OMAGH
BOMBING INQUIRY

INQUIRY LEGAL TEAM CHAPTER 3 FACTUAL EVIDENCE SUMMARY

PART 7: ASPECTS OF THE POLICE INVESTIGATION

1. This factual evidence summary is focused upon aspects of the police investigation including information related to the device, investigations and arrests regarding the change of the number plate on the bomb vehicle, forensic science investigations and telecoms investigations. The aim is to provide the Chairman, Core Participants and the public with a digest of accounts that are in the Inquiry's possession relating to aspects of the police investigation. This evidential summary is an overview and is not intended to provide an exhaustive recitation of the police investigations.

2. This factual evidence summary will be separated into the following sections:

    1) Investigation of the supply and purchase of Coupatan timers

    2) Investigation and arrests in relation to the number plate change

    3) Forensic science investigations

    4) Telecoms investigations

3. Unless otherwise indicated, ranks of RUC and British Army officers are recorded as they were on 15 August 1998, to avoid confusion about the chain of command or the relative authority of the individuals at the time.

Section 1: Investigation of the supply and purchase of Coupatan timers

4. During searches of the scene, the remains of the Timer Power Unit (TPU) used in the device were discovered. It was discovered that the TPU contained a Coupatan electro-mechanical two hour run back timer (the "Coupatan timer"). During subsequent police enquiries conducted in 2002, the source of the Coupatan timer and their use in other previous incidents was investigated by the PSNI.

5. It had been discovered that the TPU used in the bombing had a product or part serial number 561 222 362 and a batch number of 99170. Statements were obtained

regarding the distribution and sale of Coupatan timers from a company based in France and, in particular, timers with those identifying numbers.

Colette Robert

6. Colette Robert made a statement dated 17 March 2003. In it she stated that she was the Plant Manager of Coupatan S.A in France. She referred to a fax she had sent to Detective Sergeant Officer 7 of the PSNI on 29 January 2003. She said that that document outlined that it is possible for the Coupatan Company to produce 680 two-hour run back timers per day.

7. In relation to the timer code number 561 222 362, she said that in 1997, 4800 of those timers were supplied to Hydraelectric and 480 were supplied to Thermaco. She also stated that in 1998, 5760 of that particular type of timer were supplied to Hydraelectric. She stated that that type of two-hour run back timer with that code number was not supplied to any other customers in Europe in 1997 or 1998.

8. Ms Robert explained that the code number 561 222 362 was the code part number which denoted the type of two-hour run back timer. She then explained that the number 99710 could be broken down as follows: *"the first 9 means it was made in France. The 2nd and 3rd digits 97 mean it was made in the year 1997. The 4th and 5th digits 10 mean that it was manufactured in the 10th week"*. She explained: *"the 10th week of March 1997 commenced on Monday the 2nd of March 1997 finishing on Saturday the 8th of March 1997"*. She stated that if a timer bore the number 561 222 362 99710, it meant that it was a two-hour run back timer produced by Coupatan on the 10th week of 1997, commencing on 2 March 1997.

9. Ms Robert stated that, from records available to her, she was not in a position to state how many timers were made with that number, or how many were made on a particular day. She explained that records showed that the product with that number could be part of an invoice supplied to Hydraelectric under invoice number 36885. She also stated that another invoice (number 36840) showed that 480 2-hour run back timers 561 222 362 were delivered to Thermaco in Malvern, with the customer shown as Electro Techniks. She stated that the order that went to Thermaco would have been produced on 3 March 1997 and would have had the number 561 222 362 99710. She

stated that the order that went to Hydraelectric *"would probably have been finished at the same time, but it could also have been produced or finished at the start of week 11"*. She said that if the order to Hyrdraelectric was finished on 10 March 1997, *"the timer would have bore the date stamp 99711."*

10. She stated that she believed that all of the timers supplied to Thermaco and Hydraelectric were produced on week 10, *"because I would have known both orders would have to be fulfilled and when the production line for the timer 561 222 362 was set up it would make sense to complete both orders at the one time"*. She also stated that the Coupatan factory is closed on Saturdays and Sundays, with the working week being from Monday to Friday.

Leonard Harding

11. Leonard Harding made a statement dated 19 March 2003. In it he said that he was the owner and Managing Director of Thermaco Limited, based at Sandy's Road, Malvern, England. He stated that he had provided invoices from Coupatan to police, which related to a transaction where Thermaco Limited obtained four hundred and eighty 120-minute timers with part number 561 222 362 and supplied them to a company called Electro-Techniks of Coe's Road, Dundalk, Co. Louth. He stated that this was the one and only transaction carried out by Thermaco Limited with that company.

12. Mr Harding described how the transaction took place. He said that Electro-Techniks would have placed an order by phone or fax. The number of timers would have been suggested by Thermaco, because of the fixed quantity by Coupatan. Mr Harding stated that the timers came in boxes of 240. He said that when the order was placed with Thermaco, because Electro-Techniks were a first-time purchaser, cash *"up front"* would have been asked for.

13. Mr Harding explained the various invoices and records, stating that the payment was made in French Francs. He said that on 4 March 1997 Coupatan dispatched four hundred and eighty 120-minute timers to Thermaco Ltd. He stated that the timers did not include knobs or dials which had separate part numbers. He said that four hundred and eighty timers were then dispatched from Thermaco on the 12 March 1997. He stated that Electro-Techniks did not use the delivery company Target as originally

invoiced, but in fact arranged for the collection of the goods themselves. He said that the goods were signed off the premises by Dennis Morgan, who signed the dispatch invoice. Mr Harding stated that he had no knowledge of who collected the goods, or of that company's background and he had no recollection of who he spoke to in the company.

Dennis Morgan

14. Dennis Morgan provided a statement dated 19 March 2003. In it he said that in March 1997 he was employed by Thermaco Ltd as a warehouse manager. He said that he signed and dated the dispatch note, but he was unable to furnish any details in relation to who may have collected the order.

Colin Hayward

15. Colin Hayward made a statement dated 20 February 2003. In his statement he said that he was the managing director of Hydraelectric based in Surrey. He said that the company imports Coupatan *"2 HR"*[1] Run Back timers from the Coupatan company which is based in France. He said that in total there were *"many variations"* of the Coupatan timer and that the time variation can run from 15 minutes to 24 hours. He explained that when his company received the timer from Coupatan, they put it in a box with a knob and several fixing screws. He said that they also place a yellow identification label on the box.

16. He went on to explain the ordering procedure with Coupatan. He explained how the numbers could identify the type of timer, where it was made and when it was made. He described invoices between Coupatan and Hydraelectric dated between January 1997 and November 1998. He stated that the only firm to which Hydraelectric supply the particular type of Coupatan "2 HR" run timer with part number 561 222 362 was RS Components UK Limited. He referred to the invoices during the period 1997 to 1998 for products sold to RS Components UK Limited and provided further information regarding them.

[1] This is understood by the Inquiry to mean "2 hour".

17. Mr Hayward provided a further statement dated 27 May 2003 which contained further information including in relation to the types of knobs used with the timer and where they were purchased from.

John Foster

18. John Foster made a statement dated 19 February 2003. In his statement he said he was employed by RS Components UK Limited as a credit manager. He stated that RS Components UK Limited was a supplier of electrical, electronic and associated products, dealing primarily with business-to-business customers, but also that they used to supply private individuals through a mail order company called Electro Mail. He said that the company operated trade counters as well as mail order. He explained how customers' details were captured when they purchased an item. He stated that the company operated within the UK. He described them as the sole supplier of goods to a separate company called Radionics Ltd, Glenview Industrial State, Dublin 12. He said that if someone from the south of Ireland ordered components from RS Components UK Ltd, they would direct them to Radionics Ltd *"as they stock almost the same range of products"*.

19. He stated that RS Components sold a Coupatan two-hour run back timer. He stated that he examined the company's back sale catalogues from March 1997, July 1997, November 1997, March 1998 and July 1998. He confirmed that the Coupatan two-hour run back timer was on sale.

20. In a further statement dated 18 March 2003, Mr Foster provided more information regarding various sales, including referring to an invoice 0655632 dated 6 March 1997. He stated that this was an invoice of products dispatched to Radionics Ltd, Herberton Road, Dublin 12. He stated that the products left the premises on 6 March 1997.

Detective Sergeant Officer 7

21. Detective Sergeant Officer 7 (PSNI) was appointed to the role of Forensic Liaison Officer on 16 September 2002. He produced a report dated 16 June 2003 regarding inquiries into the timers. In his report, he stated that *"the difficulty encountered in tracing the particular batch of timers 561 222 362 99710 was that Coupatan did not*

record how many timers were made with the date code 99710". He reviewed the supply by Coupatan to Hydraelectric and Thermaco and concluded:

> *"What has been proven evidentially is that Radionics, Dublin were supplied on the 6/3/97 with 87 Coupatan 120 minute run back timers, part number 561222362. Therefore it was physically impossible for these timers to have the date stamp 99710 because Hydraelectric, R S's supplier, did not receive the timers... until the 14/3/97".*

22. When considering Thermaco, he stated as follows:

> *"On the 15th of January 1997 Thermaco received payment in advance for the 480 timers. This was 18,236.88 French francs, which was paid into their French franc account at the National Westminster Bank, Malvern. The money had been transferred from the AIB Bank, Dublin on the instructions of a Briege Morgan,* [redacted] *Newry Road, Dundalk".*

23. He stated that enquiries to date had been unable to verify either the firm Electro-Techniks, or Briege Morgan. He stated that enquiries were ongoing and were with Garda.

24. He went on to conclude as follows:

> *"Enquiries into the source of the supply of Coupatan timers have proved that Dissident Republicans obtained a batch of timers through the firm Electro-Techniks, Coe's Road, Dundalk. This is the only source these timers could have been procured from because it is known that the timers used by the terrorists did not have the Coupatan supplied knob on them. The timers supplied by Thermaco to Electro-Techniks were purchased without a knob, (statement of Roy Harding), hence the need for the bomb maker to obtain a knob for use with the timer. If the timer had been obtained by the terrorists through the R S distribution chain, it would have been supplied with a knob. It is highly unlikely the bomb maker would have dispensed with a perfectly serviceable knob and obtained a different knob for use with the timer. From enquiries with Hydraelectric it has been proven that the knobs used on the Coupatan Timers on the Mark 19 TPUs are not the*

knob they supplied with the timer to R S Hydraelectric (statement of Colin Hayward), [they] have only used 2 variation of knob when they supplied 561222363 type timers to R S UK Ltd. Neither of these knobs are the same as the knobs used by the terrorists on the MK 19 TPUs".

25. In his further report dated 5 December 2005, Detective Sergeant Officer 7 stated that subsequent enquiries had revealed that Bridge [sic] Morgan of Newry Road, Dundalk and Electro Techniks *"do not exist"*. In a statement dated 11 May 2005, Detective Inspector James Sheridan of An Garda Síochána stated that Briege Morgan of Newry Road Dundalk *"has no account with AIB. There is no such person living at this address or ever was. There is no company by the name Electro-Techniks in Coes Road, Dundalk or any other address in Dundalk now or in 1997"*.

26. DS Officer 7 also produced a report dated 27 May 2005 in which it was recorded that the original AIB bank documentation had been obtained, with fingerprints located on it. DS Officer 7 requested any details regarding female associates from South Armagh or North Louth, "*in order to try to identify the female who paid for the money transfer from the AIB"*.

27. In a report dated 7 June 2007 sent by Detective Sergeant Officer 13 to Acting Detective Chief Inspector Officer 15, Officer 13 stated as follows:

"The financial transaction of payment for the timers was made through the AIB Branch at Clanbrassil Street, Dundalk. This bank has now closed and has amalgamated with another AIB branch in Dundalk. Martin Carr is employed by the AIB in Dundalk and in evidence given at the District Court in Dublin he stated that there was no bank account held in the AIB in Dundalk under the name Briege Morgan. Mr Carr also produced original documents to the court… One of these documents is described as the AIB application for foreign transfer customer payment form (MT 100). The remitter's name and address were shown as Briege Morgan, [redacted] Newry Road, Dundalk, County Louth. The signature on the form was Bridge Morgan… In the evidence given by David O'Riordan… he states that the AIB do have an account under the name Bridge Morgan of a different address from that contained on the Foreign Transfer Form of [redacted]

Newry Road, Dundalk. This would be one enquiry the Garda Siochana could consider in order to clarify the correct position."

