

IN THE CROWN COURT IN NORTHERN IRELAND

ANTRIM CROWN COURT

THE QUEEN

-v-

COLIN FRANCIS DUFFY AND BRIAN PATRICK SHIVERS

SIR ANTHONY HART

[1] Colin Francis Duffy and Brian Patrick Shivers are charged with two counts of murder, six counts of attempted murder, and one of possession of two firearms and ammunition with intent to endanger life arising out of an attack by two gunmen armed with automatic rifles on several soldiers who had emerged from the gates of Masserene Camp on the night of 7 March 2009 to collect pizzas they had ordered. As will be apparent from the actions of the gunmen they were determined to kill as many people as possible, not only the soldiers who were dressed in uniform, but the civilian drivers who were in the process of making the deliveries, and a civilian security guard.

[2] On Saturday 7 March 2009 members of 25 Field Squadron, Royal Engineers stationed at Masserene Barracks on the outskirts of Antrim were due to deploy to Afghanistan. Because there was a delay in their departure some of the soldiers decided to order pizzas from Dominos Pizzas in Antrim. It was a very common practice for soldiers stationed at Masserene Barracks to ring various fast food outlets in Antrim and place an order. This would be delivered by car to the front gate of the camp where the soldiers would collect their order and pay the driver. It appears that this had been an established practice for a considerable period of time. On this occasion several orders had been placed, and deliveries were made in rapid succession, the first by Marcin Wietrzynski in his red Mazda 626, and the second by Anthony Watson in his Volkswagen Bora.

[3] As can be seen from exhibit 87, photographs 1, 7 and 20 there appear to have been a number of entrances at the front of the camp at one time, and that nearest

Antrim was blocked by a number of large concrete obstacles referred to as dragon's teeth placed some distance back from the edge of the carriageway in such a manner as to create a small layby or parking area. It was into this area that Mr Wietrzynski drove, parking his red Mazda with its nose close to the dragon's teeth, with his driver's side towards the open gate into the camp and the sangar housing the civilian security guards.

[4] What happened from then on was recorded on CCTV, and was comprehensively and carefully analysed by Mr Jonathan Greer of Forensic Science Northern Ireland. Mr Greer has particular experience in dealing with firearms, and he examined the scene in the early hours of Sunday 8 March 2009. No issue was taken with his evidence by either defendant, and I propose to summarise his evidence. I am satisfied that the following account is the relevant sequence of events, and when I say "satisfied" in this judgment I mean satisfied beyond reasonable doubt.

[5] The CCTV shows Mr Wietrzynski's car pulling up at the dragon's teeth at 22:41 and 19 seconds. However, the CCTV was 70 minutes fast, therefore the correct time was 21:31 and 19 seconds. Just under 5 minutes later a group of 5 soldiers dressed in desert camouflage uniform emerged from a door at the base of the sangar and walked towards Mr Wietrzynski's car, and he got out to speak to them. The soldiers were Sappers Patrick Azimkar, Mark Quinsey, Mark Fitzpatrick, Richard Marshall and Christopher Fairclough. They had received a phone call to say that their orders had arrived and made their way from their quarters to collect their orders. As they spoke to Mr Wietrzynski Mr Watson arrived in his Bora at 21:37. He also parked in the layby on Mr Wietrzynski's left, with the front of his car towards the dragon's teeth, but at an angle to Mr Wietrzynski's car, so that approximately a car's width separated them at the front, and rather more at the back. Sappers Fitzpatrick, Azimkar and Quinsey can then be seen walking round the back of the red Mazda towards the driver's door of the Bora, leaving Sappers Marshall and Fairclough beside Mr Wietrzynski with all three close to the driver's door of his car at 21:37:33. As can be seen from the CCTV, the whole area was well lit and the soldiers are clearly distinguishable from the two civilian delivery drivers by their desert uniforms.

[6] Three seconds later the first shots have been fired, Sappers Marshall and Fairclough are seen running back towards the sangar, while Sappers Fitzpatrick, Azimkar and Quinsey can be seen looking down between the two cars. During the attack, which lasted less than 40 seconds, two gunmen armed with Romanian made AK47 assault rifles fired a total of 63 rounds, one of the gunmen ejecting a further two rounds. When describing their actions I shall adopt the descriptions of gunman 1 and gunman 2 used by Mr Greer.

[7] The gunmen got out of a car which then drove a short distance in the Randalstown direction. They opened fire towards the two parked cars and those

gathered there, and the pattern of bullet damage to the cars suggests that the initial shots took the form of automatic fire. Gunman 1 can be seen to be firing left handed. He went between the two cars and fired at the area of the front of the Bora where Sapper Azimkar was. He then went towards Sapper Quinsey who appears to have tried to take cover behind one of the dragon's teeth, but gunman 1 went round the front of the red Mazda to a point between two of the dragon's teeth and fired at Sapper Quinsey as he lay on the ground. Whilst this was happening Mr Watson had been wounded in the right shoulder and was still in the driver's seat of his Bora lying flat over the front passenger seat trying to take shelter. Sapper Fitzpatrick attempted to get into the Bora, and gunman 1 then fired a number of single shots into the Bora before making his way back to the attack car. Whilst the shooting was going on the attack car reversed back towards the gunmen, and gunman 1 then got into the front passenger seat. Altogether gunman 1 fired 26 rounds as well as ejecting 2 further unfired cartridges. As an AK47 can hold 30 rounds in a single magazine, as well as one round in the breach, this gunman fired almost an entire magazine during the attack.

[8] After firing his initial shots and approaching the gap between the rear of the red Mazda and the rear of the Bora with gunman 1, gunman 2 then went to the rear driver's side of the Mazda and fired downwards at Mr Wietrzynski before making his way back towards the road, reloading his rifle as he went. It is clear that he reloaded, both from his posture on the CCTV and because 37 of the spent cartridges found at the scene were from this weapon. Whilst gunman 1 was getting into the front passenger seat of the attack car gunman 2 fired downwards at Sapper Azimkar, and then went to a position not far from the rear of the Mazda and fired at Mr Wietrzynski who was also on the ground. Gunman 2 then got into the rear passenger side of the attack car which drove off in the direction of Randalstown. During the attack one or both of the gunmen also fired at the sangar where Ryan Dodwell, a civilian guard, was stationed, and through the open gate at Sapper Fairclough who had taken cover behind one of the dragon's teeth positioned inside the gate as can be seen in exhibit 97, photograph 10. The dust from the impact of the bullets hitting the sangar, and the figure who appears to be Sapper Fairclough crouching behind one of the dragon's teeth behind the sangar, can be clearly seen in the video still 22:47:45 in exhibit 113A.

[9] In his post mortem report on Sapper Azimkar Professor Crane, the State Pathologist for Northern Ireland, concluded that Sapper Azimkar died as a result of suffering multiple bullet and shrapnel wounds. He found that:

“He had been struck by a number of bullets and bullet fragments which had caused wounds of varying size and raggedness on the head, trunk and limbs. The appearance of many of the wounds would indicate that a number of the bullets had first hit an intermediary target before striking his body and it also

seems likely that a number of the wounds were sustained whilst he was lying on the ground with some of the bullets fragmenting on contact with this hard surface.”

Professor Crane concluded “it was the combined effect of these wounds which were responsible for his rapid death despite attempts to resuscitate him in hospital”.

[10] Professor Crane also prepared a post mortem report on Sapper Quinsey, concluding that death was due to bullet wounds of the trunk, and that he had also been struck by a number of bullets and bullet fragments. It is Professor Crane’s opinion that:

“the pattern of injury would suggest that some of the wounds were sustained whilst [Sapper Quinsey] was lying on the ground, probably after initially being shot”.

[11] Sapper Fitzpatrick suffered very serious injuries as the result of three gunshot wounds. The first was a linear wound to the right side of his forehead with a bullet fragment under the scalp at the back of his head, but outside the skull vault. The second was a gunshot wound to his left shoulder, and the third was a gunshot injury to his left hand with extensive soft tissue loss and visible damage to bones and tendons. This subsequently required what Dr Sandra McAllister described as “complex reconstructive surgery to the left hand”. This involved a bone graft from the left iliac crest to reconstruct the bone defects in the left first, second and third metacarpals, transferring one tendon and suturing another, and reconstructing extensive skin loss. Some weeks later he had to undergo further surgery to remove a metallic foreign body causing discomfort in his chest wall.

[12] Sapper Fairclough suffered wounds to his face from bullet fragments in his left cheek and upper lip, as well as an undisplaced fracture of the left zygoma or cheek bone. Most of the foreign material was later removed under general anaesthetic, although a few small pieces of shrapnel were left because they could not be located at the time of surgery without causing extensive soft tissue damage.

[13] Anthony Watson suffered two wounds on his abdomen, one consisting of a 1 centimetre wound at the top of his abdomen just below the sternum, and a triangular wound on his left flank measuring 3 centimetres by 3 centimetres. He also had two small puncture wounds behind the right shoulder, and a chest x-ray demonstrated several small foreign bodies in the right shoulder area. Multiple fragmented foreign bodies were detected in the right scapular and right lower abdominal area.

[14] Marcin Wietrzynski suffered severe injuries as a result of gunshot injuries, with entry wounds to both his right and left chest walls. He had obvious wounds to his rectum, with gross damage to both soft tissue and anal sphincter. He also had multiple wounds to his right lower leg, and an area of soft tissue loss on the outer aspect of his left lower leg where muscle was visible. He also had multiple wounds to his left foot, as well as on his back and flanks.

[15] Sapper Richard Marshall was fortunate that although he was one of those who came under fire as he stood beside Sapper Fairclough and Mr Wietrzynski, he was able to run back into the sangar and take shelter and somehow escape injury from the hail of bullets directed at everyone in sight by the gunmen.

[16] Ryan Dodwell was a civilian special constable employed by the Ministry of Defence on duty in the sangar at the time of the shooting equipped with a radio and armed with a 9 millimetre pistol. He was watching the soldiers at the cars from a window when the shooting started. He activated the alarm, drew and cocked his pistol and opened the sangar door. Although he does not refer to this in his statement which was read at the trial, the sangar was struck by gun fire during the attack as described at [8] above.

[17] Whilst the offence of murder can be committed by someone who kills another with the intention of killing that person, or intending to cause grievous bodily harm, meaning really serious harm to that person, in order to be guilty of attempted murder it must be proved that the defendant intended to kill. I am satisfied that the two gunmen were determined to kill as many soldiers and others as they could during this attack. That was demonstrated by the ruthless and determined manner in which they carried out the attack, in one case reloading and then firing more shots; approaching within a few feet of some of their victims; shooting at those who lay helpless on the ground or in the Bora in the case of Mr Watson and Sapper Fitzpatrick; and in the case of gunman 2 returning again to shoot at Sapper Azimkar and Mr Wietrzynski. The gunmen, and the driver of the car as a participant in the attack, were clearly guilty of murder and attempted murder of all of those who were fired at that night, and had the necessary possession of the rifles and ammunition used in the attack with the intention of endangering life. The attack was claimed by the Real IRA in a telephone message to the Samaritans the next day.

[18] Later that night the police were alerted to the presence of a suspicious car abandoned on the Ranaghan Road very close to its junction with the Derrygowan Road. The Ranaghan Road is a minor country road in County Antrim east of Toome and south of that portion of the A6 road which in turn is a continuation of the M22 and is the main road from Randalstown to Toome. An earlier portion of the A6 leads from Masserene Barracks to the point where it provides access to the M22 before continuing into Randalstown. Jim Richardson lives near the junction of the Ranaghan Road and the Derrygowan Road, and when he was in his kitchen on Saturday 7 March 2009 sometime between 9.50 and 10.10 pm his attention was drawn to two sets

of headlights on the Ranaghan Road. He described the headlights as “travelling in convoy” from the junction, and he thought this was strange because this is “a very rural area and seeing the cars in convoy would be out of the norm”. The cars drove past his house and he lost sight of them, however he was unable to identify either the type or the colour of the cars. Later that night Neville Richardson drove along the Ranaghan Road, and as he approached the junction with the Derrygowan Road he saw a dark coloured Cavalier parked on the Ranaghan Road about one car’s length from the junction. It had no lights on, and because he became suspicious of the car as a result of something he heard in Randalstown he contacted the police when he returned to his home later that night. As a result the police went to the scene and located a Vauxhall Cavalier, registration number TDZ 7309, abandoned on the Ranaghan Road close to the junction with the Derrygowan Road.

