.

Q. Mr Woodrow, all marauding terrorist attacks will involve chaotic scenes, won't they?

A. Yes.

Q. It's something that's to be expected?

A. Well, I think it is, but I think it's essential to understand that you cannot make sense of that chaos in very quick time. We need to get resources there, we need to get information, we need to get situational awareness. It's not something that can be achieved when we have got resources already deployed across London on a very busy Saturday night, it's just not realistic to expect that we can get 100, 150 people into an area in the first 10 minutes of an incident, all of that takes time, and I think Superintendent McKibbin also

acknowledged that in terms of the deployment of police service assets as well.

Q. The knowledge that these things are chaotic is why we need procedures for these things, and the reason why nobody down in that courtyard was notified of the location of the resources is because you had no specific procedure for giving early notification of the location of your resources. There was an absence of a system or a procedure --

A. No, sir --

Q. -- to give notification?

A. Sir, I disagree with that, because outside of this major incident we deal with 1.2 million incidents a year where we get our resources to multiple patients, to multiple incidents, so it wasn't a failing of having procedures, because those procedures serve us well. The issue that we had on that night is that we were overflowing with information which was conflicting.

We also had information in relation to the safety of scenes, and that's what made it difficult, and I've acknowledged that actually to try to get through that information in a timely manner when you're getting such a large volume of calls is difficult and indeed it does take time.

I know that's not necessarily the answer that you

would like, but that is the reality when you're dealing with a major incident, and what I have acknowledged is that we need to do more work, using some of the means that I've described this morning, to see if we can make that process a more timely process so that we can identify patients in a quicker way, that we can commit specialist resources to provide treatment to those patients and that's the two key areas that I keep referring to that we as the London Ambulance Service and an emergency service partner will look to improve as a result of this process.

MR PATTERSON: My Lord, I don't know what time you are thinking of for the mid-afternoon break, but I do have a little more still to cover and it may be that a break at this stage would allow me to --

THE CHIEF CORONER: Yes, we've got two more witnesses to get through, so I know we are going to have a late session anyway, but we will take a break there, but I am going to suggest we just have a 10-minute break, Mr Patterson --

MR PATTERSON: Yes.

THE CHIEF CORONER: -- so that we have time to, as I say, address the other witnesses that I know are waiting.

MR PATTERSON: Yes, of course.

(3.21 pm)

(A short break)
(3.34 pm)
MR PATTERSON: Mr Woodrow, you appreciate that until a few days ago the families that I represent were unaware that Mr Beasley had any knowledge of the casualties in the courtyard. That was the effect of the evidence that he gave to this court. Are you aware of his evidence? Have you read the transcript?
A. Yes, I have.
Q. However, a few days ago we received disclosure of a recording of a radio message that features Mr Beasley and you touched upon this earlier. It's {DC8321/1}, please, if we could see it once again on the screen. Your assessment is that this was made at about 10.30 in the evening; is that correct?
A. Yes, it will be on the CAD log, radio transmission on the log, and the transmission obviously was transcribed.
Q. And in this we can see about six or seven lines down, "AB", so Andy Beasley, saying that he had been approached by firearms teams:
"... we need LAS down the staircase I believe ... on the south side."
And so your evidence is that it's understood that that's a reference to that area down the stairs which lead down towards the Boro Bistro?

A. So whilst we can't be conclusive on that, it would be -- it would be my assumption that that was indicating that general area.
Q. So if that's right, there can be no suggestion that this was somebody who was overwhelmed with the chaos or unaware of the presence of the casualties for whatever reason. If that's right, this is somebody who was made aware specifically of the casualties in that general area, down below street level; yes?
A. Well, so what Andy Beasley was told by firearms teams is that they believed there was casualties down a staircase on London Bridge.
Q. So if that's right, given that knowledge, given that awareness of the casualties down off street level, the next question then is what steps did he take to try to secure their extraction?
And we have seen no evidence of any actual steps by that bronze extraction officer to have them extracted; can you identify or pinpoint any such evidence?
A. So what I will say is that he has been given that information by a firearms team, he then quantifies that he believes that that area is still unsafe, "active shooters", that is there, he's reporting that information to EOC and he's asking for carry sheets, orthopaedic stretchers, and he's asking for ambulances

to be brought forward from the RVP.
So whilst I don't believe Andy Beasley was conscious, fully conscious that these were patients that were located in the area of Boro Bistro, it was clear that firearms teams had come to him and said that there was patients at, or there was a patient down a staircase south side of the bridge.
What Andrew Beasley goes on to do then is to acknowledge that. He does make a request to EOC to bring ambulances forward from an RVP and he also makes requests for further carry sheets and orthopaedic stretchers, talking about extracting patients and getting them to the north side.
But I must stress that when he talks about that particular area down the staircase, he quantifies that with he doesn't believe it's safe, "active shooters", and EOC as a result of that turn around and say: we're not going to deploy directly to that location, we'll get vehicles down to the RVP, and it is at that point that there is an interjection from a clinical team leader John Rice, who is at Bridge Street, Southwark, interjects, hearing that radio transmission and asks for permission for EOC to go forward because he had five ambulances with him. That permission was granted by EOC to move forward and there was a conversation between

Andy Beasley and the clinical team, John Rice, as to where the appropriate place would be and would their route that they were taking from Bridge Street, Southwark, be safe?
Q. How on earth could Mr Beasley have been unaware of all of this detail and have told the court on the contrary that he was unaware of these casualties in that general area; can you help us?
A. So I'm not saying that Andy Beasley was consciously aware of patients in that area; I was saying that Andy Beasley was getting information from lots of sources, including some information around [assistance] being required at the bottom of the staircase.
What he does with that information is that he gets on to EOC and reports that to EOC and he requests a number of resources, physical assets in terms of ambulances. So from that, Andy Beasley is trying his best in a difficult situation to try to extract patients that he can, and he requests the equipment and he also informs EOC that they're going to start to evacuate patients to the casualty clearing station on the north side of the bridge.
So to say Andy Beasley was not actively trying to manage casualties, was not actively trying to locate patients, I don't think is truly accurate. I don't

believe he knew that those patients were in the Boro Bistro area, but he was getting information about a number of patients and clearly that information also gave him some information around the safety of that site because he immediately in that transmission talks about "I don't believe it's safe, active shooters".