28. DS Officer 13's report had also referred to the examination of fingerprints which had been located but not identified. A further report by Acting Detective Chief Superintendent Officer 15 dated 20 June 2007 sent to Detective Chief Superintendent Baxter requested that Officer 13's report be forwarded to AGS via the Extradition Unit *"in order to continue enquiries into the matter having regard to available evidence, namely fingerprints. If An Garda Siochana identify any person involved in the purchase then that person/persons could be prosecuted by the authorities in the Republic of Ireland. Prior to this report being forwarded to An Garda Siochana, I would suggest that the issue should be raised at a meeting to be arranged with the D/Superintendent at Monaghan".*[2]

29. DS Officer 7's role had also involved carrying out enquiries in relation to component parts of the TPUs in other incidents. For example, his report dated 27 May 2005 contained a list of 14 incidents being investigated by the Omagh bomb investigation and stated that, in most of those incidents, a Mark 19 TPU was used. In each case where one was used, it incorporated a Coupatan 2 HR run back timer with the serial number 361 222 362 99710.

Section 2: Investigation and arrests in relation to the number plate change

30. Police in Northern Ireland arrested three people under Section 14 of the Prevention of Terrorism (Temporary Provisions) Act 1989 in relation to the suspected manufacture of false number plates bearing the details MDZ 5211.

31. Police believe that the digits used in the bomb car's number plates were manufactured by a company called Tearne and Sons Limited in Birmingham, which supplied a distributor called Wipeco in Newry, County Down. Wipeco sold components for the manufacture of registration plates to customers in areas such as South Armagh and

[2] Officer 13 and Officer 15's reports were then forwarded by Detective Chief Superintendent Norman Baxter to Acting Chief Inspector Galbraith by further report dated 27 June 2007. In a further report dated 9 October 2007, Acting Detective Chief Inspector Officer 15 stated that *"a file in relation to the purchase of coupatan timers has been passed to Detective Superintendent O'Leary of An Garda Siochana."*

the Republic of Ireland. Although Wipeco also manufactured plates, police did not believe this had occurred in respect of the bomb car plates; police also did not believe the plates had been manufactured professionally and that it was both possible and convenient to buy components and make up a plate privately. Components sold by Wipeco, including a plain acrylic plate and adhesive backing tape, matched the bomb car plate. Police say that no other distributor was found to have that specific combination of components. The Omagh investigation team explored the firms to which Wipeco supplied a specific combination of components and identified a business called Cullaville Auto Plates, which was in an area of South Armagh where police suspected some of those involved in the Omagh bombing lived and operated.

32. The owner and two employees of Cullaville Auto Plates were arrested; those being Seamus Meegan, Gerald McDonald and Terence O'Neill. Police say that one of these individuals was suspected to have links to PIRA and one to the INLA. These individuals were interviewed but no person was charged.

33. Seamus Meegan was the owner of Cullaville Auto Plates. He was arrested on 22 February 1998 and released on 23 February 1999. At interview, he denied involvement with RIRA or the Omagh bombing, stating that on 14 or 15 August 1998 he went on holiday to the Republic of Ireland with his family. He denied knowledge of the number plate MDZ 5211 being made in his garage, although he admitted that the plates could have been made there innocently by himself or by staff. He denied membership of RIRA or other paramilitary organisation and said he was truly sorry for the grief caused to the people of Omagh and that he would not knowingly have played any part in the planning or commission of the bomb.

34. Gerald McDonald was an employee of Cullaville Auto Plates. He was arrested and detained between 22 and 23 February 1999. He was suspected by the RUC of being a member of RIRA. He said at interview on 22 February 1999 that he knew some of the people from the Cullaville area who were arrested in relation to the Omagh bomb in September 1998. McDonald said that he had no knowledge or recollection of making the bomb car number plate and there was no formal procedure for taking orders for plates. He accepted that he could have made the plate without knowing what it was going to be used for. He denied any part to play in the Omagh bombing. He said that

making registration plates was one part of the business. Plates could be ordered by ringing the business or by attending in person. A customer would ask for a number, it would be written on a scrap of paper and any member of staff could create the plate. No record was made of the plates created and the details MDZ 5211 were not familiar to him, although he said he supposed that MDZ 5211 was a strange number for the area. McDonald also described the process of making a number plate and said that the business would sometimes lend material to another business in Crossmaglen in County Armagh called Cassidy's. He looked at the bomb plate recovered from the scene of the Omagh bomb and said that it looked more like a professional job made by someone who knew what they were doing. McDonald said that he had never been approached by anyone outside working hours to make a number plate. He denied membership of RIRA or other paramilitary organisation.

35. Terence O'Neill was also an employee of Cullaville Auto Plates. He was arrested and detained between 22 and 23 February 1999. He was questioned regarding alleged membership of RIRA and involvement in the Omagh bomb. O'Neill said he made up several number plates every week and several staff members would make plates. He could not remember making the plate used in the Omagh bomb and would not have done so had he known it was for terrorist use. He denied being a member of or associated with RIRA or having any involvement in the Omagh bomb.

36. The Inquiry understands that the examination of the registration plate found at the scene in Omagh did not produce forensic material linking it to any individual. Police suspected that one or more of the suspects involved in the bombing, some of whom were involved in the auto trade, could have bought or manufactured the bomb car registration plate given the necessary components were widely available and could be bought without creating a record.

37. Whilst it is not clear to the Inquiry, at this stage, when Bernard McGinn's registration details were matched to Paul Ward's car, police suspected that it was more likely that the bomb car was stolen and then a match for the plates was found after, although this was not certain. The Inquiry also cannot say with certainty when the registration plate details belonging to Bernard McGinn were made or added to the bomb car stolen from Paul Ward.

Section 3: Forensic science investigations

38. Forensic investigations commenced immediately after the bomb exploded, involving many individuals working for the Forensic Science Agency Northern Ireland ("FSANI") and later Forensic Science Northern Ireland ("FSNI"), the RUC and external agencies outside Northern Ireland. The investigations spanned several years. An International Scientific Peer Review Panel, established by the Senior Investigating Officer of the Omagh Bomb Investigation in December 2003 (which is summarised in another summary), said the following in respect of forensic investigations:

> *"Incidents involving bombings and mortar attacks in Northern Ireland were, unfortunately, not uncommon in 1998. With minimal damage and few if any injuries, the investigations were conducted as matters of relative routine. The "scenes of crime" examinations are not perceived to have been pursued with the intensity and thoroughness that might have been expected in jurisdictions where such events are less common. No useful fingermarks were found on vehicles or other objects using basic techniques. Some items were returned to their owners; others were not retained or were not stored under ideal conditions, thus limiting potential reconsideration and reprocessing later.*
>
> *The laboratory examinations were primarily concerned with the bomb/mortar mechanisms and construction. What was done was done competently but, presumably due to other casework pressures, not everything that might have been done was in fact done and the priorities assigned were not particularly high. This is exemplified by the fact that, although the first mortar attacks in this series (1667/98 and 1669/98) occurred in March 1998, "Preliminary Reports" on the devices were not issued until October 23 and December 01, 1998 respectively (although we presume there was verbal communication during this period.) The written reports essentially consist of only basic descriptions of the devices. Similar reporting time frames applied to the other incidents. The approach appeared to have been primarily descriptive rather than investigative.*
>
> *There is nothing particularly surprising about this; similar comments might be made about the work of other forensic science laboratories around the world. Although FSNI staff members are recognized internationally as having*

considerable expertise with respect to the examination of material from explosives related incidents, the full value of this expertise could not be realized because of resource limitations. In addition, while the FSNI laboratory had been destroyed by an explosion in 1992 following which it was relocated to "temporary headquarters" in a former cigarette factory; it still occupies those "temporary headquarters". In August of 1998, FSNI had only one full time explosives expert available for "on call" requests. Other personnel with the necessary expertise had been transferred to different units in the laboratory (John Davison Report, October 16, 2000 page 15). FSNI, as did other forensic laboratories, coped with their caseload by performing only the most essential examinations and by prioritising cases, usually on the basis of court dates or where items that might determine whether or not a suspect could be associated with an incident were available for examination. Few, if any, laboratories worldwide have now, or had then, any "surge capacity", i.e., the capability to deal with overwhelming demands presented by a major incident that results in submission of very large numbers of items for examination. Omagh clearly presented such a situation to FSNI.

...The value of having Mr McAuley take charge of the search is demonstrated by the fact that, despite the extensive destruction of the bomb car (and the buildings in the vicinity), an electrical toggle switch was found near the remains of the front end of the vehicle during a "line-abreast" search on Sunday August 16th. Recognizing this switch as being typical of those previously observed in Mark 19 TPUs, Mr. McAuley was able to show the searchers the other types of components they should be looking for. This undoubtedly facilitated the recovery of additional relevant items from the masses of debris which permitted him to describe in some detail and confirm it to be a Mark 19."

39. The Review Panel Report continued:

"The examination of the site at Omagh presents an entirely different picture from the earlier incidents. As with any large explosion with serious injuries and/or loss of life, when the crime scene examination began, the site was anything but pristine. Contemporary amateur videos show large numbers of people moving

about in mass confusion. Attempts to rescue injured persons and the recovery of bodies quite properly took precedence over physical evidence recovery and documentation…Damage to commercial and municipal infrastructure, including water mains, required the active presence of repair crews. As a result, the police were unable to completely isolate the scene until several hours after the explosion…

A detailed examination of the scene began on Sunday August 16, 1998 when Dennis McAuley of FSNI took charge (Dennis McAuley Statement, February 18, 1999). From then until August 21, 1998 when the scene was released, the crime scene examination appears to have been very thoroughly and professionally performed…"

40. The PSNI has informed the Inquiry that in the summer of 2002 a new forensic strategy was devised which sought to identify links between the Omagh bomb and other bombing and mortar incidents, and came to include all incidents in which a Coupatan timer bearing a batch number 99710 was used.

Walter McCorkell

41. The Inquiry understands that one of the first individuals from FSANI who attended the site of the bombing was Walter McCorkell, Forensic Scientist. He provided a statement on 4 August 2000 to say that he attended Omagh on 15 August 1998 at the request of the RUC. He requested support by way of the provision of skips to recover debris from Market Street and the surrounding area. Mr McCorkell returned the following day with his colleague, Mr Dennis McAuley, and relayed his understanding of what had happened and what he had done the previous day. Mr McCorkell said that he recovered one item from the scene, a piece of white plastic which was given the exhibit reference WMcC1.

42. In a witness statement provided to the Inquiry, Mr McCorkell said that on 15 August 1998 he held the position of Reporting Senior Scientific Officer. He was a Chartered Chemist and member of the Royal Society of Chemistry. At the time of the bombing, he had experience in attending numerous explosive related incidents, including VBIEDs. He had experience of being part of the FSANI Explosives on-call rota, which

consisted of three individuals who were *"operational, scene competent scientists with Explosives scene and analytical related competencies for explosives investigations"*. He said his role involved reporting on components present at a scene and how devices, including VBIED or otherwise, had been or were constructed. It was his experience that investigations were prioritised by considering whether there had been a fatality, a suspect had been identified or potentially it was part of a 'linked cases' enquiry. He was not aware of any prioritisation of explosives related casework during the period of the bombing.

43. Mr McCorkell said that casework was carried out according to the needs of the incident or investigation. Reporting Officers within FSANI disciplines would co-ordinate on forensic strategy and necessary examinations in order to maximise the recovery of evidential material to assist in the investigation, records of which should be casework papers. Mr McCorkell said that FSANI/FSNI encouraged discussion within disciplines of any advance in casework practices, particularly regarding contamination avoidance and DNA developments. He was not involved in engaging with external agencies or in accessing external forensic databases, save for his engagement with the Omagh bomb police investigation team or those assisting with scene management.