[19] An unsuccessful attempt had been made to destroy the car and its contents by setting fire to it, and whilst it will be necessary to describe its history and the significance of the results of a detailed forensic examination of the car in greater detail in due course, a number of matters established that this was the car used by the gunmen during the attack at Masserene Barracks, and in which they drove off afterwards in the direction of Randalstown. First of all, there was the attempt to destroy the car by setting fire to it. Secondly, in a snatch of conversation accidentally recorded on the voicemail of one of two mobile phones found in the front of the car voices are heard to say “there was a few dead all right” and “have to say boys you were as cool as fuck”. The call containing this snatch of conversation was made at 21:40:13 and lasted 23 seconds. The content of the conversation, and its taking place two minutes or so after the attackers drove away from the scene of the attack satisfies me that the conversation refers to the attack. Thirdly, a number of balaclavas and items of apparently unused camouflage clothing were found in a bag in the boot. Finally, a coffee jar found in the glove compartment contained 27 live rounds suitable for use in an AK47 rifle, and when Mr Greer examined them later he found that six of these rounds had been chambered in, and then extracted from, the AK47 used by gunman 1, and nine had been chambered in, and extracted from, the AK47 used by gunman 2. A further three live rounds of the same type of ammunition which had also been chambered in the AK47 used by gunman 2 were found in the bag from the boot which was initially examined by Alan Ness, the ammunition technician who cleared the car to check for any explosive devices before it was examined and removed from the scene for subsequent forensic examination. For all of these reasons I am satisfied that the Cavalier was used by the gunmen during their attack on Masserene Barracks.

[20] I am also satisfied that an unsuccessful attempt was made to destroy the Cavalier after the gunmen and the driver abandoned it on Ranaghan Road. They must then have escaped with their weapons, and the most obvious and effective way of doing so would be to rendezvous with another vehicle, and then leave the area in that other vehicle as rapidly as possible. For that to happen there had to be at least one further person present when the rendezvous took place because someone had to

drive the rendezvous vehicle. That the rendezvous would take place in an area where there might be expected to be few people or vehicles to observe what was happening is logical. That such a rendezvous did take place in this area is supported by the evidence of Jim Richardson that he saw two cars travelling in convoy, something he considered to be out of the norm for this area. His times, whilst approximate, would be consistent with him observing the attack car and the rendezvous car travelling in convoy before the attack car was abandoned. For these reasons I am satisfied that the gunmen and the driver of the Cavalier rendezvoused with another car driven by a fourth person, and all four escaped in that car after what proved to be an unsuccessful attempt to destroy the Cavalier by setting fire to it at Ranaghan Road.

[21] The car, its condition and its contents, and the inference the prosecution argue should be drawn from the forensic evidence relating to these matters, form the core of the prosecution case against both defendants, although, as will become apparent, the prosecution also rely on inferences which they say should be drawn from other matters said or not said by each of the defendants. The evidence upon which the prosecution relies is of a circumstantial nature, and it is appropriate that I explain what circumstantial evidence is in law, and how it is to be approached. Circumstantial evidence simply means that the prosecution relies upon evidence of various circumstances relating to the crime which, when taken together, establish the guilt of the defendant because the only conclusion to be drawn from that evidence is that it was the defendant who committed the crime. It is not necessary for the evidence to provide an answer to all of the questions raised in a case. It would be an unusual case indeed in which a judge or a jury can say "We now know everything there is to know about this case", nor is it necessary that each fact upon which the prosecution relies, taken individually, prove that the defendant is guilty. The test for the court is whether all of the evidence has proved the case against the defendant beyond reasonable doubt. Pollock CB expressed the test in R v Exall [1866] 4 F & F 922 at 929 in a passage that has been repeatedly approved and applied since.

"It has been said that circumstantial evidence is to be considered as a chain, and each piece of evidence as a link in the chain, but that is not so, for then, if any one link breaks, the chain would fall. It is more like the case of a rope comprised of several cords. One strand of the cord might be insufficient to sustain the weight, but three stranded together may be quite of sufficient strength. Thus it may be in circumstantial evidence - there may be a combination of circumstances, no one of which would raise a reasonable conviction or more than a mere suspicion; but the three taken together may create a conclusion of guilt with as much certainty as human affairs can require or admit of."

Although the judge referred to three strands he was speaking figuratively, the law does not require at least three strands to be established, there may be more or less than three. Nor is it necessary that every piece of evidence relied upon should be of the same significance or weight, some may be of greater strength or significance than others. However, it has been repeatedly emphasised that circumstantial evidence must be examined with great care for a number of reasons. First of all, such evidence could be fabricated. Secondly, to see whether or not there exists one or more circumstances which are not merely neutral in character, but are inconsistent with any other conclusion than that the defendant is guilty. This is particularly important because of the tendency of the human mind to look for (and often to slightly distort) facts in order to establish a proposition, whereas a single circumstance which is inconsistent with the defendant's guilt is more important than all the others because it destroys the conclusion of guilt on the part of the defendant. In the present case not only must the evidence against Duffy and Shivers be examined in the light of these principles, but the evidence relied upon by the prosecution against each of them must be examined separately because it is for the prosecution to prove beyond reasonable doubt that each is guilty of the charges against them.

[22] There is no dispute that the Cavalier had been owned by Mr Brian Downey, nor is there any dispute as to the circumstances leading up to the sale of the car, or to his account of the sale itself on 22 February 2009, and I am satisfied of the following matters. Mr Downey had owned the Cavalier for several years, and his brother owned it before he did. Mr Downey decided to sell the car and advertised it for sale in the Auto Trader magazine edition of 19 February 2009. In order to prepare the car for sale he removed any rubbish he could find from the interior of the car, and sprayed the dashboard and panels with what he described as "a car product", and then wiped down the dashboard and panels. After he had cleaned the car he only drove it twice before it was sold, once to the vehicle test centre, and then to a friend's house to change the wheels, covering about 25 miles altogether. He left the car manual and a pair of cream coloured latex gloves in the car, gloves which were subsequently found in the glove compartment of the car beside the coffee jar with the bullets in it already referred to. Whilst these gloves were found to have his DNA on them it is not suggested that these gloves played any part in these offences. Mr Downey kept gloves of this type in the car for use when performing dirty tasks such as changing wheels. He never used latex gloves that were either purple or lilac in colour, nor did he know either Duffy or Shivers, nor did he know either Dominic McGlinchey or Declan McGlinchey. Not only did he not know any of these four individuals, none of them had ever been in his car during the years he owned it before he sold it on 22 February 2009.

[23] On Sunday 22 February 2009 a man rang about the car during the morning, and called at Mr Downey's home at about 1.15 to 1.30 pm. After this man had taken the car for a short test drive with Mr Downey he bought the car for £400 cash, and Mr Downey returned £20 as a luck penny. Mr Downey gave the purchaser the necessary documents, and pointed out to the purchaser that the MOT certificate was in the car. A letter confirming a vehicle test inspection of the car on 20 January 2009



was later found in the car, and this must have been either given to the purchaser by Mr Downey, or more likely, had been left in the car by Mr Downey in addition to the latex gloves to which I have referred. The purchaser, who had arrived with a companion in a small white van, then drove off, as did the man in the van. The Cavalier, closely followed by a small white van, was recorded on CCTV arriving at the Milltown Service Station on Milltown Road, Ballymoney, at 13:45. The driver can be seen opening the driver's door, touching it with his hand as he gets out, opening the petrol flap and then putting petrol in the car before closing the flap, going into the filling station and paying for the petrol. He got back into the Cavalier and drove off, closely followed by the white van which waited close behind the Cavalier whilst the driver put petrol in the Cavalier. This transaction must have taken place within a very few minutes of the purchase of the car, and it is an agreed fact that the driver who put petrol into the car is called Conor Mawhinney.

[24] At the commencement of the trial Mr Mooney QC (who appeared for the prosecution with Mr Ramsey QC and Mrs Kitson) was challenged to identify the basis of the prosecution case against Duffy by Mr Barry Macdonald QC (who appeared for Duffy with Mr Mark Mulholland QC). Mr Mooney responded with four propositions, which he re-affirmed in his submissions at the close of the prosecution case.

- (i) The prosecution could not say that Duffy was one of the gunmen during the attack because the evidence was insufficient to say that he was one of the gunmen.
- (ii) Duffy could have been in the car during the attack; or
- (iii) he helped to prepare the car for the attack; or
- (iv) he helped to try to destroy the car after the attack.

The principal elements in the prosecution case relate to DNA from the tip of a finger from a latex glove which the prosecution say was found in the car after the attack, and to DNA from the metal tongue of the front passenger seat belt. In his closing submissions Mr Mooney formulated the prosecution case relating to the inferences that the prosecution submit should be drawn from the presence of the tip of the finger of the latex glove in the car in the following passage:

“... we submit that the presence of Duffy's DNA in the latex tip of the glove and the seat belt of the car show that he was present in the car, at the very least, before the attack. We submit that the inescapable inference is that his unexplained presence was for the purpose of furthering the attack either by preparing the car, and this preparation is bound to have included his

knowledge of what was contained in the car, that is to say the ammunition, the balaclavas and we will further say the assault rifles, which were necessary for the attack to be carried out. Or he was present in the car at the time of the attack or he was present when the car was abandoned at Ranaghan Road in all the circumstances that we have described. The plan must have involved co-ordination and co-operation of all the conspirators. And we therefore suggest to the court that since he is so closely related to the items found in the car that he is fixed with the knowledge and the purpose of the plan which, if one stands back in the circumstances, is perfectly obvious. From that the court may infer that he intended to assist those who actually carried out the attack, that's to say the actual gunmen, in sharing their intent and purpose and helping them to make the plan succeed. The plan involved the deaths of two young soldiers and the wounding of other soldiers and entirely innocent civilians."

[25] If Duffy was present in the car during the attack, but was not one of the gunmen, then he could only have been the driver because there is no evidence to suggest that anyone else was in the car except the two gunmen who got out and opened fire, and the driver who remained in the car. The driver was just as much a principal offender as the two gunmen, because there can be no possible doubt that the driver took a full part in the attack by driving the car. If Duffy was not one of the gunmen, and was not the driver, if he helped to prepare the car for the attack with full knowledge of the intention of the attackers to open fire in the way that did occur, or if he helped to destroy the car after the attack with full knowledge of what had already happened, he was an accessory who aided and abetted the principal offenders in either of those two ways. As such he would be regarded in law as a secondary offender, and in order to be convicted of these offences the prosecution have to establish a number of matters beyond reasonable doubt. These were identified in R v Bryce [2004] 1 Cr. App. R. 35 at [71], and applied by our Court of Appeal in R v Gault (unreported 9 July 2004), see Kerr LCJ at [56] and following. Bryce is still good law, see Archbold 2011 at 17-67. In the circumstances of the present case these matters can be expressed in this way.

- (i) Duffy did something to assist the gunmen to carry out the attack, either
  - 
  - (a) by preparing the car for the attacks; or

- (b) being present when the attack car was abandoned and an attempt made to destroy it at Ranaghan Road.
- (ii) That Duffy deliberately did either of these things, realising that they were capable of assisting the attackers either before or after the attack.
- (iii) That when Duffy did either of these things he contemplated that the attackers were determined to kill soldiers at Masserene Barracks.
- (iv) That when Duffy did either of these things he intended to assist the attackers carry out their plan to attack soldiers at Masserene Barracks and escape afterwards.

[26] The foundation of the case against Duffy depends upon the inferences to be drawn from DNA found on two objects in the Cavalier. The first is the piece of latex which has been identified as the tip of a finger of a latex glove, that identification has not been disputed and I shall simply refer to this item as the latex tip. The second object was the metal tongue of the front passenger seat buckle which was swabbed for traces of DNA. There is no dispute as to the manner in which the swabs from the seat belt tongue were taken, although it will be necessary in due course to examine the expert evidence relating to the interpretation of the results of the examination of that swab as that evidence is contentious. Although Mr Macdonald refrained from explicitly alleging that the latex tip had not been found in the car, it was the clear inference from both the cross-examination of a number of witnesses, and from his closing submissions, that it was implicitly being suggested that the latex tip had not been seen in the Cavalier before the Cavalier was removed from Ranaghan Road for detailed forensic examination. That can be seen from Mr Macdonald's questioning of Rachel Deane when he put the following question to her at the conclusion of an extremely thorough cross-examination:

"The question that arises here ultimately, Miss Deane, is whether this latex glove really was there at the time you say you saw it?"

