

SHERIFFDOM OF GLASGOW AND STRATHKELVIN AT GLASGOW

B3170/10

***INQUIRY HELD UNDER
THE FATAL ACCIDENTS
AND
SUDDEN DEATHS
INQUIRY (SCOTLAND)
ACT 1976,
SECTION 1(1)(b)***

DETERMINATION

by

IAN HARPER LAWSON MILLER, Esquire,
Advocate, Sheriff of the Sheriffdom of Glasgow
and Strathkelvin

following an Inquiry held at Glasgow on 14th,
15th, 16th and 17th March 2011

into the death of

LIAM JOSEPH BOYLE

GLASGOW, 25th MARCH 2011.

The Sheriff, having considered the evidence presented to the Inquiry and the submissions made thereafter,

FINDS AND DETERMINES:

- (1) In terms of section 6(1)(a) of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976, that Liam Joseph Boyle, who was born on 24 May 2007, and who resided latterly at 114 Dryburn Avenue, Hillington, Glasgow died on 28th February 2009 at 12.12 hours at the Southern General Hospital, Glasgow.
- (2) In terms of section 6(1)(b) of the said Act, that the cause of his death is electrocution;
- (3) In terms of section 6(1)(c) of the said Act, that the reasonable precautions whereby his death might have been avoided were that in respect of the three core flexible cable with

internal conductors for live, neutral and earth connections terminated at one end in a three pin plug and at the other with the sheathing and basic insulation stripped back and the stranded copper conductors in each core exposed over a length of approximately one centimetre, (1) the cable and plug be kept in a place where Liam could not get at them once they had been disconnected from the back of the oven on which they were supplied for the period of time that the work of replacing the oven in the kitchen of the house where Liam lived was being done; and (2) once that work had been completed, they be removed as part of the necessary task of clearing up whatever tools and equipment had been brought to that house in order to carry out the work.

(4) In terms of section 6(1)(d) of the said Act, that there were no defects in any system of working which contributed to his death; and

(5) In terms of section 6(1)(e) of the said Act, that there were and are no other facts which are relevant to the circumstances of his death.

NOTE

[1] This Fatal Accident Inquiry has been convened to inquire into the circumstances of the death of Liam Joseph Boyle which occurred on 28 February 2009. He was then 21 months old, having been born on 24 May 2007. He resided latterly at 114 Dryburn Avenue, Hillington, Glasgow G52 2AL with his mother, Ms Claire Louise Hughes and his older brother, Connor Phillip Carr, who was born on 2 July 1997.

[2] The Crown have requested this Inquiry under section 1(1)(b) of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976 (“the Act”), which governs the conduct of such inquiries. That provision gives the Crown, in the exercise of their discretion, the right to apply to the sheriff for the holding of such an inquiry where it appears to be expedient in the public interest on the ground that the death was sudden, suspicious or unexplained, or has

occurred in circumstances such as to give rise to serious public concern. It is the last of these on which the Crown found in this Inquiry.

[3] The application to hold the Inquiry states that Liam was fatally electrocuted at his home shortly before midday on 28 February 2009. The supporting narrative says that he had picked up a plug attached to an un-terminated flex which had been left unattended at his home by workmen while they worked there to replace an oven. Liam thereafter plugged the plug into a socket and was fatally electrocuted because he appears to have touched the live bare wires on the un-terminated flex.

The witnesses to the Inquiry

[4] The only party to the Inquiry represented at it was the Crown. In the course of the Inquiry the Crown presented the evidence of 11 witnesses. They, and the general substance of their evidence, were as follows.

1. Ms Claire Louise Hughes, Liam's mother. She told about why the workmen were in her house, the events of the day in question, and Liam.
2. Mr Daniel Rough, the handyman who carried out the work of replacing the broken oven in the kitchen of the house at 114 Dryburn Avenue with a new oven. He said that he was instructed to replace a broken oven, attended at the house and did that, and also explained his ability to do and experience of doing such work.
3. Mr Simon Burns, a self-employed joiner. He said that Mr Rough asked him to help him transport the new oven to the house and took away the old oven after its removal from the kitchen of the house.
4. Police Sergeant Susan Milloy, who said that she and two police colleagues went to the house in response to the report to the police that a baby had stopped breathing at the house and an ambulance had been in attendance. Amongst other investigative work she took a statement from Connor in the presence of an adult. She then wrote it up in her own hand whereupon Connor signed it and she had it countersigned by the adult in whose presence she obtained the statement (Crown production number 6). She also instructed the police identification bureau to become involved and amongst other things take photographs of the house and of Liam.
5. Police Constable Andrew Wallace, one of the colleagues of Police Sergeant Milloy who accompanied her to the house and said what he did and saw at the house and about certain features of the electricity system in the house.