44. Mr McCorkell said that he was contacted by the Duty Scientist in FSANI on 15 August 1998 in respect of his availability to attend the bomb site, to *"provide expert explosives input and assistance to the RUC."* He was contacted as he had previously been involved in the on-call rota but was not, at that time, on-call for explosives-related casework. He said he attended the scene and received a briefing from RUC Chief Constable Ronnie Flanagan and observed that the site had been secured with an Incident Control Point ("ICP"). He said that the *"purpose of my investigation, on arrival, was to control the scene, give forensic guidance and to prepare, initially, a common approach path (CAP) from the ICP up to the area of the crater for controlled scene examination"*.

45. Mr McCorkell received assistance from several RUC personnel in sweeping a narrow path to the area of the explosion, whilst *"constantly looking for any items of possible relevance to the device."* Mr McCorkell said that while he was at the scene on 15 August 1998, he permitted the then Deputy Prime Minister, John Prescott, and Mr

Seamus Mallon (a politician in Northern Ireland at that time) to enter the scene with him. They stayed on the CAP and approached close to the crater. They briefly discussed the needs of the investigation.

46. Mr McCorkell attended the RUC station in Omagh on 16 August 1998 with his colleague, Mr McAuley, who had been on the Explosives on-call rota and who had explosives scene experience and management competences. He also re-attended the scene on that day.

47. Mr McCorkell was not involved in any review into the Omagh bombing or the prosecution of any individual.

Dennis McAuley

48. Mr McAuley was a member of staff at the Forensic Science Laboratory between most of the period of 1976 – 2011. He was awarded an OBE in 2009 for his contribution to Forensic Science in Northern Ireland.

49. Mr McAuley has provided a witness statement to the Inquiry,[3] stating that he holds a degree in Chemistry and was involved in the examination of approximately 170 scenes of terrorist-related explosions in Northern Ireland, with around 20 of those incidents occurring after 1998. He had decades of experience in the investigation of various types of explosion scenes, including those involving VBIEDs.

50. Mr McAuley attended the scene of the bomb in Omagh between 16 August 1998 and 20 August 1998, and said that the *"main purpose of my attendance was to ensure that all possible evidential materials were identified and recovered in order to facilitate a more detailed examination/analysis of the items at FSANI"*. Mr McAuley said that another reason for the identification of device components was to establish attribution i.e. whether or not the components were typical of those previously used by a terrorist group in Northern Ireland. He engaged with Mr McCorkell and officers and individuals from the RUC; including Scenes of Crime Officers (SOCOs), CID personnel,

[3] Mr McAuley provided several witness statements and reports following the Omagh bombing, including as part of the initial investigation into the bomb and subsequent reviews into the Omagh investigation and related to linked incidents. He also gave evidence at the trial of Sean Hoey. As with other individuals referred to in this summary, not every witness statement provided by Mr McAuley is referenced.

photographers and mappers, search team personnel and stolen car personnel. He also engaged with Metropolitan Police Service Officers from debris search teams.

51. Mr McAuley has said there was no written FSANI guidance or policy document in relation to the assessment of scenes of explosions and that experience was gained practically or through reference to textbooks regarding explosion investigation and analysis. He said that his approach at a scene was to ensure scene preservation, scene safety, identification of priorities and resources required, briefing of relevant agencies, scene recording, having a thorough searching methodology, recording, recovering, packaging and labelling all evidential items and maintaining continuity of evidence recording. To his recollection, the RUC kept a decision log of the overall strategy regarding scene examination.

52. In an earlier statement from Mr McAuley, he described attending at Market Street in Omagh. His observations included an engine, front wheel rim/tyre assemblies, parts of a chassis and sections of maroon painted bodywork. Mr McAuley said that a front number plate, bearing the registration mark MDZ 5211, was found at the scene and was consistent with having been fitted to the vehicle. In another earlier statement from Mr McAuley, he said that he assumed control of the forensic examination of the scene from Mr McCorkell and had been briefed at Omagh RUC station. He said that from the outset of his examinations of the scene he wore cotton overalls, rubber safety boots, nitrile rubber gloves and a safety helmet and that, at times, he wore a waxed cotton coat over his overalls and a disposable dust mask.

53. Mr McAuley directed Mr McCorkell to organise a line-abreast search of Market Street by RUC personnel. Those searching had *"little protective equipment at the beginning of the scene examination"* but Mr McAuley brought spare helmets, gloves and dust masks. He also arranged for Omagh District Council to provide safety helmets. Instructions were given *"to look for materials such as pieces of timer mechanism, plastic, metal fragments other than from a vehicle, wiring and batteries"*. This search identified an electrical toggle switch *"in the vicinity of the front end of the bomb vehicle remains."* Mr McAuley stated: *"I retained this switch as I believed it formed part of the explosive device."*

54. Mr McAuley said that on 17 August 1998 he attended Omagh again after he identified at the FSANI Laboratory *"a timer power unit which I believed to be similar to that used in the Omagh bomb (based on the toggle switch recovered)."* Having described the timer power unit, he briefed the RUC Search Team and a SOCO on what to look for. Mr McAuley said that *"any major pieces of bomb vehicle bodywork should be gathered at that stage"* and that a new line-abreast search of Market Street took place. This found a blue lunch-box lid similar to that on the timer power unit found in the vicinity of the front of the bomb vehicle. This was retained. The area was then swept and items deposited in a skip.

55. Mr McAuley and a SOCO *"closely searched the area around the remains of the front end of the bomb vehicle and recovered batteries and a battery connector which were retained."* The debris in this area were collected into bins. Glass was also gathered from Market Street before a search of shops took place.

56. Mr McAuley organised three skips to be removed to Girdwood Army Barracks in Belfast on that occasion (with 13 skips, 17 wheeled bins, 11 flip-top bins and assorted bags being recorded in another statement as being gathered during the course of the scene examination). He accompanied bomb vehicle remains and bins of debris to the FSANI Laboratory after attending a case conference at Omagh RUC Station to brief those present on the scene examination and his plans and requirements for the following day. He produced photographs, delivered from the FSANI Laboratory, of a timer power unit believed to be similar to that used in the bombing.

57. Searches and the gathering of material continued after 17 August 1998. The search was expanded on 19 August 1998, with the RUC Search Teams being requested *"to widen their search for the outstanding remains of the explosives device (none of the timer mechanism, in particular, had yet been found)"*. Mr McAuley stated that he briefed members of the Metropolitan Police Search Team on the scene examination to date and of the nature of the debris their teams would be searching. Further skips and bins of debris were transported to Girdwood Barracks. Mr McAuley stated that he completed his examination in Omagh at 17:15 on 20 August 1998.

58. On 21 August 1998 Mr McAuley briefed Metropolitan Police Officers at Girdwood Barracks. Mr McAuley said: *"I advised them of the types of components and overall*

construction of the device which I believed had been used, what components of the device had already been found at the scene and what components potentially remained to be found in the debris." He said he prioritised the skips he thought more likely to contain components of the timer power unit which he had in mind. He was informed on 23 August 1998 that the remains of a timer had been found in a skip of debris at Girdwood Barracks. Mr McAuley travelled to Girdwood Barracks and took possession of the timer from MPS Constable Davies.

59. Mr McAuley submitted a total of 87 items to the Forensic Science Laboratory between 18 August 1998 and 24 August 1998. Further materials recovered from the scene, skips and wheeled bins were received by the Laboratory during the period 25 August 1998 and 11 September 1998.

60. Mr McAuley said that the forensic analysis on items from the Omagh bomb scene occurred in various sections within FSANI. In addition to his RO duties regarding the work of his own team in Explosives and Microchemistry, he liaised with ROs responsible for the case in other sections. All of the ROs participated in regular RUC case conferences. The ROs included:

a. Dr Ruth Griffin (Biology/Search)

b. John Logan (Biology/Search)

c. Alan Dinsmore (SFU)

d. John Brown (SFU)

e. Stephen Maxwell (Documents)

f. Jim Armstrong (Physical Methods)

g. Gordon McMillen (Explosives)

h. Ann Irwin (Microchemistry)

i. Peter Barker (Explosives physical/chemistry)

61. The Inquiry has obtained witness statement evidence from a number of the individuals identified by Mr McAuley:

a. Dr Ruth Griffin, who was a Senior Reporting Officer within the Biology Department in August 1998 but would later become the Lead Scientist in FSNI for the Review of the Omagh Bombing (material relating to Dr Griffin is summarised further below);

b. Mr John Logan, who was a Principal Scientific Officer and Reporting Officer in the FSNI Biology Department;

c. Mr Alan Dinsmore, who worked as a fingerprint recovery chemist within FSANI in August 1998;

d. Mr Stephen Maxwell, who was involved in the examination and comparison of handwritings, the decipherment of indented writings on paper and the comparison of marker pen inks;

e. Mr William Armstrong, who was a fingerprint recovery chemist within FSANI in August 1998;

f. Mr Brian Irwin, who provided technical support to the FSNI Biology Department Reporting Officer(s);

g. Ms Alison Keith, who was an Assistant Scientific Officer in August 1998;

h. Mr Ian Fulton, who was a Reporting Officer within the Electronics Department in FSANI August 1998.

62. Mr McAuley addressed his role as the Explosives RO as requiring him to direct the types of examinations and analysis to be required for each item and the sequence of this. He conducted the physical examination and identification of component remains and other items such as: items from house searches; plastic adhesive tapes; batteries; electrical circuitry; electronic components, including toggle switches, LEDs, resistors and wiring; glue sticks; and components of toolboxes. He prepared several witness statements addressing his scene examination and laboratory findings. Preliminary reports could be sent to the RUC.

63. He offered an opinion on the Omagh bomb, including the arrangement of the device within the vehicle, the nature and type of the explosives and timer power unit used and how it was intended to be detonated:

> *"From the damage to the vehicle and surroundings I estimated that a* [very large amount] *of improvised explosive had functioned in the boot of the Vauxhall Cavalier saloon registration mark MDZ 5211.*
>
> *From the materials recovered I concluded that the main charge of the device had been boosted by at least one booster charge which would have been initiated by at least one electric detonator wired to an improvised timer power unit.*
>
> *The timer power unit had probably been located in the passenger compartment of the vehicle... the explosive charge* [was likely] *in the boot.*
>
> *Similar devices have been used by terrorists in Northern Ireland and usually consist of:*
>
> *(a) a main charge of explosive comprised of a mixture of ammonium nitrate based fertiliser and sugar.*
>
> *(b) a booster charge containing a similar explosive mixture confined inside a* [length] *of steel tubing... The tubing has* [diameter holes] *drilled in lines along its length and is wrapped in brown packing tape. A length of detonating cord, frequently of improvised manufacture, is inserted into the explosive filling in the tube and protrudes from one end.*
>
> *(c) an electric detonator which may be of commercial or improvised manufacture.*
>
> *(d) a timer power unit constructed from a plastic lunch box containing a two hour electromechanical timer, two toggle switches, a red LED, an electrical resistor, a* [battery] *connector, a battery (or* [four batteries] *in a battery holder), lengths of wiring and a quantity of thermoplastic glue.*
>
> *(e) The components are fixed through holes in the lunch box base such that the toggle switch levers. the timer knob and the LED all protrude on the*

exterior of the box. These components are wired together, along with the battery connector, to form a firing circuit and are secured into position with the glue. The letters "A", "B" and "C" and the words "ON" and "OFF" are usually marked on the box base adjacent to the components to indicate the switching sequence which would arm the device safely.

In operation, the electric detonator of the device is attached [from the timer power unit]. *The two hour timer in the unit would then be wound back to provide the required time delay, and the toggle switches would be switched on. After the time delay expires electric current from the batteries would initiate the detonator, causing the detonating cord in the booster charge, the booster charge itself and the main charge all to function in turn."*

John Davison

64. In March 2000 the RUC commissioned a review of the Omagh Bomb Investigation, led by Detective Chief Superintendent McVicker, which was finalised in November 2000. The Review Team invited the participation of Dr John Davison, who was a Specialist Advisor from the Forensic Science Service. Dr Davison was instructed to conduct a separate review of the forensic science aspects of the investigation. His report, entitled "Review of the Scientific Contribution to the Investigation of the Omagh Bombing", dated 16 October 2000, had the following terms of reference:

a. To identify examples of good practice and areas where improvements might be made.

b. To assess work still in progress and evaluate its potential worth to the investigation.

c. To recommend any further scientific work which might provide evidence of intelligence to the investigation.