Mr Macdonald made the same point in his closing submissions when he said

"The question arises whether ... this glove tip was necessarily in place the way it was said to be".

[27] One of the reasons why circumstantial evidence has to be examined with great care is that such evidence could be fabricated, and before considering the DNA evidence relating to the latex tip I must therefore consider whether the evidence satisfies me beyond reasonable doubt that the latex tip was in the front foot-well of the Cavalier before the Cavalier was removed for forensic examination, because the latex tip was not physically recovered from the Cavalier at Ranaghan Road. If the

prosecution cannot satisfy me that the latex tip was present in the Cavalier at Ranaghan Road, then the possibility of the evidence having been fabricated by placing the latex tip in the Cavalier at a later stage to implicate Duffy could not be excluded, and in that event the major part of the case against Duffy would fall away. For these reasons I will consider the evidence of those witnesses that bears on this issue before proceeding any further.

[28] The Cavalier was removed to the PSNI Station at Maydown, County Londonderry where it was subjected to a thorough forensic examination on 10 March 2009 by Rose Mary Johnston, a PSNI Crime Scene Investigator. She recovered a large number of items, one of which was the latex tip which she marked RMJ43. Her evidence was not seriously challenged, and I am satisfied that she recovered the latex tip in the front passenger foot-well, where it can be seen in Exhibit 91 at photograph 15. The prosecution case is that the first person to see that the latex tip was in the front passenger foot-well was Rachel Deane. Ms Deane is a PSNI Crime Scene Manager who visited the scene at Ranaghan Road on Monday 9 March, and inspected the inside of the car after it had been rendered safe by Warrant Officer Alan Ness. After he had made sure that the car was safe from an explosives perspective he looked at the interior of the car and took a number of photographs which are exhibit 89. In the foot well he saw what was subsequently identified as a bar code label from a balaclava lying on top of a windscreen tax disc holder. He photographed them with a zoom lens and they can be seen in photograph 5. He did not see anything else there he thought might be of potential evidential significance, and he did not see the latex tip. He agreed that he might not have seen it because it was not there, but qualified this by saying that he might not have seen it because of its size, and because it was not significant in terms of his search. He discussed his findings with Ms Deane, and she says that when she looked at the interior of the car she saw the latex tip in the foot well, and recorded it in her notes which she made before she left the scene later that night. She was cross examined by Mr Macdonald in great detail about the various entries she had made.

[29] She had a consultation by mobile phone with Paul Wilson, another PSNI Crime Scene Manager, who had overall responsibility for this aspect of the investigation, and they decided that whilst the car was to be removed from the scene and taken to Maydown, some items that were suitable for rapid DNA examination were to be removed from the car before it was taken from the scene. The latex tip was not one of these items because it was not considered suitable for "fast track" examination because the examination of such items can take a considerable period of time. The items to be subjected to fast track examination were recovered from the Cavalier by John Carson, a PSNI Crime Scene Investigator. He says that although he did not mention this in the statement he made close to the time, he saw the latex tip in the car when he was removing the other items. Later that night Ms Deane and Paul Wilson met at Antrim PSNI station. They discussed what had been observed at the scene so far. Paul Wilson says that Ms Deane did refer to the latex tip in that conversation, and in support of this points to an entry he made in his notes to a piece

of latex as confirmation of this, although he conceded that she did not mention it in their earlier mobile phone conversation, nor did he expressly refer to it when directing Rose Mary Johnston to examine the car at Maydown and recover various named items that might yield DNA, such as the tax and MOT discs.

[30] I have considered the various points made by Mr Macdonald about the evidence of each of these witnesses, including the failure of Warrant Officer Ness to see the latex tip, and carefully considered transcripts of the evidence of Mr Ness and the cross examinations of Ms Deane and Mr Wilson. The latex tip is very small, its original dimensions were only some 3.5 centimetres by 2.3 centimetres before a small portion was later cut off to allow the defence to carry out their own forensic investigations. When photographed by Rose Mary Johnston in exhibit 91 it cannot be seen in photograph 14 although it can be seen in photograph 15. If it was in the same position in the footwell when Mr Murray took photograph 20 of exhibit 90 at Ranaghan Road it could have been obscured from view by the front passenger seat because of the angle at which that photograph was taken. Ms Deane's account of the weather conditions at Ranaghan Road is borne out by the appearance of the edges of her scene log book, an appearance which is consistent with the log book being affected by rain. I have also considered the apparent inconsistencies in the accounts of Ms Deane and Mr Wilson about when they made their entries relating to the latex tip, and Mr Carson's failure to include a reference to it in his original statement.

[31] If the latex tip was not in the Cavalier before it was removed from Ranaghan Road then it must inevitably follow that Ms Deane, Mr Wilson and Mr Carson have given perjured evidence. It must also follow that someone was able to obtain a piece of latex glove with DNA already on it that could be Duffy's DNA, or was able to acquire such DNA from somewhere and transfer it to the latex glove. There is nothing to suggest how that DNA could have been obtained to enable this to be done. Had it been desired to concoct such evidence by placing such DNA on the latex tip, why not place the DNA on the jar found in the glove compartment and/or the bullets found in that jar, thereby constructing a much stronger and potentially irrefutable inference that Duffy was intimately involved with these guns and therefore intimately involved with the attack itself? I consider that a much more likely explanation is that only some of those who looked into the Cavalier at the scene saw a small piece of material whose significance was only appreciated later, material which was in a position in the footwell where it might not have been seen. Having considered all of the evidence relating to the presence of the latex tip I am satisfied that it was present in the front passenger footwell of the Cavalier where it was seen by Ms Deane and Mr Carson before the car was removed to PSNI Maydown for examination.

[32] I am satisfied that during her examination of the Cavalier at Maydown on 10 March 2009 Miss Johnston was appropriately dressed in forensic clothing, and removed a number of items as well as taking swabs from a large number of locations both inside and outside the car. At this stage it is only necessary to refer to RMJ43,

the latex tip which she covered from the front passenger foot well, and RMJ72, wet and dry swabs which she took from the front passenger seat belt buckle. These swabs were taken from both the metal tongue of the buckle, and from the plastic moulding or surround of the metal tongue. I am also satisfied that these items were appropriately packaged and sealed by her, and remained sealed until subject to forensic examination in due course.

[33] DNA from the latex tip and from the swabs of the seat belt buckle was examined by Dr Watson who is a forensic scientist at Cellmark Forensic Services in England. She has been a forensic scientist since 2002, and has considerable experience in dealing with DNA evidence in criminal cases. As part of the investigation into this case she was supplied with DNA samples obtained from Duffy and Shivers by the police to enable her to compare their DNA with any DNA that might be recovered from any of the items or swabs recovered from the Cavalier. She referred to these DNA samples obtained from Duffy and Shivers as the reference samples. As will appear later she was also provided with DNA reference samples obtained from other individuals which she was asked to compare with DNA considered in the investigation.

[34] Before describing the results of her examinations it is necessary to refer to some of the features of DNA evidence in order to put in context the evidence of Dr Watson, and the other witnesses who gave evidence relating to DNA and the methods by which that evidence was obtained. As I explained in my ruling [2011] NICC 37 on the admissibility of Dr Perlin's evidence the quantities of DNA in this case are very small, and can be regarded as Low Template DNA or LTDNA for short. LTDNA and the concepts involved in identifying it have been described in considerable detail in a number of decisions, notably in R v. Reed and Reed [2010] 1 Cr App R 23 at paragraphs 28 to 60 and 71 to 74, and it is unnecessary to repeat what has been said in Reed and Reed. However, it is necessary to say something about LTDNA in order to put the evidence in this case in context. The following matters are not in dispute and have been taken from Reed and Reed, from the evidence of Dr Watson and the other witnesses in this case, and from the various scientific papers and documents produced or given in evidence. DNA carries genetic information that determines the physical characteristics of a person which controls the functioning of their body. The information is carried in coded form and half is inherited from each parent. Different combinations of DNA are inherited, and except for identical twins each person's total DNA complement is unique. Certain areas of DNA are known to have high levels of variability between people and these can be analysed in a process referred to as Short Tandem Repeat or STR. In this case the technique used to target and copy specific areas of DNA for STR profiling is known as SGM+, a technique which is widely accepted as reliable.

[35] DNA is copied from ten areas that contain varying lengths of DNA, and then there is a further area which identifies the sex of the individual. These areas are referred to as Loci, and as there are two STRs at each locus (one inherited from the

mother and the other from the father) a complete analysis will produce two results for each of the ten Loci. Each result is a numerical value representing the number of STR repeats, and each numerical value observed is referred to as an allele. The test also identifies the sex of the individual, and the result is expressed as XY for males and XX for females.

[36] DNA found in mitochondria and nucleus of each cell may be recovered from body fluids or other cellular material such as blood, body tissue, semen or bone. If the amount of DNA is of good quality and sufficient amount, a full or complete profile with two alleles at each of the ten Loci will be produced. However, if the DNA is degraded or only present in very small amounts then some alleles may not be detected, and in such circumstances only a partial or incomplete profile with alleles being shown for only some of the sites will be obtained. The less information the profile contains, the weaker the ability to assess the match of the profile to that of the individual whose DNA is under comparison. A sample may contain DNA from more than one person, and it is often the case that one person will have contributed more of the DNA than another. In such a case the profile of that person is referred to as the major profile and that of the other person is referred to as the minor profile. The provider of the minor profile is referred to as the minor contributor, or contributors if there is more than one such person.

[37] Scientists express the relationship of a profile to the DNA of an individual suspect in terms of probabilities known as the "match probability". This is the probability of obtaining the match if in fact the DNA did not originate from the suspect, but originated from an unknown person unrelated to the suspect but who has the same profile. In the United Kingdom if the profile is full it is possible to express the match probability as one in one billion, that is one in one thousand million. It is possible to express this as an even lower probability, but the recognised probability is one which Dr Watson described as conservative. If the unknown person is a close relative, or if the profile is incomplete, then the probability of an accidental match will be higher, for example one in ten thousand. Where there is a mixture this has to be taken into account in the evaluation of the match probabilities.

[38] It is recognised that DNA can be transferred in many ways, three of which were described in Reed and Reed at paragraph 59.

- (i) Primary transfer by a person directly to the object from which the sample was taken.
- (ii) Secondary transfer by a person to another person, and by that other person to the object from which the sample was taken.
- (iii) Tertiary transfer by a person to an object, and from that object to another person, and by that person to the object from which the sample was taken.

It is agreed that there is no test to distinguish between primary and secondary or subsequent transfer of DNA from a suspect. It is also agreed that in certain conditions DNA can remain in existence for extremely long periods, certainly for many years, and that it cannot be said when the DNA came to be found on an object, unless there is other evidence of circumstances from which that could be deduced.

[39] It will be necessary to refer later to some other parts of the expert evidence on DNA in greater detail, but these necessarily general statements provide a sufficient background within which to consider those parts of Dr Watson's evidence that relate to Duffy. She compared the DNA from the reference sample relating to Duffy, that is the sample taken from him after his arrest, with the DNA taken from the latex tip and found that the DNA from the latex tip contained a complete profile of 20 components, together with the male gender determinant XY, all of which matched the corresponding DNA components of Duffy's reference DNA profile. She concluded that the complete DNA profile could have originated from him, and alternatively if the DNA did not originate from him the result must match by chance. She estimated the chance of obtaining the matching DNA profile if the DNA originated from someone other than, and unrelated to, Colin Duffy to be less than one in one billion.

[40] She explained that when the latex tip was received at Cellmark it was starting to roll in and out, and as the outside surfaces were touching the inside surfaces it was not possible to say whether the DNA obtained from the glove was taken from the inside or outside of the glove, and therefore whether the DNA got there as a result of someone wearing the item or as a result of someone touching the item. When asked by Mr Macdonald whether that meant that the DNA that was found may not have been from the person who wore the glove she replied:-

“Given the strength of the profile in this case, and the findings, I would say that it's more likely the individual had worn the item”.

When pressed by Mr Macdonald whether the DNA could have got there other than by the person wearing it such as by sneezing or touching it, she accepted that was possible, although when asked whether someone else other than Duffy had worn or handled the glove, that is the glove from which the latex tip had come, she said that she would have expected to recover that person's DNA as well. Her view was that as between two hypotheses to explain the DNA on the glove, one being direct contact between Duffy and the glove, the other being contact between some other person and the glove, direct contact with Duffy was more likely.