Q. In the next paragraph we have following that EOC speak:"Yer, Roger", and speak about the current situation; do you see that paragraph?

A. Yes.

Q. And in that response to him revealing about the need for the LAS to go down the staircase, what he's being told, if you read to the end of that response, is that they:

"... won't send anyone into you yet, but get them to RVP ..."

In other words, he is being advised or instructed to do what he should obviously do is get them out, extricate them and get them to where the ambulances are, but he still doesn't do that, does he?

A. No, that isn't actually what is being described there, sir, it's actually EOC saying they will not deploy resources into that area because of Andy Beasley saying there are active shooters. What EOC do turn round and say is that they will send further resource into the RVP. That's not the same as extracting the patients and

taking them to the RVP. Andy Beasley set up a casualty clearing station at St Thomas Street junction of Borough High Street. The RVP that was serving that casualty clearing station, well there were a number, were Elephant and Castle, Bridge Street in Southwark, and then we had King William Street north of London Bridge, which was servicing ambulance assets for patients that were being evacuated to the casualty clearing station north of the bridge.

Q. But in the minutes that followed this at 10.30, so at 10.35, 10.40 and 10.45, still the police officers down in that courtyard weren't told by anyone from the LAS of the arrival of the ambulances up on the High Street, were they?

A. No, but you would read from the evidence that the firearms team that informed Andy Beasley there was a patient down on a staircase south of the bridge would be aware of where ambulances were because they were with Andy Beasley at the casualty clearing station when that conversation took place.

Q. And Mr Beasley himself didn't cause any message to be passed to those officers in the courtyard, did he?

A. No, he called EOC and asked for further resources to come forward and also for extrication equipment, such as orthopaedic stretchers and carry sheets.

Q. And your EOC didn't pass the message to the courtyard in the minutes that followed either, did they?

A. So the EOC staff would not have been in a position to pass any messages direct to anyone in the courtyard because we didn't have actually LAS personnel in the courtyard at that time, sir.

Q. So again it brings me back to absence of training of Mr Beasley as to how to bring about locating and extricating, and it brings me back to the absence of a procedure for notifying those of the arrival and the location of the resources. Those two things have fed into or caused those people to remain there in the minutes that followed; would you agree?

A. No, I don't agree with that, sir. I believe Andy Beasley was discharging his duties as a member of the command structure for a major incident. That major incident was more complex because Plato had been declared as part of that major incident, and the command for Plato does not fall to Mr Beasley, and the actions that EOC took was to recall the on-call Plato commander and mobilise that Plato commander to the scene so that they could manage the Plato dimension of this major incident.

Q. Isn't it possible, Mr Woodrow, that if the person in charge of extraction for that first hour had been

properly trained in Plato, or if there had been a proper procedure for notifying the arrival of the resources, if either of those things had occurred, it's possible, isn't it, that those people would have come out of the courtyard at a much earlier time than they did?

A. Sir, the guidance that we were working to, which is the marauding terrorist attack JOPs, that is a national document that was embedded into our incident response procedures, it's embedded into the joint emergency service interoperability principles, and it's embedded into every document that London emergency services use. The process to manage a Plato incident and to recover patients from the warm zone was through an FCP and the requirement to send multi-agency partners to that FCP, to have those discussions, share intelligence and make those deployment decisions. That was the procedure, and on the night that procedure was followed.

Now, I have on several occasions today said that that took time, and I think colleagues that have given evidence have also said that that took time, and I have committed to work with partners to see whether we can improve that and indeed, I've spelt out some of the actions that the LAS as an organisation will do to ensure that to commit AIT teams we do that in the shortest possible position. I will reiterate, we will

do that through the use of HART team managers, on duty team managers, and tactical response unit supervisors who will actually give the authorisation for the multi-partner commanders at the FCP to deploy those assets.

Q. Mr Woodrow, my suggestion is this: on the night there was insufficient urgency and the procedures were deficient for urgently getting people out of that courtyard.

A. So that is not my reflection and that is not what the evidence would reflect, because there were significant numbers of patients that were moved rapidly from that scene. 19 of those patients were triaged as P1, so critically life threatened, and those patients were triaged, treated, extricated and removed to hospital. And no patient that we took to hospital on that night lost their life, sir.

Q. {DC5052/3}, please. This is one of the debriefing documents we looked at earlier and at paragraph 37 in the feedback meeting a few days after the attack it was stated that:

"There were complications with commanders arriving on scene and being unable to notify anyone via radio that they had arrived (the radios were not working)."

What was the difficulty?

A. So the radios were working. The issue that was highlighted in the debrief was an issue that when resources were initially being sent, bearing in mind the resources were initially being sent on their own home dispatch groups, so their own talk groups, and then obviously the information changed in relation to what was happening on the scene, and so there was issues in the first instance with people managing to get their transmissions -- you can only have one resource transmit through the Airwave talk channel at a time. That issue was looked into as a part of this debrief process and actually that issue was resolved when, in accordance to procedures, the major incident talk groups for command channels and resource channels were implemented.