65. Dr Davison noted that: *"My specific experience of explosive incidents is far less than that of the scientists involved in the original investigation, and I have conducted my review on the lines of general sound scientific principles, and in particular the use of*

science in supporting active investigations". Dr Davison provided an overview of the opportunities for scientific assistance of the investigation, including:

a. The construction and possible storage of the explosive device.

b. That a vehicle was stolen and stored for up to two days at a location which may have been different from the device construction site.

c. False number plates were made and fitted.

d. The device was loaded and then placed into the bomb car.

e. The bomb car was then driven to Omagh.

f. Telephone warning calls were made.

66. Dr Davison reviewed issues such as overall case management and co-ordination, exhibit identification, laboratory examinations relating to scene material and suspect items, number plates, linked offences and concluded with recommendations and possible further examinations. Dr Davison noted the full co-operation of officers within the Omagh review team and staff at FSANI and *"found the attitude of all the scientists concerned consistent with their attitude prevailing throughout their work on the case, a determination to do everything possible to ensure a successful and just conclusion to this investigation."* Dr Davison gave ten general recommendations, including that: *"in future incidents a scientist, having no other specific involvement in the case, be appointed to liaise closely with the investigation team, and to co-ordinate the work of the various scientific specialists throughout the enquiry"* and *"consideration be given to new, strict anti-contamination procedures at all scenes where LCN DNA analysis may be subsequently required"*, whilst Dr Davidson had earlier commented upon the advent of LCN DNA techniques which were not available at the time of the bomb, which had implications for the examination and recovery of items from scenes.

67. Dr Davison gave 28 specific recommendations for possible further work in the Omagh investigation. These included that an overall co-ordinating scientist be appointed to take the lead in relation to further work on this case. Ideally, that co-ordinator should

have no direct involvement in the actual examination of items. Further recommendations related to DNA testing of a jumper/pullover exhibit reference PC3, that device components from linked incidents be examined for hairs and that tapings from telephone boxes should be examined for fibres and extracts from cigarette ends for LCN DNA.

68. Dr Davison was invited to act as the Forensic Co-Ordinator to the Omagh bomb investigation. He authored a report in December 2001 with Dr Ruth Griffin from FSNI which sought to provide a *"detailed account of the examinations that have been carried out subsequent to the review of the scientific contribution to the Omagh bombing investigation, in October 2000."* Referring to previous incidents in Lisburn on 30 April 1998, Newry on 13 July 1998 and Banbridge on 1 August 1998, the authors said *"Nothing has been found to provide any conclusive scientific evidence of the involvement of the same individual in any two of these four incidents. Nothing has yet been found to scientifically link any suspect with any of the offences."*

69. The report went on:

> *"Most of the examinations detailed in this report were of the nature of "long shots" and the disappointing outcome might have been predicted. Factors such as the forensic awareness of the offenders, the severe damage caused by the explosion and the condition of the items as recovered from amongst the large amount of debris at the scene, all hampered the search for evidence.*
>
> *The main opportunity for evidence from the examinations detailed in this report was considered to rest with new DNA technology not available at the time of the initial examinations in 1998 and 1999. The extent to which these examinations would have been more productive had the DNA technology been available in 1998 is unknown."*

70. The report continued: *"Nevertheless, despite the above difficulties, the examinations detailed in this report represent exhaustive attempts to identify any evidence relating to the role played by individuals in the Omagh offence. They also represent a thorough, determined attempt to identify any scientific evidence to indicate conclusively the involvement of the same individual in Omagh and any of the other three linked*

offences." It also said: *"DNA profiles and fingerprints are available which may relate to persons having played some roles in the incidents. Reference samples for comparison are required from suspects."*

71. Dr Davison produced a report, dated 6 January 2003, in which he was asked to review material relating to seven incidents and to assess the potential for evidence of scientific linkages between the incidents, evidence to indicate the identity of offenders and evidence to support the involvement of suspects in the offences. Dr Davison reviewed material which had already been investigated in relation to the Omagh bombing, including the car bomb attacks in Lisburn on 30 April 1998, in Newry on 13 July 1998 and in Banbridge on 1 August 1998. He also reviewed offences which he described as not having been previously examined in relation to the Omagh bombing, including a car bomb attack at Portadown on 23 February 1998, the mortar found at Altmore Forest on 12 April 2001 and the mortar attack in Newry on 21 July 1998.

72. Dr Davison said that opportunities to obtain scientific evidence were limited in relation to the Omagh, Banbridge and Portadown incidents as the bombs all exploded. The amount and condition of material collected did not allow for examinations that might be attempted if the scenes were visited at the time of his report. He said there were strong indications that the offences were linked, *"nor merely via their general circumstances but by the precise construction of the devices"*. Dr Davison further noted:

    a. Where an improvised Ammonium Nitrate and Calcium Carbonate explosive was recovered intact, the amount was similar between all four cases, although the precise concentration of sugar was variable.

    b. All of the devices featured the use of thermoplastic glue to seal connections or hold the TPU together and that it should be possible to investigate the variability in such material, e.g. by carrying out analytical techniques between brands or batches and also the variability within a particular example with usage.

    c. The finding of the same DNA profile in two offences was the only conclusive link so far established between the offences but there were materials such as fibres and tape ends which could be compared with incidents now being investigated.

There was also the use of an "improvised" mechanism for the protection of toggle switches in two incidents, which may be a general practice between terrorists, with the use of hand cut pieces of "household" conduit seeming to be a significant comparative feature between the two incidents in Newry.

d. There were a number of as yet unidentified finger or palm marks which mainly related to warning calls or the provision of vehicles. Dr Davison noted that detonation damage and steps taken by terrorists meant that marks were rarely retrieved from bombs and devices. Dr Davison noted that it was *"now becoming apparent"* that DNA, in amounts retrievable by LCN, is often left on surfaces touched by people wearing gloves and it is not easy to avoid leaving such traces. Incidents without any or full explosions allowed better scientific opportunities, although where examinations were carried out prior to LCN DNA testing, without special anti-contamination procedures which were in place at the time of his report, this affected the opportunities that might have been available.

e. Dr Davison noted *"there are significant DNA findings in relation to a number of persons playing a role in these offences"*, including that the same DNA profile (referred to a 'unknown male A') was found on various parts of devices from Lisburn and Altmore forest, which provided a strong inference that it was the man who constructed the TPU and the detonators. A male's profile ('unknown man B') was found on the toggle switch and tape from the Lisburn incident which indicated he might have played a role in the offence, possibly installing or arming the device, and another male's profile ('unknown man D') may have been the person to install the completed TPU in the vehicle and connected it to the mortar in the Altmore forest incident. Dr Davison said that a DNA profile obtained from blood on a garment discarded by the driver in the Newry mortar attack may have originated from that driver, that being the person who armed and fired the device. Referring to other DNA profiles, Dr Davison said that *"the strength of evidence for some of the important profiles is very strong indeed"* and there were a number of possibilities to obtain further DNA profiles.

73. Dr Davison concluded his January 2003 report by making several recommendations in relation to the investigation of the overall series of incidents and specifically in relation

to each incident; recommending, in relation to the Omagh bombing, further LCN testing and blood testing.

74. Dr Davison, in his role as forensic co-ordinator of the Omagh bomb investigation, provided a witness statement on 16 October 2003 and authored another report, dated 25 October 2005, which gave an overview of the current scientific evidence in relation to the Omagh bombing and linked offences. He was asked to answer two specific questions:

a. Do the scientific findings support the proposition that the Mark 19 Timer Power units (TPU) deployed in a number of terrorist incidents, including the Omagh Bomb, were constructed by the same person?

b. Do the scientific findings assist in relation to the role, if any, of Sean Hoey in the Omagh bombing or any of the other incidents?

75. Dr Davison provided a summary of scientific involvement in the Omagh bombing, saying that phase 1 involved the initial response and forensic examinations. Phase 2 was a period of review and phase 3 a relaunched scientific investigation. Phase 4 involved a widening scope of examinations and phase 5 a further extension of the series of linked incidents being considered. Phase 6 involved examinations relating to Sean Hoey.

76. Dr Davison said that his report summarises the scientific work carried out in relation to the investigation of the Omagh Bombing and a number of linked incidents and *"could serve as a briefing document, a starting point for identification of all relevant scientific documents and an indication of the key ones. It explains the rationale behind the scientific examinations and the development of the scientific strategy (Appendix 1). It recognises the high standards brought to the investigations by all concerned and the thoroughness and appropriateness of the work"*.

77. Dr Davison noted:

> *"Because of the difficulties in recovery of material in a condition suitable for trace evidence examinations, no DNA profiles, fingerprints nor anything else that*

could identify a possible offender had been recovered from anything directly attributable to the Omagh bomb.

It was considered possible that such evidence might be recoverable from other offences where components of the devices/bombs had been recovered in a much less damaged condition. If it could be established by scientific means that those offences were carried out by the same persons as the Omagh bombing then identification evidence generated from related incidents would be relevant to the Omagh bombing."

78. Dr Davison's report continued that the report provides an *"overarching interpretation of the scientific findings as a whole and in my opinion the following conclusions can be drawn:-*

- *There is strong evidence for the proposition that the Mark 19 Timer Power Units (TPU) used in a number of these incidents, including the Omagh bombing, were constructed by the same person.*
- *There is extremely strong support for the proposition that DNA found in relation to some of these incidents has originated from Sean Hoey.*[4]
- *There is strong support for a proposition that Sean Hoey built the Altmore Forest TPU.*
- *There is strong support for a proposition that Sean Hoey taped the batteries into the battery holder found inside the Lisburn TPU.*
- *There is strong support for a proposition that Sean Hoey was also actively involved in assembly of the functioning car bomb in at least two of the incidents.*
- *There is very strong support for the proposition that after the Omagh bombing Sean Hoey was still constructing TPU."*

[4] In a witness statement provided to the Inquiry by PSNI, it is stated that Sean Hoey was connected by DNA to four linked incidents (Lisburn on 30 April 1998, Armagh RUC station 16 May 1998, Blackwater trailer bomb 10 July 1998 and the Altmore Mortar bomb on 12 April 2001).

Ruth Griffin

79. Dr Griffin joined the Northern Ireland Forensic Science Laboratory in 1986, working within the Biology section throughout and retiring in 2016. Her qualifications include a Bachelor of Science Hons, BSc (Chemistry) and Doctor of Philosophy, PhD (Chemistry). She was awarded an OBE in 2010.

80. Dr Griffin has set out in a witness statement for the Inquiry that she had many years of experience carrying out forensic investigations of suspected terrorist explosions, including VBIEDs and IEDs used in other types of bombs. She had research experience in the analysis of explosive and firearms residue, polymerisation and the identification of polymers and analysis of fibre dyes. Dr Griffin had experience of liaising with the Forensic Science Service and other UK laboratories for the provision of specialist techniques.

81. Dr Griffin's statement to the Inquiry states that the Biology Reporting Officer (RO) in FSANI's investigation into the Omagh bomb was John Logan. She could not remember what input, if any, she had at the time of the Omagh bomb, although she could say generally that she worked in investigations at that time alongside her FSANI colleagues and with RUC investigation teams, SOCOs, photographers and mappers.

82. Dr Griffin said that the role of the Biology RO was to determine if there was contact between, for example, person to person, person to recovered items or scene, or between items and scenes. Contact was determined through means which included the *"recovery of fibres transferred to or from garments worn at the time of the incident; by blood deposited from an injury during the incident; by hairs transferred during the incident; and by DNA deposited by wearing the garments or by contact with items at the scene."*

83. Dr Griffin assisted with forensic strategy by assessing requests from RUC Investigating Officers, considering the examinations required on items submitted to the Laboratory and discussing with a submitting officer or Investigation Officer what could or could not be done within a timeframe, and what priorities there were. Dr Griffin stated that major incidents generally required priority examinations, but that the system could be overloaded due to the number of serious incidents that occurred. There could be

delays in the examination and completion of cases already within the laboratory when staff had to pause other work to assist with urgent examinations.