[41] Dr Watson also examined DNA from the swabs of the front passenger seat buckle RMJ72, and found a partial or incomplete profile of 16 out of 20 components matching the corresponding components of Duffy's reference DNA profile. She



concluded that some of the DNA from the seat belt buckle could have originated from Duffy, or to put it another way, he could not be excluded as a contributor to that profile. Her opinion was that Duffy's DNA could have been deposited on the seat belt buckle by direct transfer, and although she would not rule out secondary transfer, this would be less likely because in that eventuality she would have expected to have seen the DNA profile from the person or item that was in contact with the seat buckle. Nevertheless, she accepted that secondary transfer of the DNA to the buckle was possible, but it would have to be from a good source of Duffy's DNA, and that the glove was one such possible source.

[42] Evidence on behalf of Duffy in response to that of Dr Watson was given by Professor Dan Krane, a professor of Biological Sciences at Wright State University, Dayton, Ohio in the USA. Professor Krane accepted that if Dr Watson's conclusion that the DNA on the glove tip was not a mixed sample, but was a single mixture, was correct, then her statistical approach was reasonable. He also accepted that all of Duffy's alleles appeared in each of the triplicate runs of the DNA analysis carried out by Dr Watson. Where he disagreed with Dr Watson was in respect of the interpretation of some of the findings produced by the software he used to analyse the electronic data sent to him containing the Cellmark results, and in his conclusion that the results of his analysis and that of Dr Watson indicate that the DNA profile on the latex tip could be a mixture of two or more individuals, in his view a mixture of a male and a female. Professor Krane based this upon imbalances in the relative fluorescent units (RFUs) for some of the allele heights.

[43] It is important to bear in mind that Professor Krane recognised that there could be other explanations for this in the form of a technical artefact which could distort the process, or because of problems with the small quantities of DNA being analysed resulting in what are called allele drop-ins or drop-outs. An allele "drop -in" is a spurious or false positive allele, whereas a "drop-out" is an allele that is present but is not detected, giving a false negative. These possibilities weaken his hypothesis that there could be a mixture of two or more individuals in the DNA on the latex tip, but what of his analysis of the allele heights?

[44] In her evidence on 21 and 22 November Dr Watson elaborated on a number of criticisms she made in her witness statement of 31 October 2011 relating to Professor Krane's report of 29 September 2011, and I will consider these criticisms in turn.

- (1) In his report Professor Krane did not explain what software he used in his examination of the data sent to him. Only when he came to give his evidence on 19 December, several weeks after her witness statement and after her oral evidence, did he say that he had used an earlier model of software produced by the creators of the software used by Dr Watson. It would seem from his description that the earlier software he used would produce results in a different, and not directly comparable, format to the results obtained by Dr Watson.

- (2) The second criticism was that in his report of 29 September Professor Krane relied upon a report by Walsh *et al* in 1992 (described in the report as “Preferential PCR amplification of alleles: Mechanisms and Solutions”) which Dr Watson said borne no relation to the SGM+ system used by her, and which was developed some years after the 1992 report. This criticism was not challenged at the time, nor did Professor Krane attempt to do so when he gave evidence.
- (3) The third criticism was that in the same report Professor Krane had wrongly included at page 6 Figure 1 a diagram described as “derived from a presentation by Dr John Butler . . . on October 11, 2006” as relating to the concept known as “stochastic variation”, or statistically random effects which affect the reliability of the DNA profile obtained. Dr Watson said that this table did not refer to stochastic variation, but to the impact of DNA amounts into “the multiplex PCR reaction” as she described it. Again this was not challenged, nor dealt with by Professor Krane.
- (4) At page 6 of the same report Professor Krane cited Coble and Butler’s paper of 2005 as authority for his statement that “the propensity for stochastic effects when small amounts of template DNA are analysed is well documented in the scientific literature”. Dr Watson pointed out that this article dealt with the mini STR system which is specific to degraded DNA samples, but in the case of the latex tip there was no significant indication of degradation extracted from the latex tip. She also made a further point that Coble and Butler only saw stochastic variation in terms of allelic drop-in and drop-out in samples containing less than 100 picograms of degraded DNA, whereas here 200 picograms of DNA from the latex tip was analysed in triplicate. Neither of these points was challenged or addressed by Professor Krane.
- (5) Dr Watson also suggested that whilst Professor Krane was correct to point out in his report of 29 September that Dr Bruce Budowle *et al* commented on allele drop Professor Krane did not refer to two relevant factors also made by the authors of that paper. The first was that they noted that 125 picograms may be sufficient to minimise stochastic effects and here 200 picograms had been analysed. The second was that they stated that reproducibility of the results must be invoked by requiring alleles to be present in multiple amplifications of the same allele, and in this instance the profile was replicated over three separate amplifications. Again these points were not challenged when Dr Watson gave her evidence, nor was any attempt made by Professor Krane to deal with them in his evidence.

[45] When an expert witness is challenged in this way a court is entitled to expect the witness to respond to such criticisms unless they are manifestly ill-founded. No such attempt was made here in respect of most of these criticisms, and I therefore conclude that this was because they could not be answered satisfactorily. This, and Professor Krane's reliance on a different form of software, something which prevented Dr Watson from properly considering his findings, leads me to conclude that I cannot accept Professor Krane's evidence where it conflicts with the evidence of Dr Watson who I found to be a careful, thorough and reliable witness.

[46] Dr Watson's response to Professor Krane's suggestion that there could be a mixture of DNA from a male and female was that in her opinion the peak heights were not unexpected from a sample of male DNA analysed at 0.2 nanograms (which is the equivalent of 200 picograms), and that in addition there was nothing to suggest that the full male profile which matched Duffy's reference DNA sample originated from more than one person. In addition she had Duffy's DNA reference sample re-analysed in triplicate, and found that the results were comparable to the X and Y peak height imbalance within the DNA profiles obtained from the DNA from the latex tip. She concluded that the level of imbalance was as one would expect from samples analysed at 0.2 nanograms. Having considered all of the evidence relating to the latex tip I am satisfied that, contrary to Professor Krane's opinion, there were no signs that there could be a mixture of 2 or more individuals in the DNA on the latex tip. I am satisfied that Dr Watson is correct in her conclusion that the DNA came from Duffy, and that there is no evidence to show that anyone else handled or touched the latex tip found in the Cavalier.

[47] Whilst Dr Watson was unable to attribute a match probability to the incomplete profile of 16 out of 20 components matching the corresponding components of Duffy's DNA found on the seat belt buckle, she was able to say that this meant that some of the DNA could have originated from Duffy. I consider that the absence of a match probability does not mean that no significance can be given to the incomplete profile found on the seat belt buckle. Whilst this may be of limited value on its own without a match probability, when considered in conjunction with the DNA evidence relating to the latex tip found in such close proximity to the front passenger seat it is of considerable significance. I consider that it would be an astonishing coincidence for the DNA on the belt buckle to share 16 out of 20 components of Duffy's DNA, but not to be his when a complete profile of his DNA has been found on the latex tip lying in the footwell of the car. Taken together the findings of Dr Watson satisfy me that it was Duffy's DNA that was found on the belt buckle, even though there were indications from that DNA of at least two other additional contributors as Dr Watson accepted in cross examination.

[48] Before considering the significance of Dr Watson's findings, at this stage I must refer to Dr Perlin's evidence. I have already explained the origin and nature of his TrueAllele system in my ruling on the admissibility of his evidence, and I do not intend to repeat what I said there. It is sufficient to say that I am satisfied that Dr

Perlin's findings regarding Duffy's DNA on the seat belt buckle are reliable. His expertise is in the area of attributing statistical significance to DNA where there are mixed profiles when it is not possible to attach match probabilities to each contributor to the mixed profile. His TrueAllele system can do this, and applying that system to the DNA from the belt buckle he concluded that a match between the buckle and Duffy would be 5.9 trillion times more probable than a coincidental match. Dr Perlin's conclusion provides a statistical evaluation of the probability of the DNA found on the seat belt being Duffy's, the evaluation that Dr Watson was unable to make, and so his finding strengthens this aspect of the prosecution case. However as I have already stated, I am satisfied from Dr Watson's evidence alone that the DNA on the seat belt buckle and on the latex tip is Duffy's DNA. Dr Perlin's evidence, whilst supplementing the prosecution case against Duffy, does not materially advance it.

[49] Mr Downey sold the Cavalier on 22 February 2009, almost 2 weeks before it was used in the attack on Masserene Barracks, and I am satisfied that Duffy had no contact whatever with the Cavalier before 22 February. The presence of his DNA on the latex tip alone is strong evidence that at some point after the Cavalier was purchased, and before the car was abandoned by the attackers, Duffy had contact with the interior of the Cavalier whilst he was wearing a latex glove. That he was wearing a latex glove gives rise to a strong inference that he was doing so in order to conceal the fact that he had contact with the interior of the car. I consider that his DNA on the seat belt buckle provides further evidence that at some stage during that period he had occasion to touch the seat belt buckle, either when wearing the latex glove without the tip, or in some way such as touching the glove against the seat belt buckle, or in some other way that left his DNA on the buckle. When considering whether, as Mr Mooney asserted in the passage already quoted at [24] above, Duffy's contact with the car during this period leads to an inescapable inference that the contact "was for the purpose of furthering the attack either by preparing the car . . . or he was present in the car at the time of the attack, or was present when the car was abandoned at Ranaghan Road" it is necessary to consider the remainder of the evidence, and not just the prosecution evidence so far referred to.

[50] The defence rely on several pieces of evidence to show that Duffy was neither in the Cavalier during the attack, nor present at Ranaghan Road, and I will consider these in turn, starting with the evidence of his wife Mrs Martine Duffy. She gave evidence that he was at their home in Lurgan, County Armagh throughout the entirety of Saturday 7 March, and in particular during the night, although Mrs Duffy accepted that she was asleep for part of the time before they both retired to bed. She accepted that when she visited Antrim PSNI Custody Suite on 26 March when her husband was being questioned she spoke to a female police officer, and made it clear to the officer that she had been advised to say nothing. I am satisfied that she adopted this attitude as part of a deliberate strategy of non co-operation with the police in case she said something that would harm her husband's position, and I do not regard her evidence as being of any value.

[51] During the investigation into this incident the police obtained two reports from Duncan Lees. In the event the prosecution chose not to rely on Mr Lees' reports, these were disclosed to the defence, and Mr Lees was called on behalf of Duffy as a defence expert. Mr Lees trained and worked as an archaeologist before moving into the field of pure surveying. He described in considerable detail how it is possible to analyse CCTV images, and by comparing the details observed on the images with measurements taken at the scene using laser scanners, it is then possible to estimate the heights of individuals who appear in the images. He and a number of colleagues went to the scene of the shooting in November 2009 and surveyed the area with a laser scanner. The measurements obtained by this process were then compared with the images of the gunmen on the CCTV. As a result of his calculations Mr Lees has concluded that one of the gunmen was 1.914 metres tall, that is approximately 6 feet 3 inches; and the other gunman was 1.992 metres tall, that is approximately 6 feet 6 inches. Although cross examined about the reliability of his deductions because some of the images that were relied upon for analysis were on the periphery of the CCTV pictures, it was not suggested that the concept of measuring the heights of individuals in this way was unreliable or flawed. At the very least Mr Lees' conclusions must be regarded as providing significant evidence that the two gunmen were in the region of 6 feet 3 inches and 6 feet 6 inches in height. That one of the gunmen was over 6 feet gained some support from the evidence of Sapper Fitzpatrick, who said that although there was nothing he could put his finger on he thought at one stage one of the gunmen could be over 6 feet. Given the traumatic and confused circumstances, and the very short period of time, in which Sapper Fitzpatrick had the opportunity to make this observation it may well be inaccurate. Nevertheless it is evidence that has to be taken into account. As it is accepted by the prosecution that Duffy is 5 feet 11 inches tall and is right handed, whereas one of the gunmen is seen firing left handed on the CCTV, there is considerable evidence to suggest that Duffy was not one of the two gunmen.