6. Mr Lawrence McErlane, one of the two paramedics who attended at the house in response to the request for an ambulance for Liam and who, assisted by reference to the Scottish Ambulance Service Patient Report in respect of Liam (Crown production number 5) talked about their attempts to resuscitate him at the house and in the ambulance before conveying him in it to the Southern General Hospital, Glasgow.
7. Mr Jason Long, a consultant in Emergency Medicine at the Southern General Hospital, who said that he was involved in the attempts to resuscitate Liam at the hospital and what treatment he and other hospital staff administered to him.
8. Ms Clair Ann Evans, a consultant paediatric and perinatal pathologist at the Royal Hospital for Sick Children, Glasgow, one of the two pathologists who carried out the post mortem examination of the body of Liam and who subsequently prepared a post mortem report on their findings (Crown production number 3) in which they gave it as their opinion that the sole cause of his death was electrocution. In addition Doctor Evans completed the medical certificate of cause of death in relation to Liam dated 3 March 2009 (Crown production number 7).
9. Mr James Tweedie, the owner of the house at the time and the person from whom Ms Hughes leased the house. He told of visiting the flat to check the report from Ms Hughes that the existing oven there was broken, commissioning Mr Rough to replace it with a new oven. He confirmed that he knew Mr Rough was a handyman whom he was accustomed to using for jobs such as replacing ovens. He also told of his subsequent involvement with the police about Liam's death which included giving two statements.
10. Detective Sergeant Francis Clark, who was instructed to act as crime scene manager and said that in that capacity he had obtained a statement from Mr Burns and seized certain items.
11. Mr James Madden, HM Principal Specialist Inspector (Electrical Engineering) of the Health and Safety Executive, who as a skilled witness gave opinion evidence on the circumstance of Liam's death from the standpoint of his particular expertise as an electrical engineer and under reference to his report of his investigation into those circumstances (Crown production number 4).

The evidence of numbers 2 to 6 and 9 to 11 was given orally, the evidence of numbers 7 and 8 entirely by affidavit and the evidence of number 1 by affidavit supplemented on a few points by oral evidence.

The submissions for the Crown

[5] At the hearing on evidence the procurator fiscal depute began her submissions by observing that the function of the sheriff at a fatal accident inquiry in making his determination did not include making any finding of fault or apportioning blame. The Act did not empower the sheriff to do that, and this was authoritatively stated in the case of *Black v Scott Lithgow Limited* 1990 S.C. 322. She then, under reference to section 6(1) of the Act, invited me to make findings in respect of each of the five considerations set out there in the following terms.

[6] Under section 6(1)(a) (where and when the death took place) that Liam who was born on 24 May 2007 and who resided at 114 Dryburn Avenue, Hillington, Glasgow, died at 1212 hours on 28 February 2009 within the Accident and Emergency Ward of the Southern General Hospital, Glasgow as a result of an accident which had occurred in his home address at 114 Dryburn Avenue, Hillington, Glasgow. She supported this from the evidence of Liam's mother, Mr McErlane and Mr Long.

[7] Under section 6(1)(b) (the cause of death) that the cause of Liam's death was Electrocution. She based this on the evidence of Mr Long and Doctor Evans. In addition she submitted that the court might find it proved on the balance of probabilities from the evidence of Liam's mother, Mr Long, Doctor Evans and Mr Madden, that the accident was caused when Liam picked up an un-terminated electrical power cable and plug from a settee in the living room of the family home and thereafter made his way into the toy room where he plugged that un-terminated power cable into a socket. The socket was either already switched on or alternatively Liam switched it on. Either way, he received an electric shock at a touch voltage of 240 volts because he handled the exposed un-terminated copper conductors with the live wire in one hand and either the neutral or earth wire in the other thereby creating the conditions for a hand to hand electric shock.