Q. Police Constable Attwood who was dealing with James McMullan down in the courtyard stated that he had no direct link on his radio with the ambulance service and although he spoke about the possibility of having talk groups, that it would take some time before they are set up and, as you have told us today, in any event, talk groups would only be for staff on the ground within the LAS, so that there would be no procedure for those sorts of radio communications between the LAS on the ground and police officers on the ground; is that correct?

A. So that is correct currently. There is a command channel that is shared that is always open, that is the ES5. So if there are communications going back into the MPS control room, those messages can be shared across into the control rooms with the London Fire Brigade and the London Ambulance Service through Emergency Service 5 channel, which is an Airwave talk group.

Q. So when we think about the questions that Mr Hough was asking you about potential procedural improvements for the future and communications, does it remain the case to this day that a police officer on the scene who wants to speak directly with the LAS on the scene cannot have direct radio contact?

A. So there are ways where an officer's Airwave radio could be programmed by the individual to be used as a mobile phone, using an ISI number, and then us to contact the individual through an Airwave terminal in the ambulance service headquarters.

But I think what we're talking about here is a fundamental review around shared command and operational resource groups within a major incident, which would need to be explored further.

Q. So the constables on the ground are reliant upon those above them for passing to them the information they need to receive.

A. Well, for each associate organisation they would be passing information or asking questions of their control room or their special operations centre and then the coordination across the three services would either happen on the tri-service conference call or ES5, which is the open channel where each control room can talk to each other, which is operational 24/7.

MR PATTERSON: Thank you, Mr Woodrow. Those are all my questions.

MR HOUGH: Those are all the questions we have for you. Thank you very much for giving evidence.

A. Thank you.

MR HOUGH: Sir, the next witness is Dr Wrigley.

DR FENELLA WRIGLEY (sworn)

THE CHIEF CORONER: Good afternoon. Please do make yourself comfortable, if you want to take a seat that's absolutely fine.

Questions by MR HOUGH QC

MR HOUGH: Would you please give your full name for the court?

A. My name is Dr Fenella Kate Wrigley.

Q. Dr Wrigley, I ask you questions first on behalf of the Coroner, and then you may receive questions from other lawyers.

What is your current position in the London

Ambulance Service?
A. My role at the London Ambulance Service is medical director. I've been medical director since March 2016. I also retain a practising role at the Royal London Hospital where I am an emergency medicine physician.
Q. I think within the London Ambulance Service you've worked for ten years; is that right?
A. That's correct, I joined the ambulance service in 2008 as an assistant medical director for control services and then was appointed deputy medical director in 2010 before being appointed to medical director in 2016.
Q. In a sentence or two, what is the role of the medical director?
A. The medical director is responsible for the clinical strategy across the trust, which includes clinical safety, looking after the clinical education and standards, the clinical audit and the advanced paramedic and clinical practice guidelines.
In addition to that, I'm the trust responsible officer for doctors, I'm the controlled drugs accountable officer, the Caldicott Guardian and the director of infection prevention control.
Q. And as you have also told us, you're a practising consultant in emergency medicine?

A. I am.
Q. You appreciate you're here to give evidence on clinical aspects of the London Ambulance Service emergency response to the attack.
A. Yes.
Q. You made a number of witness statements, two of them concerning the victims of the attack, and it's those about which I will be asking you. You may refer to them as you wish.
A. Thank you.
Q. During the attack itself, is it right that you were gold medic, or gold doctor, the strategic medical director for the incident?
A. That's correct.
Q. Again, briefly, what were the responsibilities in that role within the attack itself, or the response to it?
A. The strategic medical advisor is an advisory role to support the gold commander with clinical aspects of an incident as it unfolds, and to act as a point of liaison to the wider NHS to be able to support the hospitals that have been prepared to receive patients, and also to ensure that the right clinical resources are available to be deployed at the right time.
Q. In preparing your statements and preparing your evidence relating to the clinical aspects of the response, have

you had access to a wide range of material?
A. I have, and I would also like to bring to your attention that I have subsequently to submitting my statement, I have seen the video footage from the police officers for the patients that are in my statement.
Q. So just to understand what you've had: you've had the patient report forms of the LAS crews?
A. I have.
Q. Witness statements made by crew members, both internally and to the police?
A. Yes.
Q. The reports of the police investigation team about each of the victims?
A. Yes.
Q. Post mortem examination reports?
A. Yes.
Q. And you tell us you have also seen police body-worn video showing the efforts at resuscitation?
A. I have.
Q. May I then ask you some questions first of all in relation to your overview witness statement, first of all about the clinical skill sets and scope of practice of different staff members. Now, is it right to say that the LAS workforce encompasses staff with a number of different skill sets and qualifications?