[52] Dr Catriona Storey-Whyte is an independent consultant specialising in the analysis of tape recordings, speech and language samples who has given evidence in several jurisdictions in numerous cases since 1990 on behalf of both prosecution and defence. She was initially retained by the prosecution to analyse the voices on the voicemail and compare them with interview tapes of a number of suspects including Duffy. She too was not relied upon by the prosecution, but her report was disclosed to the defence, and she was called as a defence expert on behalf of Duffy. She identified several male voices in the voicemail message, and for a number of reasons found it difficult to make out what they said, although as I understood her evidence she concluded that there were certainly three male voices heard speaking in the car. She concluded that there was no reason to think that Duffy was a speaker on the voicemail, and her opinion was that on the balance of probabilities he was not, although it was not totally impossible that he was a speaker. Whilst Dr Storey-Whyte's evidence was not really challenged, of itself it does not necessarily prove that Duffy was not in the car, because he might not have been speaking. However, if there

were only three people in the car when that conversation was recorded, and if Duffy was not, or may not have been, one of the three speakers then that is further evidence that he was not one of the gunmen nor the driver.

[53] The evidence that Duffy is right handed and 5 feet 11 inches tall whereas the gunmen may have been 6 feet 3 inches and 6 feet 6 inches, together with Dr Storey-Whyte's evidence, makes it impossible for me to be satisfied that Duffy was in the car during the attack on Masserene Barracks. The prosecution has failed to establish that he was either one of the gunmen or the driver, and there is no evidence to show that there was a fourth person in the car.

[54] Based on the presence of his DNA on the latex tip and on the seat buckle the prosecution suggest that Duffy was present when the car was abandoned at Ranaghan Road. However no suggestion has been advanced how that might have come to be in the Cavalier at that time, or what he may have done if he was present at Ranaghan Road. Whilst the DNA on the seat belt buckle is more likely to have been deposited by Duffy handling the buckle while sitting in the front passenger seat, the evidence about the height of the gunmen rules out Duffy sitting there during the attack, and would suggest that the DNA must have been deposited on the buckle at some other time, either by Duffy handling it or by secondary contact with the glove. Whilst I am satisfied that the tip of a finger of a latex glove became detached from the glove in some way after Duffy had worn the glove, I cannot be satisfied that it became detached whilst Duffy was doing something in the car at Ranaghan Road before the car was set on fire and abandoned. That may have happened, although no satisfactory explanation has been advanced as to how that might have happened, but I consider that it is equally likely to have become detached on some earlier occasion after the car was purchased and before the attack. At the very least that the latex tip could have become detached on some other earlier occasion cannot be excluded as a reasonable possibility. Once that reasonable possibility is accepted, as it has to be, I consider that the prosecution has failed to prove beyond reasonable doubt that Duffy was present at Ranaghan Road.

[55] That leaves the inference that Duffy took part in the preparation of the attack in some way. I am satisfied that the Cavalier was purchased in order that it could be used in a criminal enterprise of some kind, and I am satisfied that the presence of Duffy's DNA on the latex tip and on the seat belt buckle was because at some time after the purchase of the car and before the attack he was in the car in circumstances where he wore a latex glove in an attempt to prevent his leaving any traces that might show a connection on his part with the Cavalier. I am further satisfied that that strongly suggests that he knew the car was to be used to commit a crime. As I have explained, in order to establish Duffy's guilt as a secondary party the prosecution have to prove beyond reasonable doubt that he did something to assist the gunmen by preparing the Cavalier for the attack, that he did so deliberately whilst realising that what he was doing was capable of assisting the attackers, and when he did so he contemplated that the attackers were determined to kill soldiers at Masserene

Barracks. There are two major obstacles in the way of the prosecution as they seek establish each of these requirements beyond reasonable doubt. The first is that they cannot establish what Duffy actually did to prepare the car, and the second is that they cannot prove when he did whatever he did. Even if one assumes that he may have cleaned the inside of the car before the attack in order to remove traces of himself and/or those who had been in the car, perhaps using the Jif cleaning spray recovered from the car, does that prove beyond reasonable doubt that when he cleaned the car he contemplated that it was to be used in a murderous attack on soldiers at Masserene Barracks, and intended to help the attackers by doing whatever he did? Of course, if he knew that the car was to be used in a murderous attack of this type then it would be a proper inference to deduce that by cleaning the car he intended to help the attackers.

[56] In order to overcome these obstacles the prosecution invite me to draw an adverse inference against Duffy from his failure to give evidence. Like any defendant Duffy is entitled not to give evidence, to remain silent and to make the prosecution prove its case beyond reasonable doubt. He has not given evidence to explain the presence of his DNA on the latex tip or on the seat belt buckle, although he has called evidence to undermine, contradict or explain the other evidence relied upon by the prosecution. Article 4 of the Criminal Evidence (Northern Ireland) Order 1988 permits me to draw an adverse inference from his failure to give evidence, provided that he has a case to answer. I consider that the presence of his DNA on the latex tip and on the seat belt buckle establishes a case to answer that he was in some way involved in the preparation of the Cavalier for this attack. Mr Macdonald suggested various reasons why Duffy might have an adequate explanation for not giving evidence. One was that he might implicate others, another was that he might not be confident that he would be believed in his denials that he was involved in this episode because of experiences he had in the past. As to the second explanation there is no evidence of any such experience, and as Lord Taylor CJ stated in R v. Cowan [1996] 1 Cr App R 1:-

“it cannot be proper for a defence advocate to give the jury reasons for his client’s silence in the absence of evidence to support such reasons”.

In any event neither of these reasons is an adequate reason. I am satisfied that it is fair to draw an adverse inference against Duffy from his failure to give evidence because I am satisfied that the only sensible explanation for his silence is that he has no answer, or no answer that would stand up to examination, when questioned about the presence of his DNA on the latex tip and on the seat belt buckle. However, whilst his failure to give evidence provides some additional support for the prosecution case, I must not find Duffy guilty only, or mainly, because he did not give evidence.

[57] There are some further matters I must bear in mind. One is that when a defendant is charged as an accomplice, it is not legitimate to convict him of any

offence which, helped by the preliminary acts of the accomplice, the principal offender may commit. As Lowry LCJ put it in R v. Maxwell [1978] NI at page 58:-

“The relevant crime must be within the contemplation of the accomplice and only exceptionally would evidence be found to support the allegation that the accomplice had given the principal a completely blank cheque”.

The other matter is that even if the accomplice contemplates that his assistance will in some way help the commission of a terrorist crime, it does not follow that without more a court will be justified in including murder by the principal within the contemplation of the accomplice. That is because terrorists frequently use cars to carry out other crimes such as robbery, transporting firearms or explosives, kidnapping, and assault in the form of a so-called punishment shooting, to name just some of the crimes frequently committed in the past by terrorists in this jurisdiction.

[58] Having considered all of the evidence against Duffy I am satisfied that at some stage between the purchase of the Cavalier and the attack on Masserene Barracks he was present in the Cavalier whilst wearing latex gloves in order to avoid leaving any traces in the car that might identify him, and in doing so he must have known that the Cavalier was going to be used by others in the commission and furtherance of a criminal act. The prosecution must, however, prove more than that because they must go on to prove beyond reasonable doubt that the criminal act Duffy contemplated was an attack on soldiers at Masserene Barracks. There must be strong suspicion that Duffy did know that was what was going to happen and that that is why he has refused to give evidence. However, suspicion, no matter how strong, is not sufficient by itself to establish guilt beyond reasonable doubt, and is not an acceptable substitute for facts from which guilt can be properly proved. I consider that there is insufficient evidence to satisfy me beyond reasonable doubt that whatever Duffy may have done when he wore the latex glove and handled or touched the seat belt buckle meant that he was preparing the car in some way for this murderous attack, and I therefore find him not guilty on each count.

[59] When Shivers was cross-examined it was not suggested to him that he had been one of the gunmen or the driver. The prosecution case against Shivers is that he was present at Ranaghan Road where he used the matches found in and near the Cavalier to set the car alight in what proved to be an unsuccessful attempt to destroy the car and its contents, and the prosecution relies on what is said to be his DNA on the matches to show that he used them for this purpose. They also rely on the presence of what is said to be his DNA on the mobile phone found between the front seats from which was sent the snatch of conversation already referred to as a further indication of his involvement with the car. Although the matches and the mobile phone form the main part of the case against Shivers, the prosecution also rely on other matters which they say support the inference that the only explanation for the



presence of his DNA on the matches and on the mobile phone is that he set fire to the car. The first of these matters is that CCTV images from Magherafelt at various times on Saturday 7 March show Shivers in his car in close proximity to a car which the prosecution allege to be the Cavalier in circumstances from which it could be inferred that there was a connection between the two vehicles. The second is that most unusually Shivers was not with his fiancée Lisa Leacock that night until he returned to his house where she was waiting for him later that night. His evidence is that although he had arranged to go to Belfast to have a farewell meeting with some Polish friends who were about to return to Poland, and left Magherafelt intending to do so, he later changed his mind after he had attended Mass at a chapel on the way to Toome, and visited graves at the chapel, and then had a carry out meal in Toome. Instead of going on to Belfast from Toome he went to his brother's house but found there was no one there. Shivers says that he let himself into the house and made himself a cup of tea, and returned to Magherafelt. The prosecution say that when the evidence relating to his presence in Magherafelt after the shooting is examined it is clear that Shivers had sufficient time to set fire to the Cavalier after it arrived in Ranaghan Road, and that his account of where he was and what he did during that period of time is untrue.

[60] They also rely on the emergence of his account as to how he spent his time that night at a late stage, and his failure to give these details to the police in interview, as evidence that Shivers has lied about these matters. They point to what they say is the unusual feature of his behaviour that he did not use his mobile phone between approximately 5 pm and 10.27 pm on 7 March as a further indication that he was involved in the events leading up to, and immediately after, the attack on Masserene Barracks. They also rely on inferences supportive of guilt they suggest should be drawn from evidence he gave about other matters, and from the evidence of Lisa Leacock, relating to his conduct that night and his connections with other individuals, evidence that bears on his behaviour that night, and upon the explanation advanced by him as to how his DNA came to be found on the match sticks found at the scene, if it was his DNA.

[61] The evidence relating to the matches and mobile phone is the foundation of the prosecution case against Shivers, because without it the remaining matters lose all their evidential significance. There is no dispute that an unsuccessful attempt was made to set the Cavalier on fire at Ranaghan Road. A red petrol can was found in a field adjoining Ranaghan Road on the opposite side of the junction to where the car was found and a plastic cap and ring was found on the verge at the junction. These were later examined by Mr McCorkell of FSNI. He found that the petrol can had an approximate capacity of 5 litres, and contained approximately 15 millilitres of a golden coloured liquid identified as petrol. The container had sustained heat damage and was blackened and melted around the threaded spout region. The black plastic threaded cap and retaining ring had also sustained heat damage, and this cap and ring would fit the container. Analysis of the cap and ring indicated they were associated with petrol vapour. Mr McCorkell concluded that the damage to the petrol

container and the retaining ring would indicate these had been originally one item and sustained damage whilst intact. The damage would be consistent with the flammable vapour from the container, igniting and burning like a “candle” at the spout. Mr McCorkell also examined the Cavalier, and found that it had sustained fire damage inside the vehicle, particularly to the back seat, the rear of the front seat roof fabric, and upper dashboard areas. The vehicle smelt strongly of petrol. He concluded that the results of the examination of the vehicle and samples taken from it indicate it had sustained fire damage to the rear seating and this was associated with petrol as the “fuel”. The blackening in the interior would indicate that the fire had been burning for a period of time prior to extinguishing.

[62] The photographs of the Cavalier and its interior taken by Warrant Officer Ness at the scene, particularly photograph 2 of exhibit 89, show that the fire damage in the rear was particularly evident on the backs of the front seats and on the edges of the rear seat near to the rear driver’s side door, but was less extensive elsewhere in the rear. In this photograph 2 matchsticks can be clearly seen lying on the driver’s side of the rear passenger seat. These were recovered in due course and have been referred to as WMR13. On visual inspection it is obvious that they are spent matches. They are also somewhat grubby in appearance. Given where they were found on the rear seat close to the fire damage it is an irresistible inference that petrol from the can was poured over the back seats of the car and the matches were then used to ignite the fire before being thrown on the rear seat, and I am satisfied that this was the case.