[8] Under section 6(1)(c) (the reasonable precautions, if any, whereby the death might have been avoided) that the reasonable precautions whereby the Liam's death and the accident resulting in his death might have been avoided if Mr Rough (1) had kept the un-terminated electrical power cable and plug on or near to his possession and outwith the vicinity of Liam after he disconnected it from the replacement oven, and (2) had ensured, on completion of the work he had carried out at the house, that he had properly cleared up all

materials and tools including the un-terminated electrical power cable and plug. She observed that Mr Rough had placed the un-terminated electrical power cable and plug on the living room floor in the course of the job he was carrying out, and was perhaps the only person in the house who was aware that he had left that potentially dangerous item lying there. By reason of that state of knowledge, the position of Mr Rough was distinguishable from the other persons present in the house who either did not realise an un-terminated electrical power cable and plug had been left on the living room floor or did not realise, or could not be expected to realise, their dangerous nature. Liam had a fresh awareness of putting plugs in and out of sockets. On the balance of probabilities he lifted the new cable and plug and took them through to the toy room, then at some point in time after Mr Rough and Mr Burns had left the house he grasped the two wires.

[9] In addition the depute proposed a third reasonable precaution which was derived from the evidence of Mr Madden, that being the advisability of having child-safe blanking plugs in place in the home. This she said would cause the inquiry to serve a valuable purpose by raising the awareness of those with young children. There would undoubtedly be thousands of people in Scotland who had never considered the safety benefits of such equipment for young children but who now might pause for thought and consider this to be a wise precaution.

[10] Under section 6(1)(d) (the defects, if any, in any system of working which contributed to the death) that the court make no finding.

[11] Under section 6(1)(e) (any other facts which are relevant to the circumstances of the death) that the court make no finding.

The purpose of a fatal accident inquiry

[12] The duty on the sheriff presiding over a fatal accident inquiry is set out in section 6 of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976 (“the Act”). It is to hear all the evidence tendered and any subsequent submissions made on that evidence, and then make a determination setting out the circumstances of the death of Mr Rainey under reference to the five considerations set out in that section, in so far as they have been established to the satisfaction of the sheriff. Those five are: -

- (a) where and when the death and any accident resulting in the death took place;
- (b) the cause or causes of such death and any accident resulting in the death;
- (c) the reasonable precautions, if any, whereby the death and any accident resulting in the death might have been avoided;
- (d) the defects, if any, in any system of working which contributed to the death or any accident resulting in the death; and
- (e) any other facts which are relevant to the circumstances of the death.

The scope of all fatal accident inquiries is determined, delineated and circumscribed by this subsection.

[13] The function of the sheriff at a fatal accident inquiry in making his determination does not include making any finding of fault or apportioning blame between any persons who might have contributed to the accident. The Act that governs inquiries does not empower the sheriff to do that. This was authoritatively stated in the case of *Black v Scott Lithgow Limited* 1990 SC 322; 1990 SLT 612 in which Lord President Hope, in his opinion, took the opportunity to state the function in the following terms: -

"There is no power in this section to make a finding as to fault or to apportion blame between any persons who might have contributed to the accident. ... It is plain that the function of the sheriff at a fatal accident inquiry is different from that which he is required to perform at a proof in a civil action to recover damages. His examination and analysis of the evidence is conducted with a view only to setting out in his determination the circumstances to which the subsection refers, insofar as this can be done to his satisfaction. He has before him no record or other written pleading, there is no claim or damages by anyone and there are no grounds of fault upon which his decision is required. The inquiry is normally held within a relatively short time after the accident ... It provides the first opportunity to canvass matters relating to precautions which might have avoided the death or any defects in any system of working which contributed to it, at a stage when these issues have not been clearly focused by the parties to any future litigation which may arise. And it is not uncommon ... to find questions being asked about possible precautions or

defects which are not the subject of averment in the subsequent action of damages." (p 327 and 615G to H)

As Lord President Hamilton observed in the case of *Global Santa Fe Drilling v Lord Advocate* 2009 SLT 597 under reference to *Black* "[a] fatal accident inquiry is a statutory procedure" .. and "[a]lthough the sheriff presiding at it has judicial duties ...he does not sit to determine the rights or obligations of parties" (paragraph [28] at p 604).

[14] It is a fact finding inquiry not a fault finding inquiry. It is inquisitorial in form rather than adversarial. The standard of proof of the circumstances of the death is on the balance of probabilities. The onus of proof rests on the Crown because, by virtue of section 1 of the Act, the duty of investigating those circumstances lies on the Crown. The word "accident" is not defined in the Act. In its common usage, an 'accident' is an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury. In the context of a fatal accident inquiry the result is death.