A. That's correct. We have emergency ambulance crew who are non-registered clinicians who have undertaken a training course to enable them to make clinical assessments, to be able to administer drugs under schedule 19 and to be able to understand the operational aspects of working on an ambulance, including major incidents.
We also have paramedics, who have either undertaken a three-year degree course or been through the London Ambulance Service academy, and they, after doing an 18-month apprenticeship, after they've completed their degree, are able to work as fully autonomous paramedics.
Q. So first of all, the emergency ambulance crew. I think the service has more than 800 such people?
A. That's correct.
Q. Do their skills enable them to perform life support as well as providing some medication of the types you have alluded to?
A. That's correct, they can undertake basic life support and defibrillation and they can administer drugs that are under schedule 19 which means drugs for emergency situations.
Q. But they're not permitted, is this right, to perform invasive procedures, such as cannulation or needle chest

decompression?
A. That's correct.
Q. As to the paramedics, is it right, according to your statement, that the service has a little under 1,700 fully qualified paramedics?
A. That's correct.
Q. And just over 180 newly qualified ones?
A. Yes.
Q. And as we've heard, there are further practitioners known as advanced paramedic practitioners who have undergone additional training on top of their paramedic basic training?
A. They have. These are paramedics who have a vast range of experience and have undertaken additional training up to masters level, and are able to administer a wide range of drugs and undertake a wide range of procedures, emergency procedures.
Q. And then above that level still further, is this right, are the skills of a HEMS doctor, who brings with him or her all the surgical skills of a hospital doctor?
A. So the -- we work in collaboration with the London's Air Ambulance and the HEMS doctors. The HEMS doctors are under the governance and employed by Barts Health. The paramedics are employed by London Ambulance Service, but between the London's Air Ambulance doctors and the

doctors that work within my team, there are a range of doctors who can take additional skills to the scene.
Q. I would just like to ask a few questions in relation to Christine Archibald, having regard to your evidence about different levels of staff having different qualifications and skills.

Now, we know from the evidence of the pathologist that Christine suffered injuries which were immediately fatal and not survivable. From all your assessment as an emergency doctor looking at the records that you have referred to, do you agree with that conclusion?
A. I do, sadly. The injuries were unsurvivable.
Q. We've also heard that Mr Armstrong, a member of emergency ambulance crew staff, carried out a needle chest decompression at one stage in the treatment of Christine in order to relieve a risk or perceived pneumothorax. I think you're aware of that?
A. I am. So Mr Armstrong, based on the mechanism of the injury that Christine had received, and the fact that she was in cardiac arrest, felt that there was a possibility that she had a tension pneumothorax. A tension pneumothorax is where air gathers in the side of the chest and compresses the lung so it makes ventilation, breathing, even with assisted ventilation very difficult and this can be relieved by inserting

a cannula, which is a needle with a plastic tube over the top of it, into the pleural space, which is the area around the lung, to try to relieve it. It is a skill which requires clinical diagnosis, so you need to be trained to understand what you are looking for and what the indications are, and it is not without risk: there are a significant number of cases of a pneumothorax being caused if it is done incorrectly.

The situation Mr Armstrong found himself in without support immediately available from a paramedic, he had seen and witnessed the procedure being done previously and he made a decision to undertake it.
Q. Now, he accepted that he wasn't qualified to administer the process, but he said that he did it because Christine was in an asystolic condition and he considered that it might help him restarting her heart. He also described using a 18G cannula in the process.

First of all, what's your view of his decision to carry out that procedure at all?
A. Whilst I can understand the decision that Mr Armstrong made given the situation that he found himself in on that night, all of our clinicians work to very clear guidelines around the level of practice that they may undertake and therefore it is not a procedure that I would support being undertaken by a non-registered

clinician who has not received the right training. That being said, sadly in the case of Christine Archibald, she was already deceased when that procedure was undertaken and, therefore, it would have caused no harm to her.
Q. Based on your understanding of the evidence, had Mr Armstrong carried out a proper assessment for tension pneumothorax before administering the procedure?
A. I think that within the scope of what he had been taught, he assessed the patient as well as he could. That being said, the patient had significant injuries and therefore the anatomy that he was examining would have been very distorted.
Q. What is your view of his method, using specifically an 18G cannula?
A. It's -- we would normally use a larger cannula because a 18 gauge cannula has a very fine bore and is therefore at risk of blood, which is very often in the chest as well, clotting the end of it. It's also quite a short cannula, it's only 32 mm long and in the majority of the population that is not long enough to actually get through into the pleura. My reading of the post mortem report it suggests that it did not go through into the pleura.
Q. Moving on now to triage and the triage sieve, could we

have on screen, please {WS5037/12}. We've heard through other witnesses how triaging operates according to an algorithm which we can see on this page; is that your understanding too?
A. That's correct. In a major incident there are two stages: a triage sieve and then a triage sort. What is there in colour is a triage sieve.
Q. That's a triage sieve which identifies patients according to a P1, P2 and P3 and deceased triage categories?
A. That's correct.
Q. What is the triage sort that is then carried out?
A. So when patients arrive at the casualty clearing station where there will be additional clinicians and advanced clinicians available, the triage sort is used to look at their conscious level, their respiratory rate and their systolic blood pressure and from that to recategorise them.

An example to give to you would be that somebody at the scene may be categorised as a P2 because they're unable to walk because they've got a lower limb injury, whereas when they get to the casualty clearing station, actually if they are conscious and they are breathing and their blood pressure are all all right, then they may well then be categorised as a P3. So it's a way of

ensuring that the sickest and the ones that need help are moved from the scene to the casualty clearing station, but then prioritising those that need to get to hospital quickest using physiology to be able to make that decision.
Q. During the initial triage sieve when staff in a major incident are going through the scene and looking at a number of injured people, what types of medical care are they expected to provide, as I say, while they're doing the triage process?
A. So immediately looking for signs of life, so talking to anybody who has been injured and seeing if they're responding to immediately provide bandage and pressure to bleeding, to stop catastrophic bleeding, and anybody who is unconscious, so not responding when spoken to, to open their airway, and to see when they have an opened airway which can be done with an adjunct, which is an oropharyngeal plastic tube to put in their mouth to see whether they maintain regular spontaneous respiration so if they can breathe for themselves without requiring somebody to stay and assist them with their breathing. If they are unable to do that, then sadly they are declared dead in a major incident.
Q. So during the triage process, the initial triage sieve, would LAS staff be expected to provide care such as CPR?