[63] Prior to the Cavalier being approached and photographed by Warrant Officer Ness the car was positioned somewhat further down the Ranaghan Road from the junction with the Derrygowan Road. As part of the making safe procedure the car was towed back towards the junction to the position where it can be seen in exhibit 90, the photographs taken by Mr Murray. A third spent matchstick was recovered from the surface of Ranaghan Road and has been referred to as JC5. As can be seen from photograph 18 in exhibit 90 the match was lying on the carriageway almost at the grass verge, not far from the foot of the metal pole shown in photograph 17. It is clear from photograph 16 that Ranaghan Road is a minor road, perhaps just wide enough for two cars to pass with care, and as can be seen from the scene plan which is part of exhibit 107 the stop sign is approximately where the front of the Cavalier was before it was towed back towards the junction. If that match was struck by someone close to the driver’s side of the Cavalier and then discarded it could well have fallen in the vicinity of where it is seen in photograph 17.

[64] Mr Carson also removed the mobile phone from the Cavalier and this has been referred to as JC8. This is the mobile phone which was used to transmit the snatch of conversation already referred to. I am satisfied that when Mr Carson retrieved the single match JC5, and the mobile phone JC8, from the scene and when Mark Robinson later retrieved the two matchsticks WMR13, both witnesses were appropriately clothed with full forensic clothing, and then bagged the exhibits and sealed the bags in the correct fashion. I am further satisfied that these exhibits were correctly dealt

with thereafter by all of the witnesses who had custody of them whilst they were in the process of collection and delivery to FSNI and to Cellmark.

[65] Dr Watson was responsible for the DNA examination and analysis of the results in respect of all three matchsticks, that is WMR 13 and JC5, and for the DNA analysis of swabs taken from the mobile phone JC8 at FSNI and sent to Cellmark for examination. She also received the results of STR profiling tests carried out by FSNI on a DNA reference profile obtained by Shivers, and I shall consider the evidence relating to each of these in turn, starting with the two matchsticks.

[66] These were analysed and examined as a single item. DNA was found and subjected to two separate types of test. The first was the standard SGM+ profiling technique already described. The second was described as an enhanced DNA profiling technique. Where the results of the standard SGM+ profiling test only produce a partial DNA profile it is possible to apply a further profiling system to the profile produced by the standard SGM+ test. This enhanced test effectively magnifies the partial profile and allows low level DNA components to be interpreted. There is no dispute as to the validity of the enhancement process as a system in this case. When the DNA was examined using the standard SGM+ system Dr Watson found that it gave a partial DNA profile which consisted of 15 confirmed DNA components which matched the corresponding DNA components of the DNA reference profile for Shivers. In addition to the confirmed components this test also revealed that there were unconfirmed DNA components present which matched the corresponding DNA components of Shivers' reference profile. Dr Watson explained that this meant that she found 15 out of a possible 17 different DNA components, together with the male gender determinant. These were seen in at least two of three separate analyses of the DNA, and that while the remaining components were also seen, these fell below the threshold set by Cellmark for inclusion in statistical interpretation because they did not appear at a high enough level to be considered for that purpose.

[67] The DNA was then further subjected to the enhanced process and this produced a full STR profile which matched the DNA reference profile of Shivers. Dr Watson concluded that the DNA from this enhanced profile could have originated from Shivers. She estimated the chance of obtaining matching DNA profiles from the DNA on the two matchsticks if the DNA originated from someone else unrelated to Shivers to be 1 in 1 billion. She also pointed out that in his report on behalf of Shivers Professor Krane accepted that the result of the enhanced process is as he would expect if Shivers had been in contact with the two matchsticks. It is noteworthy that when Professor Krane gave evidence and was examined by Mr O'Connor QC (who appears for Shivers with Mr Bentley) Professor Krane was not asked about what he said in his report about the enhanced test results. I am therefore satisfied that Professor Krane agrees with Dr Watson's conclusions in that respect, including her opinion that the DNA could have got on the matchsticks by touching them.

[68] Dr Watson had also been provided with reference samples from two other individuals, Dominic McGlinchey and Gerard McCaughey. Her evidence was that there was no scientific evidence to show that either of these individuals had been in contact with these matchsticks, because neither of them could have contributed to the DNA recovered from WMR13, and if they had been in contact with the matches she would have expected to have seen at least some DNA components matching either Dominic McGlinchey or Gerard McCaughey, or even a full, or almost full, DNA profile from either of them.

[69] Dr Watson also refuted a point made by Professor Krane in his report that allele vWA18 was missing from the results of the initial standard test, pointing out that this allele was one of the 15 confirmed DNA components seen in those results. Professor Krane did not make this point when he gave evidence, and it would therefore appear that he accepts Dr Watson's refutation. This is a further reason why I prefer the evidence of Dr Watson to Professor Krane where their evidence conflicts.

[70] Dr Watson agreed with Mr O'Connor that the DNA from the two matches was Low Template DNA, and that it was a mixed profile with possibly one other contributor, although this was an unconfirmed indication. She accepted that this unconfirmed indication may be explained by someone else having come in contact with the matchsticks, although it may be explained in other ways as well.

[71] In his closing submissions Mr O'Connor briefly touched on the DNA evidence from the matchsticks when he said:-

“. . . the court is left, and we fully accept this, with the probability that it is indeed Mr Shivers' DNA on the two matches, WMR13".

I consider that the evidence of Dr Watson establishes more than a mere probability that it is Shivers' DNA on the two matchsticks found on the back seat of the car because her evidence satisfies me that it is Shivers' DNA that was found as the result of her analysis of the enhanced test.

[72] I now turn to the single match JC5 found on the surface of Ranaghan Road near the Cavalier. Dr Watson described it as having been burnt at one end and as having possible scorch marks along its length. DNA was recovered from its surface and an STR profile was obtained by standard SGM+ profiling. Her evidence was that this was a very low level partial profile indicating that there were DNA contributions from at least two persons. When she received Professor Krane's report on the data relating to this match which had been sent to him by Cellmark she realised that an error had occurred when the DNA was being analysed in triplicate because one of the samples was used twice by mistake. When this was realised, the material was re-analysed, but the results did not cause Dr Watson to alter her initial opinion. She found that there were 9 out of 10 confirmed DNA components in the mixture which

matched the corresponding DNA components of Shivers' DNA profile in the mixture, and these results were as she would expect if Shivers contributed DNA to this result. She considered two explanations for her conclusion that Shivers could have contributed DNA to this mixture. One was that the DNA present within the mixed DNA profile could be explained if Shivers, and at least one other individual, had each contributed DNA. If that explanation were true then she would expect DNA components corresponding to Shivers' reference profile to be represented in the mixed DNA result. As they were represented she considered that Shivers could have contributed to the mixture. The other explanation was that the DNA present consisted of contributions from unknown individuals. If that were true she would have a low expectation of finding 9 out of 10 confirmed DNA components which matched the corresponding DNA components of Shivers' DNA profile. She was unable to apply the enhancement process to this DNA because of the number of the contributors, and because it was not possible to separate the contributions into a major or minor component.

[73] She also accepted that the DNA could have been deposited on the match by either direct or secondary transfer, and that she could not say which, although while she could not discount secondary transfer she believed it was less likely. Her conclusion was that Shivers could have contributed DNA to the DNA found on the match JC5. She was also asked about the possibility of contamination, and excluded that possibility because of the way these exhibits had been collected, stored, examined and analysed. For the same reasons as she had concluded in respect of the two matchsticks she was satisfied that there was no scientific evidence to show that either Dominic McGlinchey or Gerard McCaughey had been in contact with this match.

[74] Dr Watson also examined the swabs taken by FSNI from the mobile phone JC8. The swabs were described as having been taken from the inside of the phone, and it will be necessary in due course to consider the evidence of Miss Coleman from FSNI as to how the swabs were taken to see whether that description is correct, but that does not affect Dr Watson's evidence as to what was found on the swabs. These swabs were also subjected to an initial standard, that is the SGM+ process, and this gave a low level partial profile with indications of DNA contributions from at least two individuals, with 12 confirmed DNA components and 7 unconfirmed DNA components. That result was then enhanced, and as a result a mixed DNA profile was obtained which indicated the presence of DNA from at least 3 individuals. 17 DNA components matched Shivers, and 3 other components were represented to some extent. Whilst Shivers was fully represented within the profile, Dr Watson could not say that all 20 of his DNA components were present. The results were as she would expect if he had contributed DNA to this result, and so he could have contributed DNA to this mixed profile and she could not exclude him as a contributor. Her opinion was that the DNA could have been deposited by direct contact, and that whilst she could not discount that it might have been deposited by secondary transfer, that was less likely in her opinion. She referred to Professor Krane's conclusion that Shivers could have contributed DNA to the mixed swabs

from the mobile phone as agreeing with her position, but she disagreed with the further point made by Professor Krane that no conclusions should be drawn from these results because it was not possible for her equipment to attach a statistical weight to these findings for the reason she gave, namely because of the number of potential contributors, the number of unconfirmed alleles, and the incomplete profile.

[75] I now turn to consider the evidence of Miss Coleman relating to the procedures involved in the examination of the mobile phone at FSNI during which the swabs were taken that were then sent to Dr Watson. There were four individuals present, and all were properly dressed in full protective outfits. The phone was then examined in stages.

- Stage one involved Miss Coleman removing fibres which she had observed from the outside of the phone with tweezers.
- Stage two involved Mr McNerlin, an electronics expert, examining the phone in some way that has not been explained. In his statement he says that he downloaded information from the phone, but what he did has not been explained.
- Stage three then involved him taking the mobile phone apart by removing the back cover, the battery and the SIM card so that the phone was now in four parts.
- Stage four then involved Miss Coleman again using tweezers to remove fibres from inside the phone.
- Stage five involved Mr Spires of the Specialised Fingerprint Unit handling all parts of the dismantled phone to light search them to see if there were any possible finger marks.
- Stage six involved Miss Coleman placing all four parts of the phone into a cabinet for another test for fingerprints to be carried out.
- Stage seven involved Miss Coleman taking swabs from eight separate locations from all of the four parts, during which she had to handle the various items. The swabs were taken from the following locations.

- (1) From the edges of the SIM card.
- (2) From the edges of the battery.
- (3) From all four edges of the back cover of the phone.
- (4) From the inside edges of the hollow space in which the battery rests inside the phone.
- (5) Red coloured button
- (6) An area above the screen on the front of the phone.
- (7) An area of the battery.
- (8) An area inside the hollow where the battery sits.

[76] Although Miss Coleman believes that each of those involved in the various stages of this examination changed their latex gloves between each stage she agreed that there was no record of that being done. She accepted that she did not change her

gloves between taking each of the eight sets of swabs, and no further evidence was given about what actually did happen. Mr O'Connor suggested that it was beyond the bounds of common sense to conclude that each person involved changed their gloves between each stage, and in the absence of any evidence other than that of Miss Coleman I cannot assume that this was done. Indeed the absence of any evidence to rebut the suggestion put to Miss Coleman supports Mr O'Connor's proposition. On that basis he then argued that I should conclude that the DNA traces found on the swabs examined by Dr Watson and which were stated to have come from the inside of the phone may well have been transferred from the outside of the phone at some stage during these processes. I consider that there is some merit in this suggestion. I should make it clear that in doing so I make no criticism whatever of Miss Coleman who I am satisfied performed her tasks scrupulously and conscientiously. However on the evidence before me I cannot exclude the risk of inadvertent transfer of minute amounts of DNA from one part of the phone to another at the various stages of what were, I am satisfied, necessary examinations performed by different individuals for different purposes. The risk of inadvertent transfer in those circumstances may be very small, and for all I know there may be procedures in place which could have satisfied me that there was no such risk, but there was no such evidence and I must proceed on the basis of the evidence before me. I will therefore evaluate the significance of Dr Watson's evidence on the basis that the DNA which she considered could have originated from Shivers may have been found on the outside and not on the inside of the phone.

[77] Whilst the DNA attributed to Shivers by Dr Watson has to be assessed on the basis that it could have come from the outside, that does not mean that it is of no significance, because it has to be viewed not only in isolation but in the context of the entirety of the DNA evidence against Shivers including the DNA from the two matchsticks and the single match. As I have already stated I am satisfied that it was Shivers' DNA on the two matchsticks and I am also satisfied that Dr Watson's evidence establishes that Shivers could have contributed to the DNA found on the phone and on the single match, and that the DNA which was found was Shivers' DNA. The overall effect of Dr Watson's findings in relation to the single match and the mobile phone is to provide further support to what I consider to be an extremely strong piece of evidence connecting Shivers to the burning of the car. It may be that on Dr Watson's evidence that when the DNA evidence against Shivers from the phone is considered alone, or the DNA evidence from the single matchstick is considered alone, the inference to be drawn from each might be insufficient to establish a connection between Shivers and the Cavalier at Ranaghan Road. When all three parts of the DNA evidence are taken together their combined effect is much greater. I consider that it would be a truly remarkable coincidence were the DNA found by Dr Watson on the mobile phone not to be Shivers' DNA, but to be that of someone else, when one considers that the phone was found between the front seats, and when the two matches on the back seat which did contain his DNA were so close. The link between these items and the single match is less strong, but her findings in relation to the single match are nevertheless of some significance.