My assessment of the evidence presented to the Inquiry

[15] The Crown in their submissions ventured no criticism of the reliability of any of the evidence given by their witnesses. My assessment of the evidence presented orally is that all of the witnesses to fact who gave their evidence in that way were doing their best to recall what happened and were doing so genuinely and honestly with the intention of helping the Inquiry to determine out the facts and circumstances surrounding the death of Liam. There were occasional differences of detail between witnesses but none has given me cause for concern over the fundamental reliability of each witness and certainly none has given me any difficulty in arriving at the findings in fact that support my determination. The differences could be explained easily by reflecting upon the different standpoints of the witnesses to specific features of the events put in question in the Inquiry, or their different preoccupations at various times throughout those events or the passage of time dimming recollection of individual aspects of those events. The evidence of Mr Madden I accept unquestioningly. He was a most impressive witness, whose great expertise in electrical engineering, acquired over more than three decades, was demonstrated in his report and in the supplementary comments he made in the course of his evidence on the circumstances of Liam's death. I am very grateful to him for his analysis and explanation of those circumstances. I have placed great reliance on them in my determination. As for the evidence given by affidavit, I accept it as given and work with it. Nothing contained in any affidavit caused me concern about the

reliability of its author when tested against the oral evidence presented, and vice versa. Accordingly I accept as reliable all the evidence presented and use it in reaching my determination.

The relevant facts

[16] In conformity with the statutory responsibilities, and the approach I have taken to the evidence presented, and in light of the submissions thereon, I find proved the following facts that I consider are relevant to and support my determination on each of the five considerations.

[17] Liam Boyle was born on 24 May 2007. He resided latterly at 114 Dryburn Avenue, Hillington, Glasgow (“the house”). He lived there in family with his mother, Claire Louise Hughes and his brother, Connor Carr, who was then about 11 years of age. Ms Carr leased the house from Mr James Tweedie who was then the owner of the house and a registered landlord. He traded as First Choice Letting from a place of business at 61 Rose Street, Cowcaddens, Glasgow.

[18] On Sunday 22 February 2009 Ms Hughes informed Mr Tweedie that the electric oven in the kitchen of the house had ceased to work. After inspecting the oven Mr Tweedie told her that he would arrange for the replacement of the oven. On Friday 27 February 2009 he confirmed to her that she would receive a new oven. Mr Tweedie instructed Mr Daniel Rough to remove the broken oven and replace it with a new oven. Mr Rough agreed to carry out that work. Mr Rough was commissioned to do that work because he was a general handyman. He did electrical, joinery and plumbing work of a general nature for Mr Tweedie and for other letting agencies. He was not a qualified electrician. His only formal training in electrical work occurred when he took a course in electrical safety when at college. That was between thirty five and forty years before the events that ground this Inquiry. As at February 2009 he had been acting as a handyman for some six years, for five of which he had done work for Mr Tweedie.

[19] On Saturday 28th February 2009 shortly before 11.00 hours Mr Rough attended at the house. He had with him Mr Simon Burns. Mr Burns was a self-employed joiner who did work for property management companies and who was known to Mr Rough. Mr Rough had asked Mr Burns to assist him because he had a van which had the capacity to transport the

new oven to the house and he could help Mr Rough to lift the new oven into the house. On arrival at the house Mr Rough and Mr Burns put the new oven on the floor of the living room. The living room of the house was adjacent to the kitchen. Also adjacent to the living room was the toy room. That room was reached by a doorway on the opposite side of the living room from the kitchen and directly opposite the kitchen doorway. When Mr Rough and Mr Burns arrived at the house Ms Hughes and Liam were in the house. They remained in the house throughout the time that he was replacing the old oven with the new. Connor was also present in the house for part of the time that the two men were in the house. At some point during that time he went outside with a ball.