A. They would not provide CPR and they would not advise to carry on CPR on a patient that is not spontaneously breathing.
Q. Can I move on to your assessment of each of those who died, which you set out in detail in your clinical statement. You address each of the victims other than Xavier Thomas; is it right that he wasn't addressed because he didn't come under the care of LAS and was -- his body was recovered some time later?
A. That's correct, although I did attend and listen to the post mortem outcome for Xavier.
Q. Can we address the other victims of the attack one by one then, please.

First of all, Christine Archibald, you've already told us that you concur with the view that her injuries were immediately fatal and non-survivable. We know that she was attended to by an ambulance crew member, Keeley Whale, a student ambulance paramedic, Mr Browne, who were also assisted by nurses from Guy's Hospital. She was asystolic throughout and showed no sign of life. It may be an obvious question, but if the triage sieve had been applied to her, what view would have been taken?
A. So had the triage sieve been applied to her, then she would have been categorised as dead and cardiopulmonary resuscitation wouldn't have started.

In the case of Christine Archibald, she was the first patient that the calls came in about and it was reported that she was a lady who had been hit by the van and was already receiving chest compressions from members of the public, and a lifeguard, I recall, who came to her assistance.

When the crew arrived they were aware of other people who had been injured by the van, it was their belief. They were not aware of the events unfolding on the south end and therefore they continued to treat Christine as the victim of a road traffic collision.
Q. In that context, not seeing her as one victim of a very major incident, was it in your view reasonable for them not to take a triage approach, but simply to treat the very badly injured person in front of them?
A. It was reasonable.
Q. And as to the quality of their clinical treatment, based on all your reading of the evidence, what was your view of that?
A. That the quality of care that she was provided by both the ambulance service and all of the personnel who assisted the ambulance service was very high. Unfortunately her injuries were unsurvivable: she had a transection of the aorta, which is the largest blood vessel taking blood around the body, and therefore she

would have immediately lost her blood into her body.
Q. May we now move on to Sébastien Bélanger, who you address from page 9 of your clinical statement. We know that resuscitation efforts started on him at an early stage involving initially members of the public and then police officers soon becoming involved. We know that he suffered a range of injuries, 12 incised wounds, a severe chest wall injury with an injury to the lung, a collapsed lung, also injuries to his neck and facial area, his arm and that he suffered very serious blood loss.

We know that he was brought up from the Boro Bistro courtyard while CPR was still being performed at around 22.46, at which point it was reported that he was in cardiac arrest.

First of all, have you considered the evidence in relation to his injuries and their effects?
A. I have, yes.
Q. What views have you formed?
A. So Sébastien suffered a significant number of incised wounds which are wounds caused by a stabbing or knife device, the most significant of these wounds were to his arm, which bled profusely, and also one to the side of his face and to his neck as well, which is reported to have caught a small branch of the carotid artery, which

is the large artery taking the blood up to the head. The reports that I have seen indicate that prior to the police arriving a member of the public had found Sébastien and that he was not breathing. At the point that the police arrived, the combination of the blood loss externally from his arm wounds and from his neck and internally from the injuries that you have described, which were the two significant chest injuries to his lung and one lower in his right lung and through into his liver, which would have been bleeding both internally and externally, meant that he was in a hypovolemic and hypoxic cardiac arrest, so a combination of having lost a huge amount of blood and having not enough blood pumping round the body to be able to take oxygen round, and the injury to his lung.

He received extremely good care from the people that were at the scene who did everything they could, but at the point that he went into cardiac arrest, which from the timeline that I have put together is around 22.16, the blood loss had resulted in him having an unsalvageable situation. The reason that I've drawn that conclusion is that I have watched the body-worn footage from the police who were there and the extent of the blood that was seen around Sébastien suggests that he had had a massive blood loss, and I subsequently

reviewed that position after having heard Dr Swift's evidence as well.
Q. Dr Swift, you appreciate, gave the opinion that it is possible that more could have been done for Sébastien, and ventured to suggest that it might have been possible to save him, although the pathologist qualified that by commenting that it wasn't his particular area of expertise, and he was careful about that qualification.

Emergency medicine, of course, is your area of expertise. What would be your comment on the evidence from Dr Swift in that regard?
A. So I fully respect that Dr Swift has a vast range of experience of doing post mortems on these type of patient. When patients reach a situation where the body's response to losing blood has been overwhelmed, so the increase in your heart rate, the tightening up of all of your peripheral blood vessels to try and pump back the blood to your heart and to your brain, and the clotting cascade, which is there to be able to help the blood loss reduce by forming clots, has been overwhelmed, that is when a patient becomes unsalvageable.

From the point of view of are all of these patients unsalvageable, I think we need to recognise that in this situation Sébastien was in a situation where there was

live fire being heard, there were shouts at both 22.24 and again at 22.26 advising people to get out. The police and two members of the public remained with Sébastien, but at that point, there was no chance of reversing the situation that he was in.
Q. Let's for the moment ignore the surrounding circumstances and focus on the clinical picture, which is your particular area of expertise. You've indicated to us that Sébastien was not salvageable by 22.16; is that right?
A. So at 22.16 he was in cardiac arrest and had suffered significant blood loss that he was not salvageable at that point.
Q. Was there any medical intervention at all from that point, 22.16, which could have saved his life?
A. Not in my opinion, no.
Q. Before that, between the time that he was attacked at around 7 or 8 minutes past, and 16 minutes past, is there anything that could have been done for him over that period, first of all, in any context, even in an emergency room, that could have saved him?
A. So if Sébastien had been in an emergency room or been an isolated patient in an isolated incident, then trying to stop the bleeding by putting a tourniquet on his arm, packing his bleeding wound from his neck, establishing

a definitive airway, so passing a tube down his trachea, into his lungs to take over his breathing to be able to provide oxygen for him and giving fluid could have been done.