84. Dr Griffin's statement to the Inquiry says that procedures for the examination and analysis of explosives incidents were *"developed over many years in FSNI, and were well established when I joined the laboratory in 1986"* and that FSNI worked with laboratories in the UK, Europe and across the world to develop methods of examination and to ensure procedures and analysis methods were correct and up to date. FSNI also trained RUC and SOCO staff in the preservation of evidence and the recovery of items from a scene, whilst Senior Investigating Officers within the police received training courses which addressed developing forensic strategies. Forensic strategy was carried out on all cases submitted to FSNI and was part of the SIO's investigation strategy which *"could be adjusted by the RO in discussions with submitting officers, or with the Investigating Officers, e.g. to ensure all examinations requested could be carried out in the order requested, or if further Sections need to be involved"*.

85. Dr Griffin stated that her work within the Biology Section related mainly to the recovery and analysis of fibres, hairs, blood, body fluids, DNA and the interpretation of blood distribution. She directed and gave instructions to staff for examinations to be carried out and liaised with ROs from other sections when joint examinations were required. Dr Griffin checked and interpreted results, providing reports and witness statements before giving evidence in Court.

86. In fibres examinations and analysis, Dr Griffin used techniques including microscopy and comparison microscopy to determine matters such as the colour, structure, fibre type and texture of items as well as whether they were man-made or animal. Blood and body fluids were detected using chemical tests. Samples were removed for analysis. In DNA, analysis on samples was carried out by the DNA team. DNA is extracted, purified /cleaned and analysed. Dr Griffin then interpreted and compared results.

87. Dr Griffin said: *"The condition of the remains of the car and device, recovered after the Omagh bomb, was very poor due to the corrosive chemicals used in the explosive, the subsequent fire and water used to extinguish the fire. The recovery of fibres and other*

trace evidence was limited due to the condition of the fragments of vehicle and device."

88. Dr Griffin said that the "*extraction of DNA is affected by the chemicals, charring and dirt. There was, in many samples, no usable DNA available for analysis. However DNA techniques were being developed and the extraction and sensitivity of analysis improved. The FSS had developed specialist more sensitive extractions and analysis procedures, the Low Copy Number DNA. This was available by request in 1998, for a few of the most serious cases. In 1998 the system used provided a match probability in the millions. Modern techniques are much more sensitive, and can analyse very small quantities of DNA and the match probability is now in the billions"* and that a number of factors can impact on the recovery of trace evidence.

89. Dr Griffin stated that in the course of her work she did not have contact with external agencies such as the Greater Manchester Police (including a Fingerprint Serious Crime Hub), Metropolitan Police (including its Fingerprint Bureau, Anti-Terrorist Branch (SO-13) and National Bomb Data Centre) or the Defence Research Agency. She did have contact with the Forensic Science Service in order to organise specialist examinations, Forensic Science Ireland, Laboratory of the Government Chemist and the National DNA Database.

90. In 2001 Dr Griffin was assigned the role of Lead Scientist in the Review of the Omagh Bombing, which operated between approximately 2000 – 2006, although further examinations occurred and statements were prepared until 2014. As is set out above in relation to Dr Davison, Dr Griffin co-authored a report in December 2001 which was intended to review the progress of forensic investigations since October 2000. Dr Griffin's instructions on the items being submitted and on examinations required were received by way of a forensic strategy from the PSNI SIO and FSS Scientific Advisor Dr Davison. Dr Griffin states that her duties were:

- *to liaise with the Royal Ulster Constabulary (RUC) Review Investigation team and Dr Davison, the Scientific Advisor from the Forensic Science Service.*

- *to assist in developing a Forensic Strategy, agree prioritisation of submissions and examinations, and organise the delivery of samples for specialist examinations at the Forensic Science Service.*

- *to liaise with Reporting Officers (RO) from other sections, e.g. Explosives, Fingerprints, DNA etc., to form a strategy to progress the joint examinations of items submitted, prioritise the submission and throughput of items, monitor progress, and give advice or suggestions for examinations.*

- *to liaise with Dr Davison on forensic science matters, update him on progress and results, discuss DNA findings. To organise checks of any DNA profiles obtained by the FSS, using their Specialist sensitive LCN DNA procedures, against the NI DNA Database i.e. any DNA profiles not yet added to the National DNA Database, and any partial profiles insufficient for the National DNA Database upload criteria.*

- *to provide updates to the Investigation team and Dr Davison on the progress of examinations, findings and further work required.*

91. Dr Griffin stated that the aim of forensic investigations at this stage was to link:

a. person(s) to the Omagh bomb and the devices from other incidents;

b. items recovered from premises and other searches to the devices;

c. devices from other incidents to the remains of the Omagh bomb; and

d. to determine if there was any connection between the incidents.

92. Dr Griffin stated that fibres recovered from each device, namely Omagh and three specific linked incidents, were grouped into populations, namely a number of fibres with the same colour, shape and fibre type. Three distinct populations were found, labelled A-C. When compared between devices, fibres matching one or more of the populations were found on two or more devices. Dr Griffin stated that a jumper was eliminated as the source of the fibres as it displayed a different range of colours and no further potential sources of the fibres were available for comparison. Recovered hairs

were mainly animal hairs and the few recovered human hairs contained insufficient DNA for analysis.

93. In the report dated 25 October 2005 by Dr Davison and Dr Griffen it is noted that:

> *"Fibres were recovered from the TPU by J Logan and R Griffin. Only those fibres that were "embedded" within glue or adhering to the sticky under surfaces of faces were recovered. This means that any fibres recovered can be attributed to the TPU assembler, or the environment in which they were assembled. These fibres were then assessed for any populations, i.e. indistinguishable fibres present in significant numbers rather than isolated background fibres. The presence of such a population could indicate direct exposure to a fabric during construction. Such populations were identified in several of the TPU. Several of the recovered fibres were in the form of "tufts" suggesting that they had originated from gloves worn by the TPU assembler.*
>
> *Any identified populations were then compared across the different TPU. The findings of R Griffin (statement 5/1/04) show that similar blue/green acrylic fibres were found in several of the TPU. She concludes that these fibres are likely to have originated from dark, blue or black, knitted gloves. It appears that two very similar, barely distinguishable populations of fibres have been found. Dr Griffin suggests that one possible explanation for this is that these fibres have originated from a mismatched pair of gloves, which were not distinguishable by eye.*
>
> *Dr Griffin concludes that the likelihood of finding fibres which are indistinguishable from these by chance is very slim. Comparison of the dye composition of fibres allows considerable discrimination, even amongst fibres from mass produced items such as knitted "black" gloves or balaclavas. These findings therefore suggest that the same gloves were worn during the construction of those TPU in which these fibres were found. A further connection was made between two of the TPU via a second population of grey acrylics. These could have come from a different paid of "woolly" gloves."*

94. Glue was recovered from 13 devices. Dr Griffin stated that *"The glue from seven devices were similar but had slight differences in opacity, hence I could not confirm or refute that these glues originated from the same source."*

95. Dr Griffin has said that a number of DNA profiles, partial profiles or mixed profiles were obtained, which were compared to reference samples from any persons arrested. The DNA profiles were also added to the NI DNA Database, for comparison between incidents, and with persons. The search of the NI DNA Database was carried out at the time, and in future searches of profiles newly added to the database. The National DNA Database was also searched.

Fingerprint analysis

96. Witness statements were provided to the Inquiry by the Head of the PSNI Identification Bureau, which was previously known as the Fingerprint Bureau. The Fingerprint Bureau was a *"centrally located"* unit based at the RUC Headquarters. It was staffed by police officers and civilian Fingerprint Officers who *"had expertise in identification, recovery and comparison of fingerprints"* at the time of the Omagh bomb. From 1992, staff were assessed by the Police Forensic Training College in Durham in order to qualify as Fingerprint Experts.

97. At the time of the Omagh bombing, the Fingerprint Bureau's store of fingerprint forms were referred to as "The Main Collection", which was held as a paper collection and as an electronic database. The forms from 1997/1998 which continue to be held by PSNI are still part of the Main Collection and electronic database, retained and indexed under a numerical system. PSNI say that there was no separation between terrorism and other forms of work and that the co-ordination and merging of investigations was done through the Senior Investigating Officer in any case.

98. Not all fingerprints lifted from crime scenes are suitable for examination as some may contain too little detail for comparison with records. Any fingerprints which were suitable for comparison were manually compared against requested suspects

available to the Fingerprint Bureau and electronic software was used to search and compare suitable marks.

99. In relation to the Omagh bomb investigation, the Fingerprint Bureau compared all relevant marks lifted and which were suitable for examination against any suspects, as identified by the police, for whom it held fingerprint records. All suitable prints were searched against its electronic database, meaning fingerprints could be matched with those who were not suspects.

100. PSNI has provided the Inquiry with information addressing the Omagh bombing and other incidents of interest to the Inquiry; including which incidents the Fingerprint Bureau completed work on, the number of fingerprints considered for each incident, where the prints were lifted from and the results of checks of prints against suspects and the fingerprint database. PSNI has also stated that a comparison of marks from one crime scene to the marks from another crime scene was completed electronically.

101. PSNI's statements to the Inquiry say that *"all lifts from all Omagh related crime scenes and exhibits have been checked and re-checked when requested"* and that *"imprints were also re-visited and re-checked as a matter of course due to the introduction of new or upgraded computer systems, these checks would have been done electronically."* PSNI's statements say there was, and remains, a process of checking any identifications as part of a verification process. The threshold at the time to determine whether a fingerprint contained sufficient 'ridge' detail was 8 characteristics, although any imprint with less than 8 characteristics was checked for verification also.

102. PSNI say that it adopted the IDENT1 system in 2014, which is the UK fingerprint database and at that time all unsolved crime scene marks held on the PSNI's local database were searched against the national database.

Section 4: Telecoms investigations

Detective Sergeant Officer 3

103. Detective Sergeant Officer 16's report D1806 stated that "*in the immediate aftermath of the bomb, five local Dissident Republican suspects were arrested and interviewed*.

Analysis of their phone [sic] gleaned little relevant intelligence. At this time [Officer 3] was appointed to investigate the tele-communications aspect of the bomb having had experience in this type of investigation in the past."

104. Detective Sergeant Officer 3 has provided a statement to the Inquiry which states that whilst he had never received any formal training on any telephone-related investigation work while working for the RUC, he did have previous involvement in some telephone investigation work, including cell site analysis, and had worked with the Telecoms Liaison Unit ("TLU") within the RUC from around 1994 onwards. He said that in the earlier 1990's, his enquiries *"focused on billing related enquiries which included incoming and outgoing calls from suspect mobile phones and land-line numbers. It wasn't until the mid to late 1990s that I became involved in cell-site work."* He described cell site analysis as being very new at the time. He said that there were no "*telephone experts"* in the RUC at the time of the bombing.

105. Officer 3 described the TLU as follows:

> *"The TLU was the interface between police and the phone companies. The personnel in TLU assisted investigators, but they did not investigate themselves. I, as a CID [Criminal Investigation Department] investigator, would have asked one of the TLU team for information from a phone company and they, if they were able, would have obtained it for me from the phone company. I recall there was proformae on which I had to provide justification for seeking the data".*

106. Officer 3 said that he was reliant upon documents from the time to remind him of his specific involvement in the Omagh investigation. This included a notebook entry for 19 August 1998 which stated that, along with Detective Sergeant Harkness, he began enquiries at Omagh. He said in his Inquiry statement: *"I believe these were primarily phone related enquiries".* Officer 3 said that he attended a conference on a date prior to 20 August 1998, with other officers including Detective Chief Superintendent Houston. The notes state: *"[Officer 3] suggested using telephone enquiries in relation to cell site analysis to identify calls in Omagh area on Saturday afternoon."*[5]

[5] In his Inquiry statement, Officer 3 stated that he had a vague recollection of making that suggestion and was not surprised that he did so, given his previous involvement in cell site related enquiries in other investigations.

107. Officer 3 stated as follows:

> *"I do not recall what specific enquiries were conducted, though I imagine they would have included cell-site information of all mobile phone data from all mobile phone networks in the area of Omagh and along the route taken by the bombers to deliver the bomb to Omagh. I do not recall if the investigation at this stage had the benefit of suspect mobile phone numbers. I do not recall if there were links being made at this stage, through cell-site analysis, between any data from other similar terrorist bombs and the Omagh investigation"*.