[20] The electricity supply to the house was to the standard applicable across the United Kingdom. That was 240 volts with the current alternating at fifty cycles per second. Mr Rough removed the old oven from the kitchen unit into which it had been fitted. On doing so he noted that the old oven obtained its electric power by means of a length of electric cable which was fitted to the back of the old oven and went from there to a wall socket into which it was plugged. The wall socket was situated behind the kitchen unit to the left of the unit that housed the oven. On seeing this he realised that the distance between the back of the old oven and the electric wall socket was further than the length of the cable and its fitted plug (hereafter referred to as “the new cable and plug”) supplied with the new oven. Mr Rough then disconnected the old oven by releasing the wires in the cable from where they were affixed to the back of the old oven. He did this while in the kitchen. He then carried the old oven from the kitchen into the living room where the new oven still was. Once he had done that he disconnected the new cable and plug from where it was affixed to the back of the new oven. The new cable and plug was a three core flexible white coloured cable with internal conductors for live, neutral and earth connections terminated at one end in a three pin plug. At the other end of the cable the sheathing and basic insulation were stripped back and the stranded copper conductors in each core were exposed over a length of approximately one centimetre.

[21] Having disconnected the new cable and plug he placed them next to the old oven which was placed on the floor in the living room near to the kitchen doorway. Mr Burns then assisted Mr Rough to lift the new oven into the kitchen, whereupon Mr Rough, without difficulty, wired up the new oven to the cable that had been wired up to the old oven. He then checked that the oven was working. The entire job of checking the plug, the fuse, the

wiring, connecting it to the new oven, and finishing the task of fitting the new oven took him between half an hour and three quarters of an hour from the time he left the new cable in the living room.

[22] At no point in time when Mr Rough was working on either oven in the kitchen did Liam enter the kitchen. At some points during that period of time Liam was in the living room with Ms Hughes. She was trying to keep him occupied there. Liam was showing interest in the new oven and the tools that Mr Rough had brought with him. Those tools were lying on the floor of the living room. They included screwdrivers and screws. He picked up various items. Liam was in the living room at a time when the new cable and plug were in that room, having been removed from the new oven. As at 28 February 2009 Liam had recently started the practice of pulling out plugs from the socket in the living room into which the television was regularly plugged. He derived amusement from doing that. He was aware that the television would come on and work when it was plugged into the socket. Ms Hughes had told him that it was bad to pull out those plugs. The socket into which the television plug was inserted was a double socket. It was similar in appearance to the double socket in Liam's toy room.

[23] After Mr Rough had completed the job of fitting the new oven he asked Mr Burns to take the old oven out of the house. Mr Burns did that. Mr Rough collected his tools, replaced them in his tool case and thereafter left the house. Mr Rough did not ask Mr Burns to remove the new cable and plug as well as the old oven. He simply assumed that Mr Burns had done that. He did not check to see if Mr Burns had. Mr Burns did not see the new cable and plug at any point in time while he was in the house. Neither Mr Rough nor Mr Burns removed the new cable and plug from the house. They left them in the house.

[24] When both men were leaving the house Ms Hughes saw them to the front door. Liam was with her and she had hold of him to prevent him from going outside. Once both men left the flat, Mr Burns drove away with the old oven in his van and Mr Rough drove away in his car. Once both men had left she closed the front door and almost immediately went back into the kitchen to start tidying it up.

[25] Some three minutes after she started doing that Connor asked Ms Hughes where Liam was. She said that he was in his toy room because she had heard him singing and muttering

away to himself in there. Connor went through to the toy room and then returned to the kitchen. He reported to Ms Hughes that Liam was sleeping. This surprised her because it was too early in the day for him to have a nap. She went into the toy room. She saw Liam lying on the floor in the same posture as he adopted when asleep, namely, on his front and with his bottom in the air. At first she thought that he was asleep, but on looking more closely at him she saw a spot of blood on the floor where Liam's mouth was. She then saw the cable wire underneath him. Connor was present at this time. The cable was the new cable and plug. It had been plugged into the left hand part of a double electrical wall socket in the toy room. The switch on the socket was in the on position indicating that the cable, including the bare wire section at the end of each of the three connections, was live. Ms Hughes switched off the electric current and then scooped up Liam. His body felt lifeless. Connor screamed, left the house and went to get help.

[26] Ms Hughes gave Liam mouth to mouth resuscitation and also telephoned for an ambulance. The Scottish Ambulance Service received her call for assistance at 11.32 hours. The ambulance despatched to answer the call was driven by Mr Lawrence McErlane. He was accompanied by Mr John Campbell. Both were trained paramedics. The ambulance arrived at the house at 11.37 hours. Mr McErlane found Liam lying on his back on the floor. He checked Liam immediately and found no pulse and that he was not breathing. Immediately he started attempts to resuscitate Liam using the mouth to mouth and nose resuscitation technique. He and Mr Campbell continued with those attempts at resuscitation and added to that chest compression while they carried him to the ambulance. They continued their attempts in the back of the ambulance. They administered oxygen. They made use of a defibrillator. It registered that Liam was asystolic. Mr Campbell took over the attempts at resuscitation while Mr McErlane drove the ambulance to the Southern General Hospital. and also alerted the hospital to the seriousness of Liam's condition. The ambulance left the house at 11.41 hours and arrived at the hospital at 11.46 hours.