If London's Air Ambulance team had been able to get to him as an isolated patient, there are then additional things that they bring because they carry blood and they are able to do more advanced procedures such as opening the chest in order to be able to try to get control of the bleeding by then pressing the aorta, the big vessel.

The survivors that they have reported from haemorrhagic cardiac arrests remain very low, but it is certainly an area that they continue to work really hard with and we're all supporting to push those boundaries to make sure these people can survive in the future.

Q. Is this right: that if Sébastien had received dedicated treatment at some point between 22.07 and 22.16, it is possible that he might have survived but the chances of surviving such injuries are nevertheless not very optimistic?

A. That's correct, on the balance of probabilities the extent of his injuries and the extent and speed of his blood loss would have almost certainly meant that he sadly would not have survived, but more would have been able to have been done.

Q. After 22.16, though, it's your view that with any practical treatment he could not have been salvaged?

A. That is correct.

Q. We know that when he was taken to the ambulance at shortly after 10.45, he was initially regarded as appropriate for transfer to hospital, but at that point a P1 patient with a severe neck laceration, Marine Vincent, was brought to the staff at the ambulance. We've heard from Mr Lesslar that he and Mr Rutherford decided that she should be treated as a priority because she was alive but her bleeding was difficult to control. At that point Sébastien was assessed again and a conclusion reached that he was not survivable and he was treated as deceased. What's your view of that process and that decision?

A. The decision-making was very difficult for the crews on the scene, it was the correct decision to make. That being said, it is really important to recognise that this is not a decision that any of the crews or any of the clinicians on the scene would have made lightly, because to have an ambulance and then to give the ambulance to somebody else is a really, really hard decision, and I would like to say how sorry I am to the family because I'm sure that's something that's really hard for them to understand, that decision-making

process.

Q. Is this right: that by that stage, 10.45, when Sébastien was in cardiac arrest and had been for some time, and based on everything you had seen, is there any realistic chance that he could have been saved if taken into an ambulance?

A. Sadly not, no.

Q. Can we move to Kirsty Boden, whom you address at pages 12 and 13. We have received evidence from the pathologist that Kirsty received injuries which were quickly fatal and not survivable. Have you taken a view of her injuries and their effects?

A. Yes. Kirsty had multiple stab wounds including one to the left side of her chest, her left upper arm and behind her left ear. The most serious was the left side of her chest which damaged her ribs and perforated her left lung and the left ventricle resulting in an injury to the main pumping chamber of the heart and blood going into the sack surrounding the heart.

Q. Do you therefore concur with the pathologist as to the speed of those injuries causing her to be beyond saving?

A. I do.

Q. She was attended to by an off-duty doctor and that doctor's friends, and we've heard that they made considerable efforts and recognised that very sadly that

she had died at an early stage, and they had to leave her because of danger at the scene. Have you considered the treatment they gave?

A. I have reviewed their statements and it would appear that the basic life support that they provided was of a high standard, but sadly the injury that Kirsty had sustained was unsurvivable.

Q. We've heard that a HART paramedic formally recognised her as deceased after 1.00 am, and presumably you would agree with that assessment?

A. I would.

Q. May I move on to Alexandre Pigeard. We have heard that Alexandre suffered very severe stab injuries, including a very severe injury to the neck, and the pathologist gave evidence that they also could not be survived and led to swift collapse and death. Have you considered the injuries and formed a view yourself?

A. I have. The injuries that Alexandre sustained were multiple incised wounds again, but the most significant one was to the right side of the lower neck where both a significant artery and vein were damaged, resulting in profuse and rapid bleeding from those wounds. These wounds are particularly difficult to get compression on to try to stop the bleeding. They're known as junctional wounds and they're where vessels separate out

and so to actually try to get control of the bleeding just with direct pressure is much more difficult.

So my view is that he suffered a fatal neck stabbing with catastrophic blood loss as the cause of his cardiac arrest and death.

Q. PC Attwood rendered resuscitative care to him and applied a bandage to his neck wound but recognised that there was massive blood loss and received no response to all his efforts. Have you considered the particular efforts that PC Attwood made?

A. PC Attwood did everything that was possible by trying to compress the bleeding wound. As I've described, these junctional wounds are very difficult to compress, but he did his best but recognised very quickly that the blood loss was catastrophic.

Q. Once again, do you support the decision of the HART team after 1.00 am to recognise Alexandre as deceased?

A. I do.

Q. James McMullan suffered severe stab injuries including a severe wound to the chest. He received care from PC Miah and others. The pathologist's view of his condition was that his injuries, like those of some of the others, resulted in early collapse and were not practically survivable. What is your view of those injuries and their effects?

A. For James, the most significant injury he had was a stab wound to the left front of the chest which went through his rib into the chest, into the right side of the heart, and then transected, so cut across the aorta, just as the aorta was coming out of the heart, and then into the left side of the chest. Cutting the aorta at that point would result in immediate catastrophic blood loss because no blood can go anywhere round the body because the aorta is the main pipe to take blood round the body.

Q. He was brought up to an ambulance shortly after 22.45 that evening and his condition was at that stage reported to be one of cardiac arrest. Is it your view, like that of the pathologist, that his injuries could not have been successfully treated by any practical means at the scene?