108. Some of Officer 3's notebook entries recorded applications for Production Orders. In his Inquiry statement, Officer 3 said:

> *"I believe the stage had not yet been reached where detailed analysis work was being conducted during my involvement in the early Omagh telephone enquiries in September 1998. Given the Production Order enquiries I was conducting in September 1998, I believe the enquiries at this time were focused on gathering as much telephone related data as possible".*

109. Officer 3 also said: *"I cannot recall any specific product that was received on foot of these orders but I am sure the requests would have been kept under very close review until data was received."*

110. Officer 3 stated, referring to his notebook, that he believed he left the Omagh bomb investigation in or around 7 October 1998 when he handed over telephone enquiries to DS Officer 16.

111. On 2 October 1998, DS Officer 16 stated that he received a handover briefing from Officer 3 and DS Harkness on 2 October 1998 following which he was handed a number of documents and charts, one of which was a list of mobile phone numbers which intelligence suggested were being used by Dissident Republicans from South Armagh and North Louth. In his Inquiry statement, Officer 3 said that he believed that he would not have been handing over any specific documents, as his firm recollection was that all relevant documents would have been submitted to the Major Incident Room. He stated that he had no recollection of handing over any specific copy of

submitted documents and if he had handed anything over, it would have been a working copy of a document already submitted to the Major Incident Room.

Detective Constable Officer 9

112. DC Officer 9's Inquiry statement dated 9 March 2026 recorded that he was placed on the Omagh bomb investigation on 15 August 1998. He explained the various roles he undertook, which included being part of the enquiry team, acting as Receiver and as an interviewing officer. Regarding his involvement in assisting the telephone enquiries, he said that he had never received any prior training into investigative techniques relating to mobile phones, cell site analysis or the use of cell site data for investigative, evidential or intelligence purposes, nor had he worked on any investigation in which cell site analysis was used. He said that he had experience as a Detective and had accumulated good working knowledge of computer programs such as Word and Excel, which were used in progressing the telephone aspect of the enquiry.

113. DC Officer 9 stated that *"these types of mobile telephone enquiries were in their infancy in 1998 as was the use of mobile telephones. Initially we were unaware of the extent of the information available from the mobile phone telephone companies and its potential, but realised very quickly the value of cell-site analysis which expanded this aspect of the enquiry beyond all our expectations."*

Lisa Purnell

114. Lisa Purnell, Senior Research Analyst at the Terrorist Finance Unit ("TFU")[6] of the Northern Ireland Office ("NIO"), gave a statement to the Inquiry dated 27 October 2025. In it, she said that she was instructed to conduct analysis of phone data on the Monday following the bombing (i.e. 17 August 1998). She believed that she was provided with 4 or 5 boxes of hard copy phone data on her desk that day. She said that she did not know where the boxes/data came from, that it was not like any data she had seen before (such as telephone billing data) but it *"did contain cell site information"*. She said that she was asked by the PSNI legal team how she knew if it

[6] Lisa Purnell stated that the TFU later became the Financial Crimes Services Unit ("FCSU"), she believes was "*some time after the Good Friday Agreement*". She said that her memory was that the TFU staff were seconded to the RUC when it became the FCSU, but they remained employed by the NIO.

was cell site data if she had not worked on cell site before. She said that she was not sure how she knew and that she must have figured it out in due course, or that there may have been indicators or labels on the page to inform her, but she could not remember. She did not think she had worked on cell site before the Omagh bombing investigation.

115. She said that she was initially *"simply instructed, in general terms, to see what I could do with the information"*. She further stated that she believed she was the first person to undertake such work in her office, and the first person to conduct cell site analysis for the RUC. She said that she was not instructed to undertake cell site analysis specifically at the start, but was presented with the data from telephone companies and asked to analyse it, and she had to work out how to do it herself. She said that there was no training, direction or instruction, nor was she aware of any research-related resources that would have helped her. She further stated that, in her opinion, *"cell site analysis would not have been particularly valuable as an intelligence tool at that time because it was too slow. It was an extremely labour intensive and meticulous process, with few resources and little by way of technology to assist (speed up). In order to have been of value in the intelligence arena, it would have needed to have been processed and completed much faster than was possible at that time"*.

116. She stated that initially her contact was with her civilian management, but she then began to liaise with the RUC. She later liaised with An Garda Síochána ("AGS"). Ms Purnell stated that police obtained the data from phone companies and provided it to her.

117. Lisa Purnell explained her process as follows: she was required to input all of the relevant raw data onto the system. If the raw data was in hard copy, she had to analyse the paper records, identify what was relevant and then input that information into the computer by typing it. She said that the hard copy records were not in chronological order and therefore she had to arrange them into chronological order before she could start working on them. She then had to search through the records *"to identify those that may be of interest, such as those occurring within certain time parameters either side of the Omagh bombing which related to certain masts... It seems very old fashioned now, but I worked through the hard copy records with a ruler and pencil. It*

was meticulous work. I had to be sure I could stand over the results. I had no administrative support. I did everything myself."

118. She said that once she had inputted the potentially relevant data onto the computer, she then used the i2 software program which she described as helpful, but basic by modern standards. She said that the software enabled her to create 'Link Charts' which were created by placing icons on a digital page, such as a number or pictures of a mobile phone, and then labelling icons with further information (such as a phone number, a name, or the cell site/mast) and illustrating links with lines and arrows. She said that the process took *"a number of months"*. She *explained that "the software did not contain the kind of AI related tools that are currently available"*. She recalled that she worked on multiple charts, responded to police feedback and focused on what was of value to the investigation in collaboration with police.

119. Lisa Purnell stated that once she had developed the cell site analysis, her aim was to try to identify locations of mobile phones that could possibly have been used by those involved in the bombing and links between those phones. Her work then later expanded to looking at links between the Omagh phones and previous attacks. She described undertaking her work to assist with interviewing suspects and then attempting to produce evidence which may have led to the potential prosecution and conviction of those involved in the bombing.

<u>Detective Sergeant Officer 16</u>

120. Detective Sergeant Officer 16 gave a statement to the Inquiry dated 4 November 2025 in which he said that he took over the telephone enquiries for the Omagh Bombing police investigation on 1 October 1998. He said that the initial work had been conducted by Officer 3 and Detective Sergeant Richard Harkness. He was told by Detective Superintendent McArthur that Officer 3 and DS Harkness were returning to South Region to continue their investigations there and that he would be taking over this line of enquiry for the Omagh bombing investigation. DS Officer 16's memoir stated that he was tasked as lead on the telephone enquiries by *"Red 1",* who the Inquiry understands to be Detective Superintendent McArthur.

121. DS Officer 16 stated that he was not familiar with cell site but had worked on investigations which involved telephone enquiries as a detective in CID. He said that his duties were not exclusively about phones. He also took part in search and arrest operations, as well as conducting interviews.

122. On being tasked, DS Officer 16 recorded that he was given a list of mobile numbers which intelligence suggested was being used by Dissident Republicans from South Armagh and North Louth. He said that Officer 3 and DS Harkness had also made 96 separate applications/warrants regarding the Public Call Boxes ("PCBs") prior to their handover to him. He said that the first requests for cell site material had been made of two phone companies (Vodafone and BT Cellnet) on 26 August 1998, by Acting Detective Chief Superintendent Officer 15, Deputy Senior Investigating Officer ("SIO") to the RUC investigation. That request was for all mobile phone data for the period between 10:00 and 16:00 on the day of the bombing.

123. DS Officer 16's report R36A dated 8 October 1998 stated that 13 Eircell telephones had already been identified and suspected of involvement in the bombing. Several had been found operating in the South Armagh area, initially through *"cell area analysis and then supported by incoming and outgoing billing supplied by An Garda Siochana"*.

124. DS Officer 16's Inquiry statement recorded that he did not know exactly how the original suspect numbers came to be known by Officer 3. He said that on Officer 3's handover to him, it was explained that the numbers had been received by way of intelligence. DS Officer 16 assumed that they had come via Special Branch as intelligence.

125. DS Officer 16 said that his initial actions included working through the following materials given to him:

- Billings of local Dissident Republican suspects;
- Printouts of the call logs for 96 Public Call Boxes from Omagh to the border *"in case the terrorists had used any of these to inform others that they had planted the bomb"*.

126. DS Officer 16 stated that *"the telephone enquiries evolved as new intelligence/evidence came to light"*. He said that as Lisa Purnell discovered relevant information from the raw data, he would brief senior police officers by way of report and actions would then be produced as to how the investigation was to proceed. He said that *"on most occasions, this process was led by what Lisa was finding"*. DS Officer 16 stated that by 10 November 1998 the investigation had *"been given the services"* of Lisa Purnell.

127. DS Officer 16 further described liaising with Detectives in AGS who were part of the telephone enquiries south of the border, in the parallel AGS investigation. Initially this was Detective Garda Eddie Wheelan and Detective Garda Liam Donnelly and then Detective Garda Kieran King and Detective Garda John Costello. In a report dated 10 March 1999 (R36E), DS Officer 16 described *"the unprecedented levels of cooperation between the RUC and AGS"* during the investigation. DS Officer 16 stated that he became the conduit of information coming and going to TLU, the AGS and Lisa Purnell.

128. DS Officer 16 produced a number of reports with the title "R36" in relation to the telephone investigation work as it progressed. These reports include information about, among other things: meetings held with telephone companies, the AGS, and others; overviews of the telephone investigations at certain points in time; and making requests for funding to advance the telephone investigations further. DC Officer 9 also produced reports with the title "R42".

<u>An Garda Síochána (AGS)</u>

129. In its Sequence of Events statement, the Government of Ireland provided information about the telephone investigations conducted by it and in collaboration with the RUC. The statement records as follows:

> *"As part of the Garda investigation into the Omagh Bombing, the Investigation team undertook a mammoth trawl of phone related data. A component part of that trawl, was that of the analysis of call data records and cell site locations.*
>
> *In September 1998, a number of mobile telephone numbers were identified as numbers of interest, two of these numbers in particular, namely -980 and -575.*

These numbers were provided to the Incident Room at Carrickmacross Garda Station by the Royal Ulster Constabulary…"

130. The statement also said that: *"the Garda investigation concentrated on phone calls made on mobile telephones registered in the Republic of Ireland, making calls in the Republic of Ireland on the Eircell System and Northern Ireland on the Vodafone UK system and the specific times."* It was stated that once the Garda investigation team identified a mobile of interest, an application was forwarded from a Garda member of Superintendent Rank to the Detective Chief Superintendent, Crime & Security, Garda Headquarters, Dublin. The application would seek details about the telephone number including the registered owner details and call data records. Applications were also made for lists of call data records routed through certain cell sites for a specified time and data.

131. The statement also set out the work conducted to plot the route of the bomb car and scout car on the day of the bombing with reference to the telephones -575 and -980 and the identification of cell sites in Northern Ireland.

132. At the date of this summary, the Inquiry has issued Rule 9 requests to Gardai John Costello and Kieran King who it is understood to have taken a central role in the telephone investigations in the Republic of Ireland. A response is awaited.

"Officer 16 Exhibit 1" (11 November 1998)

133. On 11 November 1998, DS Officer 16's R36A report prompted the provision of a *"Toll Ticket Analysis"* document from Vodafone ("O161") which addressed the use of suspect Republic of Ireland mobile phones in and around Omagh on the day of the bombing.

134. O161 was provided by Raymond Green, the Fraud and Investigation Manager of Vodafone Limited. Mr Green's statement dated 28 April 1999 recorded that he provided the records of four mobile phones being Eircell telephones, ending -585, -980, -430 and -259 respectively.[7] Mr Green described the toll ticket analysis as being a record

[7] There are five phones in O161: -132 is also included.

depicting *"the date, the times each call commenced, the number called, the duration of each call and the reference and address of the base stations (or cell site)."*

135. Mr Green has also given a statement to the Inquiry. In it he explained, among other things, that he did not recall any requests from *"law enforcement/intelligence agencies"* for information or assistance prior to the Omagh bombing. He said that, while his memory of the creation of O161 was very limited, toll tickets were printed copies of computer-generated reports, and analysis was not performed by his team.