[27] Doctor Long was waiting at the hospital for the arrival of the ambulance. On its arrival he and other hospital staff took over the task of attempting to resuscitate Liam. On examination of Liam there were entry and exit wounds on both hands which were consistent with him having sustained an electric shock. Although Liam showed no signs of life on arrival at the hospital Doctor Long and others continued to try to restart Liam's heart. Despite all their efforts in that regard, Liam was pronounced dead at 12.12 hours.

[28] On 3 March 2009 Doctor Clair Evans and Doctor Julie McAdam carried out a post mortem examination of Liam's body. That examination revealed that he had been a normally formed male child with growth perimeters in keeping with his age. He appeared well nourished and well cared for. Liam had burn marks present on both of his hands. The marks were slightly more severe on his left hand. The appearance of the burn marks on both hands exhibited the classic features caused by electrocution. The presence of those marks on both hands was consistent with him having held an electrical wire in both hands with the result that an electrical current passed through his body. The effect of the electrical current passing through his body had caused a massive shock to his heart. This had caused death within seconds before he realised what had happened to him and before he had the opportunity to feel pain.

[29] In her medical certificate of cause of death for Liam dated 3 March 2009 Doctor Evans stated the sole cause of his death was given at 1(a) as electrocution. She reiterated that as her conclusion in the undated post mortem report signed by both her and Doctor McAdam.

[30] On 3 March 2009 Mr Madden visited the house to carry out an investigation into the circumstances of Liam's death. *Inter alia* he examined the double electrical socket in the toy room. It was in satisfactory condition with the electricity supply to it correctly wired, the voltage to it correct and the impedance reading satisfactory. The socket was supplied from a thirty ampere fuse in the consumer unit of the house's power distribution equipment. That was a satisfactory rating for the socket. The consumer unit in the house was fitted with fuses. There was nothing unsafe or incorrect in having that type of unit rather than the more modern type of unit equipped with circuit breakers.

[31] On 23 April 2009 Mr Madden examined the new cable and plug. The plug conformed to British Standard 1363. It was fitted with a thirteen ampere fuse, which was intact and had not blown. The insulation resistance between conductors and the conductor continuity to be satisfactory, indicating that there were no defects. Some material had been deposited on the surfaces of the live and neutral conductors where they were exposed at the un-terminated end of each. There were no similar deposits on the exposed end of the earth conductor.

[32] On the basis of those facts and in light of the submissions on the conclusions to draw from the evidence I deal with each of the five considerations as follows.

Section 6(1)(a)

[33] The time and place of Liam's death given in both the medical certificate of cause of death in relation to Liam and the post mortem report of Doctor Evans and Doctor McAdam is 12.12 hours on 28 February 2009 in the Southern General Hospital, Glasgow. That is supported by the evidence of Doctor Long. While Mr Wallace suggested that Liam was not alive when he was in the back of the ambulance and that was before 11.41 hours, I am not persuaded that I should treat that as definitive of the time of death. I prefer the evidence that places it at 12.12 hours after repeated, valiant, totally justified but ultimately unsuccessful, attempts to resuscitate him by both of the paramedics and by all the hospital staff involved.

Section 6(1)(b)

[34] The cause of death is given in the death certificate as "Electrocution". No other cause is noted. The evidence of Doctor Evans, Mr McErlane, Doctor Long and Mr Madden all supports this conclusion, which I accept as the sole cause of Liam's death. Liam had burn marks present on both of his hands. Their appearance exhibited the classic features caused by electrocution. The presence of those marks on both hands is consistent with him having held an electrical wire in each of his hands with the result that an electrical current passed through his body, thereby electrocuting him. I accept the expert evidence of Mr Madden based on his examination of the new cable and plug that Liam grasped the bare wires of the live conductor in one hand and the bare wires of the neutral conductor in the other. At that time the cable was energised. As a consequence alternating current at the strength of the national supply flowed through his hands, arms and across his chest. The effect of that current passing through his body caused a massive shock to his heart. His death followed almost instantaneously. It is a merciful grace to Liam that in all probability he died before he realised what was happening to him and before he had the opportunity to feel pain.