A. Sadly it is, yes.

Q. James was triaged as deceased when found to be in cardiac arrest near the ambulance. Was that an appropriate decision, based on your understanding of all the events?

A. It is, yes.

Q. May I ask you about Sara Zelenak. Sara also suffered severe stab injuries. We have heard from the pathologist that they were quickly fatal and not capable

of being survived. She was provided with CPR but without giving any response at all for between 10 and 15 minutes before she was seen by paramedics and triaged as deceased. From all your view of the evidence, what is your view of Sara's injuries and whether they could have been treated?

A. Sara sadly received a wound through the top part of her neck, just below her skull, which resulted in a transection of her spinal cord at a very high level. The result of transecting the spinal cord at that level is that the patient is unable to move and that area of the cord is also responsible for autoregulation of both -- of the blood pressure and the heart rate, but also the nerve supplies the diaphragm, which is important in breathing, so by transecting the cord at that level there would have been immediate loss of the ability to breathe, to move, and she would have suffered a catastrophic drop in her heart rate and her blood pressure. She almost certainly would have gone into a respiratory arrest and stopped breathing initially, and at that point the lack of circulation of oxygenated blood would have led her to go into cardiac arrest. And it was unsurvivable, unfortunately.

Q. Do you consider that the triage decision made after that period of CPR without response was a correct one?

A. I do.

Q. Finally, Ignacio Echeverria, we have heard that Ignacio suffered stab wounds, including to his back, from which he bled profusely, and after which he moved for only a minute or so. We have heard that he received resuscitative care from a police officer and after a few minutes from an off-duty doctor who gave evidence that Ignacio was unresponsive to CPR throughout the period that followed. Thereafter he received further care from an LAS crew.

Now, what view have you formed of his injuries and whether they could have been treated?

A. So Ignacio's injuries included a stab wound to the mid-part of his back towards the left side, which transected or cut across two branches of his pulmonary artery. The pulmonary artery is the large vessel which carries deoxygenated blood, so blood that is going back into the lungs to get oxygen reattached to it from the right ventricle and they bleed very, very profusely and rapidly if they are cut. It would have been a very catastrophic bleed with rapid death.

Q. We've heard that he was initially triaged by Mr Edwards, the paramedic, as a P1 patient in the very early period. He was then moved across London Bridge to a casualty clearing station because of a perceived danger at the

scene after gunfire had been heard. Was that decision to move him a reasonable one in your view?
A. Based on the situation that we've heard during the course of this Inquest, the decision to move was reasonable. They were also trying to move him to where there was additional help, should that have been required, but sadly the injury was fatal and moving him would not have either altered his outcome or improved his chances of survival.
Q. He was assessed at the casualty clearing station by Dr Lambert and determined to be deceased just before 11.00 pm.
A. That's correct.
Q. You were aware of that?
A. Yes.
Q. Is that an assessment decision with which you concur?
A. I do.
MR HOUGH: Thank you very much, those are all my questions.
Questions by MS AILES
MS AILES: Doctor, my name is Victoria Ailes. I'm asking questions on behalf of the families of a number of those who died, in particular for these purposes I am asking questions on behalf of the family of Sébastien Bélanger.
You've provided today your opinion that the injuries that Sébastien sustained had become non-survivable by

10.16; is that right?
A. That's correct.
Q. That's not a conclusion, I think, that we find in any of your statements?
A. So the conclusion that I've come to is having viewed the body-worn footage where the degree of blood loss was apparent. That was not something that I had seen prior to the start of the Inquest.
Q. You also, I take it, reviewed the evidence that Dr Swift gave --
A. Yes.
Q. -- and his opinion? Have you had any discussion with Dr Swift about this?
A. No.
Q. You are commenting on Dr Swift's opinion but you have not provided any disclosure that would give him an opportunity to comment on yours?
A. No.
Q. So we're not in a position to know whether he would agree with you about the conclusion that you have drawn in light of the particular information that you have seen?
A. No, the opinion that I'm giving is based on being -- is a clinical opinion. I would not be able to comment on his pathology opinion at all.

Q. I think on the fundamental point, in fact, it may be that you agree with Dr Swift about this: you both agree that the original injuries may possibly have been survivable at the point that they were sustained?
A. I think we need to recognise that Sébastien had a significant number of profusely bleeding injuries. However, if he had been an isolated patient in an isolated case, then by trying stem the flow of that bleeding there may have been a window of opportunity where additional help could have been got to him.
However, by the time he collapsed and was found unfortunately the blood loss was too significant.
THE CHIEF CORONER: And by isolated... ?
A. So, sir, if he hadn't been caught up in the situation, so if he had sustained this injury just as an individual patient in London.
THE CHIEF CORONER: As a one-off?
A. Yes. Yes. So we would have immediate access to him.
MS AILES: So, similarly, if it had been an isolated incident with prompt attendance by the HEMS team these injuries would remain possibly survivable?
A. So just from the timing of being able to get the HEMS team there, if we look at the time of night, they would be travelling in a car at that time of night. We understand that Sébastien received his injuries at

around 22.08 and collapsed at 22.16. Unless the London's Air Ambulance car was in the vicinity to be able to mobilise at night by car or in the day by [air], they would be arriving at the point that he was going into cardiac arrest.
Q. And appreciating that these are questions about what might have happened, not what did happen, your evidence is essentially that death resulted from the loss of blood?
A. That's correct.
Q. That was the thing that made these injuries non-survivable. So had there been some sort of medical intervention that led to better control of bleeding, then it's possible that that might have extended the time of 10.16 that you have identified?
A. So I think medical intervention or general first aid intervention.
Q. Yes.
A. So being able to apply a tourniquet, and since this event we've been working closely with the Metropolitan Police to get tourniquets rolled out, but also rolling them out wider across London, so transport hubs have them as well because they are life-saving devices.
Q. Exactly. we've heard evidence that a tourniquet was