[78] I now turn to the DNA evidence of Dr Perlin who was sent the electronic data relating to the results of Dr Watson's findings in relation to the DNA found on the mobile phone JC8, and on the single matchstick JC5. This was so that he could submit this data to the more advanced form of analysis and evaluation he contends can be achieved with his TrueAllele system to see whether it was possible to establish a statistical evaluation of the likelihood of Shivers' DNA being found by chance on either of these exhibits. He found it was possible to establish what he described as a likelihood ratio or LR for both exhibits, this being a balance of two match probabilities, namely the probability that the evidence matches the suspect divided by the probability of a coincidental match. In the case of the mobile phone he found the LR of a match between the DNA and Shivers to be 6.01 billion times more probable than a coincidental match; and in the case of the single matchstick the LR of a match between the DNA and Shivers to be 1.1 million times more probable than a coincidental match. He also accepted that there were indications that there might well be more than two contributors to the DNA found on the mobile phone.

[79] If Dr Perlin's conclusions are valid then they provide additional support for Dr Watson's conclusions as to the presence of Shivers' DNA on the mobile phone and on the single matchstick. Mr O'Connor urged me to revisit my conclusions as to the reliability of Dr Perlin's evidence, and to discount that evidence. In my ruling on the admissibility of Dr Perlin's evidence I considered all of these matters in the light of the exhaustive examination of Dr Perlin's TrueAllele system and his veracity and credibility, an examination that occupied several days of the trial during the *Voir Dire*. I see no reason to alter the conclusions that I arrived at in that ruling. I accept his evidence as to the likelihood ratios showing that Shivers' DNA was present on the mobile phone and the single matchstick, and I accept that his evidence does provide additional support for Dr Watson's conclusions. However, it is important to keep the significance of Dr Perlin's evidence in perspective. His evidence is not the only evidence to suggest that Shivers' DNA was present on these two items because there is the evidence of Dr Watson, and there is also the significance to be attached to the presence of DNA that could be that of Shivers on the mobile phone and on the single matchstick when that evidence is taken in conjunction with Dr Watson's evidence as to the presence of his DNA on the two matches on the back seat. Her evidence about the two matchsticks is by far the most important part of the DNA evidence against Shivers, and Dr Perlin's evidence has no bearing whatsoever on that.

[80] In addition to the DNA evidence linking Shivers to the Cavalier, the prosecution rely on the evidence of Mr Wooler to establish such a link. He is a principal consultant with the Incident Investigation and Reconstruction Group at the Transport Research Laboratory, and has been undertaking image analysis and enhancement for about 10 years, normally working from video. First of all he analysed the CCTV of the attack, and compared the appearance of the attack car with that of the Cavalier found at Ranaghan Road, and concluded that they were the same vehicle. That conclusion was plainly correct, as is clear from the other evidence



relating to the contents of the Cavalier. He also examined CCTV from Magherafelt on 7 March 2009 that is shown in exhibit 143, and compared the vehicle seen in that CCTV with the appearance of the Cavalier and of Shivers' silver Mercedes C200 shown in exhibit 132. His opinion is that it is highly likely that Shivers' car appears in the CCTV images taken at 13:21:11, 14:24:10 and 17:08:10, and the defence did not dispute this. Indeed, Shivers accepted that he drove into the centre of Magherafelt for a meal in the middle of the day, and drove in again later that afternoon when he made a cash withdrawal from the ATM at the First Trust Bank timed at 17:10. However, the single CCTV image which is alleged to show Shivers' car and the Cavalier in close proximity to each other is IWS135 at photograph 7 of exhibit 143. The Cavalier is alleged to be shown approaching the rear of a line of stationary cars on Queen Street at 13:21:35, and it is alleged that Shivers' car is also in that line of traffic, with two cars between his car and the Cavalier. Given Mr Wooler's opinion that Shivers' car is highly likely to be seen approaching the same queue of cars 24 seconds earlier I am satisfied that it is Shivers' car in the queue in photograph 7, and indeed Shivers accepted that when he gave his evidence. But is the car approaching the back of the queue of the traffic the Cavalier used in the attack? The most that Mr Wooler can say is that this vehicle may be the Cavalier that was used in the attack. I consider that this qualified opinion is insufficient to establish beyond reasonable doubt that the car shown in the photograph is the same Cavalier that was used in the attack. For this reason I do not place any reliance on the evidence relating to the possible presence of the Cavalier in Magherafelt on 7 March prior to the attack.

[81] Part of the prosecution case is that it was possible for Shivers to have been at Ranaghan Road, and then return to Magherafelt in time to order a meal from a Chinese restaurant there by using his mobile phone at 10.27 pm. The police carried out a number of test drives along a number of routes from Masserene Barracks to Shivers' home in Magherafelt via Ranaghan Road. Whilst the routes, distances and times varied, and the times in particular were directly related to the speeds at which the test runs were carried out, one run showed that it was possible to cover a route with a distance of 18.09 miles in 19 minutes, and another run took 23 minutes while observing the speed limits. It is unknown how long the attackers spent at Ranaghan Road before they left after setting the Cavalier on fire, but it not unreasonable to assume that they spent just enough time there to transfer themselves and their weapons to another car, and to set fire to the Cavalier before leaving the scene. The police allowed 10 to 15 seconds for a pause at the junction at Ranaghan Road, but it seems more probable that the attackers would have spent more time than this at Ranaghan Road, although how long they spent must be a matter of speculation. If one allows say 5 minutes at most for them to arrive at Ranaghan Road, transfer to the other vehicle and set fire to the Cavalier, this means that if Shivers did set fire to the Cavalier he could have been back at his own home in Magherafelt by about 10.02 pm or very shortly thereafter.

[82] This brings me to the evidence of Shivers' fiancée, Lisa Leacock. She was interviewed by the police, and in a witness statement made on 22 July 2009 she said

that Shivers arrived home at about 9.55 pm to 10.20 pm. This timescale would plainly give him ample time to return to Magherafelt if he had set fire to the car at Ranaghan Road. Miss Leacock was called as a prosecution witness, and said that her best recollection now is that he returned between 9.55 and 10.10 pm. A good deal of attention was devoted to why she now says 10.10 pm rather than 10.20 pm as recorded in her statement made in 2009. However, I do not need to resolve this because, as Mr O'Connor conceded, even if her present recollection is right Shivers could still have returned from Ranaghan Road by 10.10 pm as the timings I have referred to demonstrate, although clearly if he returned at 9.55 pm he could not have been at Ranaghan Road, or at least it would have been extremely difficult for him to have returned from Ranaghan Road to his own home by 9.55 pm; but as Mr O'Connor recognised, her timings do not provide Shivers with an alibi for the period after the shooting until he returned home. This renders it unnecessary for me to decide whether her evidence should be regarded as suspect as Mr Mooney contended. In any event, she was called as a prosecution witness, and even though there were suggestions from Mr Mooney before she was called that the prosecution might apply for a witness summons to compel her attendance, and might seek to have her treated as a hostile witness, in the event neither of those courses were adopted. Whilst it does not follow that a party who calls a witness is to be regarded as suggesting that the witness must be accurate in every detail of their evidence, the witness is nevertheless put forward as someone capable of belief, as can be seen from the approval by Lowry LCJ in *R v Foxford* [1974] NI of the observations of Lord Parker CJ in *R v Oliva* [1965] 3 All ER at 122 where he said

“The prosecution do not, of course, put forward every witness as a witness of truth, but where the witnesses' evidence is capable of belief then it is their duty, well recognised, that he should be called, even though the evidence that he is going to give is inconsistent with the case sought to be proved.”

Miss Leacock's evidence in a number of respects was supportive of Shivers' denials that he was involved in these offences and I take those matters into account in his favour.

[83] Shivers was interviewed by the police on five occasions on 15 May 2009, after the appropriate caution had been administered at the beginning of each interview. In the first interview, having been administered the caution, he stated as follows:

“Well I have, I have never been or never have been a member of the IRA and I had nothing to do with Masserene murders and that night I was in the house, I was in the Chinese and came home, went to the house all night”.

He was asked who he had been with and said that he had been with his girlfriend. From that point onwards Shivers made predominantly “no comment” interviews. In the course of the ensuing interviews:

- He was asked if he smoked, if he had a lighter and if he used matches. He answered “no comment”.
- He was asked for the identity of his girlfriend. He refused to provide this and gave his reason as follows:

“Because my girlfriend is a Protestant I don’t want people landing on her door and then causing bother with the relationship”.

- He was asked about his movements on the day of 7 March 2009 and made no comment.
- He was asked questions about Dominic McGlinchey, including whether he had been in a vehicle with Dominic McGlinchey and whether Dominic McGlinchey had ever been at his home. He answered “no comment”.

[84] Shivers was again interviewed after caution on a further five occasions on 22 July 2009. He made predominantly “no comment” interviews. In the course of the interviews:

- Among questions about association with various people he was asked about association with Dominic McGlinchey. He answered “no comment”.
- He was asked about smoking in the context of the discovery of matches that were connected to the attempt to burn the attack car and he answered “no comment”.
- He was asked again about matches found at the scene, in particular about the matches found on the back seat of the attack car and he responded “no comment”.
- He was asked if he knew Gerard McGaughey and he answered “no comment”.
- He was told that his DNA was on the matches inside the car, on the match outside the car and on the inside of the mobile phone. When this evidence was put to him he initially made no comment. In a subsequent interview, having consulted with his solicitor, the following statement was read out on his behalf.

“I would like to say that I had nothing to do with the murder of the two soldiers or any of the other offences. I am not and have never been a member of the Real IRA. I am engaged to get married to my fiancée, Lisa Leacock, and we plan to have children. I spend most of my time looking after my health and I am not going to spend

whatever years I have left doing anything other than enjoying my life with my fiancée. I can't understand how it is my DNA, if it is my DNA. If it is proven to be my DNA it can only be there for innocent purposes as I had nothing to do with this."

[85] Shivers gave evidence on his own behalf and denied being involved in these events in any way. When considering his evidence, and the evidence against him, there are some general matters that have to be taken into account. The first is that he is now 46 and has a clear record. He is therefore a person of good character. In addition Lisa Leacock testified that she believes he has no interest in politics, that she has never heard him say anything Republican or anti-Protestant or anti-British, and she says she knows he is not capable of what she called "these terrible acts". Good character cannot by itself provide a defence to a criminal charge; but when deciding whether the prosecution has proved the charges against Shivers beyond reasonable doubt I must take it into account in his favour in the following ways. In the first place he has given evidence, and as with any person of good character it supports his credibility. This is a factor which I must take into account when deciding whether I believe his evidence. In the second place, the fact that he is of good character may mean that he is less likely than otherwise might be the case to commit these crimes. Having to regard to what has been said about Shivers the defence say that I should give considerable weight to his good character when deciding whether the prosecution has proved his guilt beyond reasonable doubt.

[86] A further factor is that Mr O'Connor suggests that Shivers is a "Highly unlikely terrorist murderer", partly because of his physical health. He has suffered from significant ill health due to cystic fibrosis for many years, and has a restricted life expectancy as a result, although, as Mr O'Connor recognises, this does not of itself mean that Shivers could not have committed these offences. Another matter is that there was no sign of any political motive or commitment on Shivers' part. It is the case that he volunteered that he attended four meetings of Eirigi out of curiosity and at the suggestion of Dominic McGlinchey. Mr Mooney suggested that I should take judicial notice that Eirigi is an organisation with what he described as "dissident" sympathies, but there is no evidence whatever before the court to support such an assertion. The only evidence about the aims and objectives of Eirigi in this case came from Shivers himself, and does no more than suggest that it is an Irish Republican organisation sympathetic to the establishment of a 32 county Irish state. This is wholly insufficient to justify any conclusion about its aims and objectives that would suggest that attendance at its meetings on a few occasions makes it likely that Shivers was involved in these events in any way, and I propose to leave his motives for attending those meetings entirely out of account.