136. DS Officer 16 stated that O161 discovered the bomb run. It was what he described as a *"groundbreaking development"*:[8]

- Two of the suspect phones had travelled to Omagh on the day of the bombing;
- They were active in the town during the period when the bomb was planted; and
- Each had then communicated with two other suspect phones before the bomb warning calls were made.[9]

LKP1 (16 November 1998)

137. Lisa Purnell produced her first report using the data in O161. This report was marked by DS Officer 16 as "LKP1".

138. In LKP1 Lisa Purnell used Vodafone and Eircell documentation which was obtained by RUC and AGS. She looked at four mobile phones (-585, -980, -430 and –259) and their use on the day of the bombing. The report listed the subscriber details of those phones, except for the -259 phone which was an unregistered "Ready to Go" phone, meaning that it had no registered subscriber. LKP1 recorded the -585 phone and the -980 phone as having contact with each other at cell sites along the route near Aughnacloy and Pigeon Top into and out of Omagh town. It also showed contact with and between the other phones, and the telephone warning calls.

[8] The full text reads: "From a telephone enquiry point of view, it was a groundbreaking development. Prior to this we had been looking at a large amount of terrestrial billings, public call boxes, some mobile phone billing data. This was much more valuable evidence".
[9] LKP1 also showed the two suspect phones travelling out of Omagh town and returning to the Republic of Ireland: see the section immediately below.

139. The report concluded by referring to several other bombings carried out by the Real IRA ("RIRA"). It stated that *"analysis has been carried out by this office on the incident at Banbridge, with significant findings"*. It said that the *"common denominator"* between the Omagh bombing and the Banbridge bombing of 1 August 1998 was the mobile phone -585. Lisa Purnell recommended that similar cell site analysis be carried out on the other terrorist bombings at that time, recommending that a request be made of Vodafone and Eircell.

140. DS Officer 16 stated that from the time of O161 and LKP1, *"telephone enquiries… played a major part in the investigation: in the identification of suspects; arrests of those suspects; and the charging of some of these suspects"*.

141. On 8 December 1998, DS Officer 16 provided Gards Wheelan and Donnelly with a copy of O161(a). On the same date, DS Officer 16 took those Gardai on a tour of cell sites in the Aughnacloy, Ballygawley and Omagh areas, the bomb site and the believed *"run in"* of the car bomb. In his report R36C, dated 15 December 1998, DS Officer 16 stated that during the tour, *"Detective Garda Donnelly had an "Eircell" mobile phone in his possession and its operating capabilities were monitored throughout the journey. The "Eircell" mobile displayed a good operating capability in most areas working off the Northern Ireland masts."*

142. The report further stated that Gards Wheelan and Donnelly were *"briefed"* in relation to the activity of five Republic of Ireland mobile phones, namely -132, -585, -980, -259 and -430. The "*history"* of those phones was discussed with the Gards "*who gave a summary of their ongoing enquiries to date"*. *"Further work"* in relation to Eircell phones and "Ready to Go" phones was discussed with the officers, including "*"dummy runs" carried out with both Eircell and RTG (Ready to Go) phones in order to ascertain which cell sites they operate from as their geographical position changes"*.

143. DS Officer 16 also recorded in his memoir that *"major preparations were… made for a large cross border search and arrest operation on receipt of LKP1"*. In his report D1806, which is not dated, DS Officer 16 recorded, among other things, that during the search and arrest operations three of the four core telephones detailed in LKP1 were seized in the possession of Colm Murphy, Terence Patrick Morgan and Derek "Shanty" Brady.

Investigations following LKP1

144. DS Officer 16's report R36E dated 10 March 1999 included, among other things, reference to a *"recent meeting"* between the RUC and AGS where other previous incidents were discussed, and 9 incidents had been highlighted as *"possibly linked"* to Omagh (Moira, 20 February 1998; Portadown, 23 February 1998; Lisburn, 30 April 1998; Armagh, 16 May 1998; Newtownhamilton, 24 June 1998; Newry courthouse, 13 July 1998; Newry RUC, 21 July 1998; Banbridge, 1 August 1998). It also contained a list of 20 telephone numbers which had been *"highlighted"* by the investigations. Further actions by AGS and RUC were agreed.

145. That report also referred to the investigation's dependence on the goodwill of telephone companies and recommended that face-to-face contact be made from the outset between phone company personnel, the analyst and the detectives involved.

146. On 23-24 March 1999, meetings were held between the RUC, Ray Green (Vodafone), Paul Griffiths (BT Cellnet) and Lisa Purnell. Those meetings were recorded in DS Officer 16's report R36G dated 1 April 1999. Mr Green and Mr Griffiths also visited Omagh, were taken on the 'bomb run' and were *"briefed"* on the possible linked bombings. DS Officer 16 reported that *"massive amounts of data"* was produced by Vodafone and BT Cellnet following that meeting. He said that *"the provision of that data, added to the data received from ROI service providers through the AGS, allowed Lisa Purnell to produce her analytical/briefing products LKP4… and later, LKP5"*.

147. Similarly, the Senior Investigating Officer ("SIO") of the Omagh bomb investigation, Detective Superintendent McArthur, made a statement dated 10 September 2001. That statement recorded that on 24 March 1999 information pertaining to telephone activity during August 1998 was formally requested from representatives of both Vodafone and BT Cellnet. He said that the dates encompassed 1 August 1998 (the Banbridge bombing) and 15 August 1998 (the Omagh bomb).

Raymond Green, Paul Griffiths and Scott Southall

148. Raymond Green, who was the Fraud and Investigation Manager of Vodafone Limited, gave a statement to the Inquiry dated 9 August 2025 in which he described the March 1999 meetings and the approach he took to the data searching in the following terms:

> *"My recollection… is that the RUC asked an open question about what we could do to assist their investigations. I initially thought they may request a cell-site dump, and directed the conversation towards a targeted search. This was more focused and more likely to produce a better result. After a discussion it was agreed that we could provide data for known telephone numbers of suspected terrorists… I cannot recall how the time period was determined but as it was focused on known individuals I felt it was justified. It is possible that the dates selected were the period that Vodafone had retained data for".*

149. Paul Griffiths also provided two statements to the Inquiry dated 19 March 2025 and 3 April 2025. He stated that, as far as he was aware, the first time that cell site analysis had been attempted in the United Kingdom or anywhere else internationally was in relation to the 1992 Manchester bombing. He said that, on the day of the Omagh bombing, he had taken the decision to proactively request data from the BT Cellnet network team, in order to avoid the loss of non-chargeable call details, and in order to analyse data therein. He said that he was, at that time, *"personally developing techniques for forensically analysing call records… It was a new area that we developed and in so doing found new ways of using the data… In this instance, it was the first time I had collected the raw network, rather than billing, data".* He initially had 3 million call records but *"there was no obvious starting points for the analysis. I therefore asked for the identities of any "persons of interest" and was given the names of suspects and telephone numbers for each".* Mr Griffiths went on to say, when asked about the main persons of interest that the RUC provided him with the details of, that he thought there may have been three mobile phone numbers he was given, corresponding to three individuals. He could remember one name: Colm Murphy.

150. A report by Detective Superintendent Sproule dated 29 March 1999 referred to Vodafone and BT Cellnet as having *"committed significant resources towards the investigation of the Omagh bombing".* The report went on to say: *"Both[10] have*

[10] This is understood by the Inquiry Legal Team to be a reference to Raymond Green and Paul Griffiths.

suggested that the RUC should enter into a unique partnership, receiving on a daily basis itemised communications data in respect of up to 100 criminals… this proactive monitoring fits ideally into the force's drive towards intelligence led policing." In relation to the existing analysis and data processing methods, the report stated: *"There is an offer to upgrade our analysis and data processing methods, which they believe were antiquated, at little cost. This analyst's time could be used more productively."* The report made seven recommendations in this regard.

151. A similar report by Acting Detective Inspector Ireland dated 27 March 1999 addressed the assistance of Raymond Green and Paul Griffiths and the suggestion of a *"relationship"* between the RUC and the telephone companies going forward. Acting Detective Inspector Ireland stated: *"It was interesting to note that both experts on examining our analysis and data processing methods thought we were primitive. They proceeded to demonstrate how they could search high volumes of data at high speed using macros and Excel and access software. They estimated that the analysis which had taken us 3 weeks, could have been done in 30 minutes using their methods."*

152. DS Officer 16's report R36G dated 1 April 1999 also recorded that Raymond Green and Paul Griffiths had questioned the quality of the *"adialytical tools* [sic] *being used by police forces, stating that for a reasonable sum of money more efficient analytical software could be purchased. They advised that direct consultation with the telecommunications companies would assist in the purchasing of such tools".*

153. Further meetings took place on 27 April 1999 between various individuals involved in the PSNI and AGS investigations, and other persons such as Lisa Purnell and Raymond Green.

154. On 6 May 1999 DC Officer 9 accompanied Scott Southall, Vodafone engineer, on a visit of the area from Ballagh Bridge, Aughnacloy Main A5 to Ballygawley, around Omagh town and then back to Ballygawley via Beragh/Sixmilecross in a Vodafone GPS vehicle. In his statement dated 25 October 2001, DC Officer 9 said that the visit was conducted as a *"test to define the coverage footprint of the cell sites in the greater Omagh area".* The statement recorded that the cell sites registered on the test were 6135 (Main Street, Aughnacloy); 6140 (Cavanacark, Fivemiletown), 6145 (Pigeon Top), 4620 (Cranlome Hill) and 4685 (Technical College, Bridge Street, Omagh). DC Officer 9

stated in an Incident Room message that the results of the survey would be forwarded to Roy Green, Vodafone and ultimately to Simon Collins *"who will prepare an expert report on the findings"*.

155. Scott Southall gave a statement to the Inquiry dated 15 April 2025. Among other things, he explained that the purpose of the survey was to gather a picture of *"RF* [Radio Frequency] *performance"*. He described this as *"measuring Vodafone's cell signal strength in Omagh and its surrounding area. The survey vehicle was fitted with a high-specification receiver, combined with Vodafone's bespoke ECAP (Evaluation of Coverage and Propagation) software, which automatically recorded RF* [Radio Frequency] *measurements across various GSM* [Global System for Mobile Communications] *channels. The measurements were then automatically plotted onto a map..."*. He explained that this work then produced a survey report. Scott Southall stated that this was the only survey he personally conducted to assist law enforcement during his time at Vodafone, and he was not aware of any other instance where this specific capability was deployed in Northern Ireland. He also said that he did not recall any engagement with AGS when preparing the report, and he engaged solely with PSNI.

Report of Simon Collins: "Report on an investigation of evidence relating to the use of mobile telephones and the associated call records and geographic information, for RUC Northern Ireland and the Garda Siochana of the Republic of Ireland in relation to the Omagh bombing" (4 June 1999)

156. DS Officer 16's report D1806 (undated) stated that as part of the prosecution case against Colm Murphy in the Republic of Ireland, expert evidence was sought regarding telecommunications systems from Mr Simon Collins of Praesidium. Mr Collins was supplied with data to do so and produced a report dated 4 June 1999, titled *"Report on an investigation of evidence relating to the use of mobile telephones & associated call records and geographic information for RUC Northern Ireland and the Garda Siochana for the Republic of Ireland in relation to the Omagh Bombing"*.

157. Mr Collins conducted cell site analysis for the use of two phones, -585 and -980 and demonstrated their activity near Omagh at the time of the bomb run. His report also provided information regarding matters such as the cell site towers and the technical

operation of mobile phones. It also identified some gaps in the evidence and materials gathered to date.

LKP4: "Cell Site Analysis Linked to Dissident Republican Activity in Northern Ireland" (14 June 1999)

158. LKP4 is a report by Lisa Purnell dated 14 June 1999 and was described by DS Officer 16 as Lisa Purnell's *"briefing document/report on the linked bombing incidents"*.

159. DC Officer 9 stated that LKP4 addressed five incidents during 1998 "*from which a pattern of the organisation and implementation of the bombings could be seen"*. These were Omagh (15 August 1998), Banbridge (1 August 1998), Newry Courthouse (13 July 1998), Lisburn (30 April 1998) and Newry rail station (1 April 1998). In relation to Omagh, the report addressed telephone traffic of various numbers during the period from the car theft (12-13 August 1998) to the evening of the bombing (15 August 1998). The report then carried out a similar task in relation to the day of the Banbridge bomb, the day of the Newry courthouse bomb, the day prior to and the day of the Lisburn bomb and the day of the Newry railway station bomb. It attributed the various numbers to individuals.