applied to Sébastien much later, at 22.45, you have seen that in the footage, but that's equipment that if it had been available earlier in the time period might have been of some assistance to him?
A. It might.
Q. And in particular, it might have extended the time that a team such as the HEMS team would have had to have got to him --
A. Yes.
Q. -- in an isolated incident or otherwise.
A. Yes.
Q. We've heard some evidence that at 10.34 those providing treatment appear to have believed that they could detect a faint pulse. Is that, first of all, something that you have seen on the body-worn footage?
A. I have watched it several times, I see them looking and feeling for a pulse both in his wrist and in his leg, in his groin earlier on, but not at that particular point. I think it's important to recognise that feeling for a pulse is something that the 2005 UK resuscitation guidelines removed because it was recognised that it is not uncommon for a responder to be feeling for a pulse and actually feel their own. The environment that they're working in, taking out the major incident, just doing a resuscitation means people are working very

heart, their heart rates have gone up, they are understandably very anxious, and it's really, really common to think that you can feel a pulse, but it's actually your own that you can feel.
Q. Nevertheless, the practice did continue, for example, Dr Lambert, the HEMS doctor, told us that it was his practice to feel for a pulse?
A. So it remains practice for trained healthcare professionals to feel for a pulse, not for lay people.
Q. I see, and would that under the triage sieve indicate that that further treatment should be carried out?
A. Not under the triage sieve, no.
Q. If it were right that there was a faint pulse at 10.34 or at any other point around that time after 10.16, would that be incompatible with the conclusion that you have reached?
A. I think the amount of blood loss that Sébastien had sadly suffered meant that when chest compressions which were being given to a very high quality were being given his heart actually had very little blood in it, and therefore the report that they could feel a pulse is mistaken.
Q. In other words, if your evidence is right, then they're wrong; equally, if their evidence that they could feel a pulse was right, then your conclusion would be wrong?

A. So I ...
Q. I appreciate you prefer your conclusion.
A. It's not a conclusion. To have a pulse palpable in your wrist or in your groin means you've got to have blood in your heart to be able pump it round. The amount of blood loss that Sébastien had experienced both externally, which is visible on the footage, and internally, and on his jumper and on his T-shirt meant that the heart was empty and there was no blood to pump round so it was not going to be pulse that could be palpable.
Q. At 10.46 Sébastien was moved up to Borough High Street and in the context of a major incident in which more casualties must have been expected, the decision was taken to move him into an ambulance, as you've already said, and the evidence that we have from Mr Lesslar was that he was considered to be the person with the best chance of survival. Now, as you've said, he was then taken out of the ambulance because another casualty presented who was a P1 and who was then taken to hospital.

But, given that conclusion, that he was the person with the best chance of survival, it would be right, wouldn't it, that there must have been some purpose to the treatment that paramedics were providing up until

that point?
A. So up until that point he had been treated by the Metropolitan Police officers and two members of the public. When he arrived at the edge of the ambulance there was ongoing active resuscitation and Mr Lesslar asked for him to be loaded onto the ambulance whilst he got a history. He then put him through the triage sieve and identified the amount of time that resuscitation had been going on and confirmed sadly that he was dead and at about the same time, I think in all of these situations it is dynamic, things are happening simultaneously, the other patient who was breathing arrived and a very difficult and sad decision was made to take him off the ambulance and to use the ambulance for that patient.
Q. We can all understand the difficult situation that arises when two patients present and only one can be taken to hospital there and then, but what I want to suggest is that these are fast-moving videos, there's a great deal going on, the video cameras are not always pointed in the direction of the patient. Is it right that you can draw the conclusion that you have drawn in preference to the decision that Mr Lesslar, who was actually present at the scene, made to load Sébastien onto the ambulance?

A. So Mr Lesslar would not have had sight of the amount of blood loss at the scene. By the time he met Mr Lesslar, he had been moved up the stairs and to the ambulance and I am drawing my clinical opinion on the ability to review all of the information, not the information just presented at the time.

But in a major incident if you have a patient who is not breathing spontaneously, then they are sadly dead.

MS AILES: Thank you.

MR HOUGH: Thank you very much, Dr Wrigley. Those are all the questions we have for you.

THE CHIEF CORONER: Thank you very much indeed.

MR HOUGH: Sir, we had very much hoped to start DAC D'Orsi's evidence this afternoon.

THE CHIEF CORONER: Yes.

MR HOUGH: I apologise to her that we haven't been able to but she will be our first witness tomorrow.

THE CHIEF CORONER: I think in fact, Mr Hough, this might be the very first time we've managed not to start a witness that we had planned to start. I know that Detective Superintendent Riggs we were going to take at one stage, but she has been less inconvenienced because she has been here every day, but my apologies to the witness that we had not been able to get to them but we will start first thing tomorrow, and I hope that gives us

good time to get through her evidence and, indeed we have a second witness tomorrow.

MR HOUGH: We do. The second witness is expecting that she will likely go into Wednesday.

THE CHIEF CORONER: Mr Hough, I think you know on Wednesday I was going to start a little bit later but in fact we are going to start at the same time because my other commitment is no longer happening, so that at least gives us a full day on Wednesday.

10 o'clock.

(4.48 pm)

(The court adjourned until 10.00 am on Tuesday, 18 June 2019)

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