[35] As to how it was that the new cable and plug got from the living room to the adjacent toy room, was plugged into the double socket there and then energised, the evidence does not provide any ready or direct answer. Both Ms Hughes and Mr Rough saw it while it was in the living room and that was after Mr Rough had disconnected it from the new oven. Liam was in the living room at some points in time while Mr Rough was working in the kitchen

and while in the living room he was showing interest in the work and the tools that Mr Rough had brought with him. Liam was aware that a plug inserted into a wall socket could lead to the television in the living room being activated. A short but unspecified time before the day in question, he had started the practice of pulling out plugs from the socket in the living room into which the television was plugged regularly. This practice amused him, which sounds as if he saw this activity as a sort of game, and that even although his mother had told him that it was bad to do that. I consider his state of knowledge about what a plug could achieve to be significant for what happened. Exhibiting the characteristic inquisitiveness of a small boy of his age, he seemed to have developed an interest in electric plugs presumably because of what that might mean for him and, in particular, I instance that it could result in him being able to watch television. I also consider that there is some significance in the fact that the socket into which the television plug was inserted and which he had been seen playing with in the house was a double socket, similar in appearance to the double socket in the toy room. The evidence satisfies me I can infer that at some unknown point in time after Mr Rough had removed the new cable and plug from the new oven and had left it in the living room it is probable that Liam carried the new cable and plug into the toy room and inserted the plug into the left hand part of the double electric wall socket in that room. The evidence does not allow me to make a finding as to whether the socket was live at that point in time or whether Liam pushed the switch to the live setting, but by some human action it became energised.

Section 6(1)(c)

[36] The Crown submitted that there were three reasonable precautions whereby Liam's death might have been avoided: (1) if Mr Rough had kept the new cable and plug on or near to his possession and outwith the vicinity of Liam after he had disconnected it from the new oven; (2) if he had ensured, on completion of the work he had carried out at the house, that he had properly cleared up all materials and tools including the new cable and plug; and (3) if there had been child-safe blanking plugs in place in the house.

[37] Liam would not have died when, where and how he did if he had been denied access to the new cable and plug once it had been disconnected from the new oven. Undoubtedly that could have been achieved by keeping the new cable and plug in a place where Liam could not get at them while the work was being done and also by removing them as part of the necessary task of clearing up whatever tools and equipment had been brought to the house to allow completion of the instructed work after that work had been completed. These, to my

mind, are precautions that are obvious, no more than common sense. I am also satisfied that they are reasonable precautions to have taken in the circumstances whereby Liam's death might have been avoided, having regard to the evidence given in the Inquiry that to my mind bears upon this issue, and the analysis of Mr Madden. Accordingly I have included them in my determination, phrased as I have expressed them above, which I prefer to how the Crown expressed them.

[38] From the moment that Mr Rough and Mr Burns arrived at the house until the moment that Liam was discovered in the toy room, there were four people in the house other than Liam: his mother, his brother, Mr Rough and Mr Burns. The Crown led the evidence of three of them and for Connor, whom they did not call, asked Sergeant Milloy in the course of her evidence to read out the full terms of the statement that she prepared from the questions she asked him in the presence of an adult within minutes of finding Liam in the toy room, and which he then signed.

[38] Ms Hughes said that she saw the new cable and plug lying on one of the couches in the living room but did not realise that it had exposed wires and did not think that it was dangerous. She did not know what it was for or who it belonged to or where it had come from or why it was in the living room. She assumed that one of the two workmen had put it there. Connor, in his statement, said that he saw the new cable and plug on the couch in the living room, and that it had a wire hanging from it and it was what he described as all broken wires.

[39] Mr Rough said that after he disconnected the new cable and plug from the back of the new oven, he put them down next to the old oven in the living room. He did not think about them again because he was busy with the work he was doing in the kitchen. He was aware that Liam was in the living room as was his mother. After he had completed fitting the new oven, he asked Mr Burns to remove the old oven and put it in his van. He did not discuss with Mr Burns anything about clearing up after the work beyond that. Mr Rough then put away his tools in his tool case and left the house. He assumed that Mr Burns took away the new cable and plug but he did not check that with him. It never occurred to him to think that they might pose a danger to a small child such as Liam, because he was thinking more in adult terms and an adult would not mess about with them.