160. Lisa Purnell stated that copies of LKP4 were provided to the RUC to assist with the interviews of the Omagh bomb suspects. Similarly, DS Officer 16 also stated that Lisa Purnell's reports were used in the interviews of the Omagh bomb suspects arrested from that time. He said that he relied on LKP1, LKP4 and LKP5 (see further below) in the interviews of Colm Murphy, Anthony Donegan, Sean Hoey, Liam Campbell and Seamus Daly.

Panorama programme

161. In his memoir, DS Officer 16 said that in early 2000, he was introduced to two men, whom he was tasked by "the Viking" (whom the Inquiry understands to be Detective Chief Superintendent Eric Anderson, the Task Force Commander) to brief fully on the telephone enquiries to date and to take them on a tour of the Omagh bomb run. They were John Ware of the BBC and his researcher in relation to the Panorama documentary which aired in October 2000.

Lisa Purnell's departure and documents marked "LKP"

162. Lisa Purnell stated that she left the Northern Ireland Office's Financial Services Crime Unit (which was the successor of the TRU), and thus her seconded work with the RUC, in 2000. She recorded in her statement dated 23 April 2002 that prior to her employment terminating, she handed all telephone data including CD-ROMs and computer floppy discs to DS Officer 16 for inclusion with all other documents at RUC Omagh.

163. DS Officer 16 produced a short report dated 31 May 2000, R36N. It referred to a meeting which took place on the same date between the Omagh Bomb Enquiry Team and the Telephone Liaison Unit. The report recorded that Constable Anderson was asked if he could obtain an update from AGS Headquarters *"regarding the mobile phone which was used to make the calls of responsibility regarding the Omagh bomb"*. The report recorded that Constable Anderson did so during the meeting and the Telephone Liaison Unit reported that the phone in question was a "Ready to Go" phone ending -921, registered for use on 1 April 1998 and which had not been used in at least the last six months, as far as their records went back.

164. DS Officer 16 recorded in his Inquiry statement that on 15 August 2001, Lisa Purnell had a meeting in Dublin Airport with DC Officer 9 from the PSNI's Omagh Bombing investigation team. He stated that *"the purpose of the meeting appears to have been for the PSNI to provide information to Lisa and for Lisa to, in turn, provide it to AGS."* He said that DC Officer 9 had with him the CD-ROM provided from Vodafone, 'Eire Roamers dated January to November 1998'. Lisa Purnell marked the item 'LKP1' and gave it to Detective Garda Kelly of AGS, who was also present. DS Officer 16 stated that the data was given to AGS in order that it could be used in the prosecution of Colm Murphy. As a result, DS Officer 16 explained there were now two items both bearing the exhibit LKP1: the November 1998 report of Lisa Purnell and the Eire Roamers data CD ROM.

165. Lisa Purnell's Inquiry statement also recorded that she gave evidence in the first prosecution of Colm Murphy, in Dublin. This was in November 2001. She also referred to giving evidence several years later in his retrial in Dublin (which took place in 2010).

She said that she also gave evidence in the second set of civil proceedings in Belfast ([2013] NIQB 35).

166. DS Officer 16's statement dated 29 April 2002 recorded that on 19 April 2002 he took possession of two CD-ROMs and 24 floppy discs which had been given to him by Lisa Purnell, and also 'Cell Site Analysis Linking to Dissident Republican Activity in Northern Ireland' (which the Inquiry understands to be LKP4). He further stated that on 22 April 2002 he received LKP1 'Vodafone Eire Roamer Jan to Nov 1998' from Detective Garda O'Hanlon, which he retook possession of. He then travelled to England on 23 April 2002 where he handed Lisa Purnell two CD-ROMs, 24 floppy discs, the document entitled 'Cell Site Analysis Linked to Dissident Republican Activity in Northern Ireland' (LKP4) and LKP1 'Vodafone Eire Roamers Jan-Nov 1998'. He then received back from her those same items exhibited: LKP2 was exhibited as the 2 floppy discs from Vodafone, and LKP3 was the 2 CD-ROMs and 6 floppy discs from BT Cellnet.

167. Before LKP5 and the re-engagement of Lisa Purnell (see below), Detective Superintendent McArthur produced a "Current Situation Report" regarding the overall status of the Omagh bomb investigation dated 18 December 2001. In it he addressed progress and constraints regarding the various lines of enquiry of the investigation. In relation to telephone enquiries, he stated as follows:

> *"The results of telephone enquiries, while of vital importance and significance to the investigation, remains as only intelligence because while we can with some confidence speculate on who was operating the mobile phones used on the day of the bombing, we cannot evidentially place any of the significant phones in the hands of individual suspects."*

<u>The genesis of LKP5 and the re-engagement of Lisa Purnell</u>

168. DS Officer 16 stated that *"the PSNI's investigation subsequently needed more work done as further evidence was required to be plotted on charts pertaining to the Omagh bombing and linked incidents"*. He referred to his report R36R dated 17 February 2003 for the Senior Investigating Officer, Detective Superintendent Norman Baxter. The report stated that telephone evidence was still being gathered and enquiries were being made in relation to the Omagh bombing and other linked incidents, and that the

bulk of the evidence was anticipated from AGS *"in the near future"*. It further stated that intelligence recently supplied to the investigation had necessitated more data to be sought from BT. It recorded that that data would require to be *"analysed and plotted/charted"* when it was available. The report further detailed that Lisa Purnell had indicated that she would be very happy to undertake the additional work. The report stated that Lisa Purnell was now working at New Scotland Yard.

LKP5: "Cell site analysis linked to Dissident Republican activity in Northern Ireland" (April 2003)

169. Lisa Purnell stated that she believed she was visited at her home by DC Officer 9 and DS Officer 16. She thought that they had contacted her new employer and asked for her assistance. In her statement dated 20 November 2003, she said that on 13 March 2003 she received LKP1 'Vodafone Eire roamers Jan to Nov 1998'), LKP2, LKP3 and *"other charts/timelines and material received from An Garda Siochana"* from DS Officer 16. She said that she analysed the material and produced further telephone charts which she labelled LKP5.

170. LKP5 followed a similar layout to LKP4. It showed the usage of various numbers during the following periods: the three days before and the day of the Omagh bomb (i.e. 12-15 August 1998); the day of the Banbridge bomb (1 August 1998); the day of the Newry courthouse bomb (13 July 1998); the day prior to and the day of the Lisburn bomb (29-30 April 1998); and the day of the Newry railway station bomb (1 April 1998). DC Officer 9's report dated 14 June 2010 also described LKP5: he said that it made additions to the chart depicting the Omagh bomb in LKP4 after Lisa Purnell received *"additional Garda material received from their phone companies and further data from relevant PCB's in Northern Ireland"*.

171. DS Officer 16 stated that following the production and delivery of LKP5, which he received on 22 April 2003 (together with LKP1-3 and other materials), he had no further investigative involvement with Lisa Purnell concerning the Omagh Bomb investigation that he could recall.

Graham Telford report: "Bomb at Omagh: 15 August 1998. Telephone & Cell Site Analysis" (24 June 2003)

172. Graham Telford, Senior Police Analyst, made a statement dated 24 August 2004 which detailed that on 28 April 2003 he received LKP5 and LKP4 from DC Officer 9. He said that he could not access LKP5 which he returned on 30 April 2003. On 17 June 2003, DC Officer 9 returned LKP5 to him with a further CD-ROM which he was able to access in order to *"conduct further analysis and produce hard copies"*.

173. He then produced a report for the PSNI titled: *"Bomb at Omagh: 15 August 1998. Telephone & Cell Site Analysis"* dated 24 June 2003. The report contained a map and diagram demonstrating the PSNI's understanding of the route of the bomb and scout cars using cell site data as well as other telephone traffic on the day of, and day prior to, the bombing. It also included other information such as eyewitness sightings of the bomb car.

Denise Owens' reports: (11 October 2005 and 4 July 2006)

174. Denise Owens, Police Analyst attached to the PSNI, made a statement dated 4 July 2006. She said that on 26 August 2005 she received telephone data from DC Officer 9 in relation to two mobile phones, -213 and -076. She stated that the request was to analyse the call data on the phones and show any similarities regarding their usage. Her analysis covered the period 20 February 1998 to 21 August 1998 for -213 and the period 11 July 1998 to 31 August 1998 for -076.

175. The report she produced was dated 11 October 2005 and titled *"Report Accompanying Telephone Chart for Telephones -213 and -076"* (version 1.1). She later produced a further version 1.2 of her report dated 4 July 2006 titled *"Report Accompanying Telephone Chart for Telephones -213 and -076"*. The report stated that it was compiled at the request of DC Officer 9. It updated the previous version, 1.1, following the receipt of two subscriber details from DC Officer 9 on 4 July 2006.

R v Daly

176. DC Officer 9 produced a covering report to the Director of Public Prosecutions via Detective Chief Inspector Officer 15 on 10 December 2007 in relation to *R v Daly* titled: *"R -v- Seamus Daly – Telephone Analysis for Omagh and Linked Series"*. The report

provided a summary of the telephone investigations conducted by the RUC/PSNI with a specific emphasis on Seamus Daly.

177. DC Officer 9 also produced a report for *R v Daly* dated 14 June 2010 setting out the telephone analysis in relation to the Omagh, Banbridge and Lisburn bombings.

178. The 18-page report was produced to *"demonstrate and prove that the one group of Dissident Republicans carried out the three incidents and furthermore show the involvement of Seamus Daly in the three incidents."* It considered the warning calls made prior to each incident, the activities of telephone numbers in relation to those incidents, the attribution of those telephone numbers to individuals and other relevant telephone investigations including the forensic examination of mobile phones.

Graham Telford report for the prosecution in *R v Daly* (19 September 2014)

179. Graham Telford, Senior Police Analyst, produced a report in relation to the Omagh, Banbridge and Lisburn bombings for use in *R v Daly*. It is dated 19 September 2014. It was said to be produced following a request by DS Agnew and it sought *"to provide a visual representation of evidential links in respect of Seamus Daly to bombing incidents in Lisburn, Banbridge and Newry in 1998".* The report in fact looks at Omagh, Lisburn and Banbridge and relates mostly to telephone usage. Mr Telford stated in the report that he was provided with a *"range of documentation which was included in two lever arch files. I was also provided with a disc containing a presentation prepared by a company called "Return 2 Scene" in respect of the Lisburn and [word missing] Bombs",* labelled 'RB200'. The report stated that all of the telephone material within it was taken from RB200 and LKP5.

180. In his statement dated 1 July 2014, DC Officer 9 stated that before his retirement as a Detective Constable of the PSNI, which was in January 2014, he had liaised with the company 'Return to Scene' ("R2S") *"and had them prepare a visual presentation of the telephone usage surrounding the Theft of the Bomb Car used in the Omagh Bombing... and the delivering of the Bomb Car in the similar attack on Lisburn Town Center [sic] on 30th April 1998",* which he exhibited as RB200, 'Return to Scene presentation for Omagh Bomb Investigation'.

O181: Kevin Weeks report for the prosecution in *R v Daly* (28 April 2015)

181. On 28 April 2015, Kevin Weeks of Forensic Mobile Services Limited produced a report for the prosecution in *R v Daly*. It was exhibited as [O18]1. This report attributed numbers to individuals. It contained maps and call tables regarding calls made and received during the following periods: the Lisburn bombing and the day prior (29-30 April 1998); the Banbridge bombing (1 August 1998); and the Omagh bombing and the days prior (12-15 August 1998).

Omagh civil action

182. DS Officer 16's Inquiry statement records that Lisa Purnell's reports were also provided to the lawyers acting on behalf of the plaintiffs in the Omagh Bomb civil action. He said that the PSNI provided a high level of co-operation to the families' lawyers and he said that he travelled to London more than once to brief families in detail on the telephone evidence. In his memoir, he recalled travelling to London with DC Officer 9. He also recalled giving evidence regarding telephones during the civil trial. Lisa Purnell also stated that she gave evidence in the 2013 second set of civil proceedings.

The Inquiry Legal Team, 28 August 2026.