[87] Shivers gave evidence that having watched the first half of a football match on television on 7 March, he left his house at 6.30 pm and then left his son and his son's friend to their respective houses in Magherafelt, before going on to a 7 pm Mass at

Newbridge chapel which is between Magherafelt and Toome. This was a regular thing for him to do because it was the parish where he grew up and he still went there from time to time. After the Mass had ended he visited the graves of some neighbours buried in the cemetery beside the church. He then went to Toome where he bought a Chinese takeaway, arriving at the takeaway at about ten past eight. He had to wait some time to be served because it was very busy, and it then took him some further time to eat the meal while sitting in his car because of digestive troubles he suffers from. Until then it had been his intention to continue on to Belfast to meet some Polish friends (although he also referred to them as Slovakian nationals) for a farewell drink as they were about to return to their homeland, but whilst he was having his meal he decided not to go on to Belfast as he had intended to do and as he had told Lisa Leacock he was going to do. There were two reasons for this decision. One was that he was not feeling well, the other was because she was not happy that he was going to Belfast. I should say that her evidence showed that she was of a jealous disposition, something illustrated by her evidence that when he went out that night and left his mobile phone charging in the house, she checked it to see whether there were texts from other women on the phone. Having decided to abandon his trip to Belfast, Shivers says that he then decided to take the opportunity to visit his brother in Toome. He drove to his brother's house which he found in darkness. He let himself in and waited to see if his brother and family would return. Whilst he waited he made himself a cup of tea, but when he decided that they were not going to return he left the house at about 25 or 20 minutes to 10 and drove back to his house in Magherafelt. By the time of his arrival in Magherafelt he had developed severe cramps, so he rushed straight upstairs to the toilet where he remained for some time. After he came downstairs from the toilet he took two pain killers and talked to Miss Leacock. She showed him some material relating to infertility that she had found on the internet. This was significant for them because they had experienced difficulties in having children. She said to him that she had not eaten, so he used his mobile phone to order her a meal from a nearby Chinese restaurant, then he went and brought the meal back to her. The call to the restaurant has been timed at 10.27 pm.

[88] I am satisfied that Shivers has lied about his actions and whereabouts on 7 March between 6.30 pm and his return to his home sometime after 10 pm. I have reached this conclusion for a number of reasons. First of all, his present account cannot be reconciled with his statement to the police in his first interview on 15 May 2009 when he said:

“ . . . that night I was in the house, I was in the Chinese and came home, went to the house all night”.

The obvious meaning of that account is that he stayed at home in Magherafelt all that night, and only left the house to go to the nearby Chinese restaurant to get the meal for Miss Leacock, and indeed that is the meaning attributed to this statement in paragraph 4 of his original defence statement. Secondly, he did not give this detailed account to the police during any of his interviews, and it did not emerge until a

further defence statement was filed on his behalf on 15 November 2011 during the second week of the trial. I find it inconceivable that if his account of his movements over this period of more than 3 ½ hours that night is, or may be, true Shivers was unable to recall these details until 2 years and 5 months after he was first questioned about these events. I am satisfied that these are facts that Shivers could reasonably have been expected to mention at the time he was questioned, and I consider that I should draw an adverse inference against him from his failure to give those details at that time, and that the reason why these facts were not mentioned was because they have since been invented by him. Finally, I am satisfied that the account he has given of his movements contains elements that do not stand up to examination. Why did he spend time visiting graves after the Mass? This does not seem a terribly likely thing to do at that time of night. But most important of all, why did he decide to visit his brother, then go into his brother's house when it appeared to be empty, and wait for his brother and family, instead of returning straightaway to Magherafelt and Miss Leacock when he saw that they were not at home? There was no suggestion from either Miss Leacock or Shivers that there was any argument or tension between them at that time that would explain why Shivers should be reluctant to return to Magherafelt once he decided to abandon his trip to Belfast, and it is not far from Toome to Magherafelt. He was well aware that she was unhappy about his going out on his own on that Saturday night and it seems therefore most surprising that given her unhappiness that he was out at all. On his account he appears to have spent a considerable period of time going to his brother's house rather than returning to be with her in Magherafelt. Shivers' account has all the hallmarks of having been created at a very late stage of these proceedings in order to explain what he was doing, an account which could not be checked because there could be no one after such a period of time who could plausibly be expected to remember him either being at or not being at any of the places where he said he was some 2 years and 8 months after the event.

[89] The mere fact that Shivers has lied about his whereabouts that night is not itself evidence of his guilt of these charges. A person may lie for many reasons, for example to bolster a true defence, to protect someone else, to conceal disgraceful conduct of his short of the commission of the offence, or out of panic or confusion. No such innocent explanation for his lying about these matters has been suggested, nor can I readily conceive of one. As I am satisfied that he has lied about this I consider that his lies can be relied upon by the prosecution as evidence supporting the prosecution case against Shivers on these charges.

[90] The prosecution also suggest that Shivers' failure to use his mobile phone over a period of several hours that night is highly suspicious. Given that he and Lisa Leacock were in frequent contact earlier that day it does seem strange that there was no contact between them, but she corroborates his evidence that he left the phone behind on a charger when he was out of the house, and so I do not regard the lack of use of the phone at the time as relevant to these charges.

[91] In his first defence statement delivered on 14 July 2011 Shivers dealt with the alleged presence of his DNA on the two matches, on the single match and on the mobile phone in the following passage:

“The defendant is not in a position to accept that his DNA was in fact recovered on WMR/13, JC/5 and JC/8. If it is found to the requisite standard that it is his DNA, which it is not (sic) accepted the defendant does not accept that it can, from this evidence, safely be inferred that he was involved in this incident. Given the nature of the DNA evidence in his case there are a number of other realistic possibilities consistent with his innocence. By way of example only, and in particular bearing in mind the nature of the items upon which his DNA was purportedly recovered, the defendant may have innocently touched some or all of these items in the course of everyday life. In this regard, an important consideration may be the fact that the defendant suffers from cystic fibrosis, which necessitates him having to expectorate and carry out breathing exercises. Further and in the alternative, the defendant will maintain that his DNA may, unbeknownst to him, have been transferred to the items without him having touched them.”

In his amended defence statement delivered in the second week of the trial Shivers advanced a significantly different explanation as to how his DNA could have been on the matches.

“. . . there were two specific persons who visited Mr Shivers’ home in the week before 7.3.09, namely Dominic McGlinchey and Gerard McGaughey. Both were friends of Mr Shivers, but especially Dominic, who would visit very regularly. Both smoked cigarettes, as did Mr Shivers. They are both likely to have used Mr Shivers’ matches at his house. It became a running joke with Dominic that Mr Shivers’ matches would have disappeared after he visited. There are several other friends of Mr Shivers who would smoke cigarettes with him when they visited his home and probably used his matches”.

[92] His evidence is that he does not know how the matches got to Ranaghan Road, he did not put them there and he was not there. He said that people who had been in

his house would have had access to matches and possibly lifted the matches by mistake, he referred to Dominic McGlinchey and Gerard McGaughey visiting his house in the week before 7 March, both were regular visitors and both smoked. He was clearly very friendly with Dominic McGlinchey who visited his house 4 to 6 times a week, and out of curiosity he went with McGlinchey to the Eirigi meetings already referred to. He claims that McGlinchey was always taking his matches and this was a joke between them, and that only McGlinchey and McGaughey took matches away, although he said that others might have done so as well. He also agreed that he spoke to McGlinchey by mobile phone on 7 March as McGlinchey was packing to move to Galway.

[93] Dominic McGlinchey has been mentioned by Shivers and on a number of other occasions during the trial. McGlinchey is not on trial in this case, nor has he given evidence, but certain matters relating to him have been agreed between the prosecution and the defence to the following effect.

“It is admitted that Dominic McGlinchey junior was arrested on 14 March 2009 on the basis of a reasonable suspicion that he had assisted those responsible for the Masserene Barracks attack after the attack and had a connection with the car used. That suspicion was based upon information [that] was assessed to be reliable.”

Whilst these matters do not establish that Dominic McGlinchey committed any offences connected with the attack on Masserene Barracks, I consider that I should take them into account for what they are worth when considering whether Shivers’ evidence that Dominic McGlinchey could have taken matches from his house is, or may be, true, and either used those matches to set the Cavalier alight at Ranaghan Road, or at some stage gave the matches to someone else who used them to set the car alight. I am satisfied that these matters do not weaken or displace any inference to be drawn from Shivers’ DNA being found on the two matches recovered from the back seat of the Cavalier because I accept Dr Watson’s evidence that there is no scientific evidence whatever to show that either Dominic McGlinchey or Gerard McGaughey could have contributed to the DNA from these matchsticks, or to show that they had been in contact with those matchsticks.

[94] When questioned on 22 July 2009 Shivers was asked various questions about McGlinchey and McGaughey, and was told that his DNA was on the matches inside the car, on the match outside the car, and on the inside of the mobile phone. His explanation for not mentioning these matters then was that he acted on his solicitor’s advice that he should answer no comment to the questions put to him. I do not need to repeat what I have earlier said about the circumstances in which an adverse inference should be drawn, save that it is necessary to add that whilst legal advice Shivers was given at the time is obviously an important consideration, it does not



automatically prevent his silence about Dominic McGlinchey and Gerard McGaughey from being held against him. That is because Shivers had the choice whether to accept his solicitor's advice or to reject it, and he had been warned that any failure to mention facts which he relied upon at his trial might harm his defence. Despite having been told that his DNA was on the matches, and asked about McGlinchey and McGaughey, he chose not to mention that they might have taken the matches from his house. Not only did he not do so during the interview, but he did not do so until after the trial had started, and I reject his explanation as to why he did not mention them. I am satisfied that he did not mention McGlinchey or McGaughey, or that they might have taken matches from his house, because he has invented this later to try and explain away the presence of his DNA on the matches, an explanation he was unable to advance at the time, and I am satisfied that the advice of his solicitor at the time did no more than provide him with a convenient shield behind which to hide. I must not find Shivers guilty only, or mainly, because he failed to mention these facts, but I can take it into account as some additional support for the prosecution case, and when deciding whether his evidence about his failure to mention these matters at the time is true, or may be true. I am satisfied that I should draw an adverse inference against Shivers in relation to his failure to mention these matters. For there to be an innocent explanation for the presence of his DNA on the two matches would require Shivers to handle the matches without striking them, and then put the unused matches into their box. He has not suggested how he might have done this, such as using the matches as counters when playing cards for example, or spilling them out of their box and picking them up and putting them back in the box. I am satisfied that his evidence that Dominic McGlinchey or Gerard McGaughey may have taken these matches from his house has been invented and is untrue. I remind myself that his failure to mention these matters, and that he has lied about them, does not necessarily mean that he is guilty for the reasons I already given in relation to his lies about his whereabouts on the night of 7 March.

[95] Not only has Shivers been unable to explain how his DNA comes to be on any of the matches, it is also very significant that he cannot explain how his DNA could be on the Nokia mobile phone taken from the car. That was a pay as you go phone so it could not be traced, and it had only been topped up with credit the day before, although it was first used on 1 January 2008. That history of its not being used and only topped up the day before suggests that it was deliberately prepared for possible use the day before and was brought in the Cavalier by the attackers so that if they had to use the phone the call could not be traced back to anyone. I am satisfied that the evidence that Shivers' DNA could have come from this phone is a further indication that he was involved with the Cavalier.

[96] There can be no doubt that the person who set fire to the Cavalier played an essential part in this murderous attack because by setting fire to the car they were trying to destroy it, and so destroy any evidence that might lead to the arrest of those involved. It has not been disputed that if it was Shivers who set fire to the Cavalier at Ranaghan Road he would be guilty of these offences as a secondary party by the

application of the principles I have set out at [25] when considering the case against Duffy. I am satisfied that Shivers' DNA was found on the two matchsticks that were found on the back seat of the Cavalier, and that those matches were used to set fire to the car before all those present left the scene. I am satisfied that it is an extremely strong inference from these facts that his DNA got onto those two matches when he used them to start the fire. That inference is strengthened by traces of his DNA being found on the mobile phone, something that he is wholly unable to account for, and on the other match. I also take into account that Shivers has lied about his whereabouts and actions before he returned home that night, and lied about Dominic McGlinchey and Gerard McGaughey handling these matches, and I am satisfied that he has lied about all of these matters to explain away his DNA on the matches. Taking all of these matters together I am satisfied that the prosecution has proved beyond reasonable doubt that Shivers set fire to the Cavalier at Ranaghan Road and I therefore find him guilty on each count on the indictment.