[40] Mr Burns said that Mr Rough told him he intended to disconnect the old oven and use its cable for the new oven but that he took no part in the installation of the new oven because he was there simply to lift and move heavy stuff. He did not see Mr Rough working with the new cable and plug at any point in time and did not see them at any point in time, either before or after they had been disconnected. When he removed the old oven and put it in the back of his van, it never occurred to him that what had to be removed was not only the old oven but also the new cable and plug. Mr Rough never mentioned them to him. While Mr Rough was replacing the oven Mr Burns was aware that Liam was wandering about in the living room and in the toy room, and was picking up things and looking at the oven and the tools that were then lying on the living room floor. Mr Burns last saw him at a point in time when the old oven was still in the living room and the new oven was in the kitchen. Connor, he recalled, spent more time outside the house than in, playing football.

[41] The primary responsibility for satisfying the reasonable precautions of keeping the new cable and plug in a place where Liam could not get at them while the work was being done, and for removing them as part of the necessary task of clearing up whatever tools and equipment he had brought to the house must rest with the person undertaking the job, Mr Rough. He knew that Liam, a small boy, was in the living room while he was carrying out the task of replacing the old oven in the next door room, the kitchen. He ought to have taken account of Liam's presence and young age to the extent of recognising that his work equipment of whatever description, and that includes the new cable and plug, would be a source of interest if not fascination to Liam, and that by reason of his young age this brought with it a significantly enhanced risk that the natural curiosity of a small boy had the potential to lead him into doing something that might injure himself even if his mother were also present in the same room. Quite how Mr Rough ought to have achieved the result of keeping the new cable and plug out of Liam's reach I would not feel it right to prescribe. It might have been, as the Crown suggest, by keeping them on or near his person but I cannot conclude that that was an appropriate response in the circumstances. Had it occurred to Mr Rough to take appropriate precautions there might have been many other possible and appropriate ways by which he might have achieved that result.

[42] As for removing the new cable and plug at the end of the job it seems to me that common sense dictates that being in charge of a job extends to the task of clearing up after it has been completed. To that I would add that that includes that person satisfying himself that

he, and anyone working under him, has completed the task of clearing up, certainly to the extent of removing all tools and equipment however brought on site for the purposes of the job. That this general requirement needs stating in clear terms is given added force by the observation of Mr Madden in his report that leaving the new cable and plug behind in the house was an error that might have been made by other people regardless of the extent of their electrical competences which he elaborated in his oral evidence to include qualified electricians.

[43] I am also of the opinion that if a tool or piece of equipment be unaccounted for at the end of the job, then its whereabouts should be investigated before leaving the work site without it. In this case if the new cable and plug were no longer in sight in the living room at the time when Mr Rough was clearing up, in my opinion he, knowing that he had placed them in the living room, ought to have investigated their whereabouts and satisfied himself on that before leaving the house finally whether that be by retrieving them from wherever they were in the house, or by confirming with Mr Burns that he had removed them from the house and taken them to his van.

[44] It was implicit in the Crown's submission that no responsibility for keeping the new cable and plug in a place where Liam could not get at them while the work was being done could attach to any of the other three persons present in the house. On the evidence led that is the conclusion that I reach.

[45] With regard to the third reasonable precaution proposed by the Crown, I am not satisfied that the evidence led is sufficient for me to conclude that I can or should include that in any form in my determination. As a subject of discussion the matter of child-safe blanking plugs did not arise until late in the evidence of Mr Madden when he volunteered it in discussing what might be deemed reasonable precautions. It was not explored with other witnesses, particularly Ms Hughes and Mr Rough. Mr Madden said that it was a precaution to use such blanking plates in houses where there were children of the sort of age that Liam was but stressed that the provision of these plates was not a duty on landlords and it was not for the Health and Safety executive to promote their use. With characteristic precision in vocabulary he described his proposal as an advisory precaution. He did not describe it as a reasonable precaution. Doubtless that is why the depute in her submission described it as a wise precaution again avoiding the adjective reasonable. I am not persuaded that I should or

could elevate the proposal to a precaution that was reasonable in the present circumstances because there simply is not the evidence to give me the facts from which I could derive that conclusion.

Section 6(1)(d)

[46] There was no evidence that justified a determination that there were any defects in any system of working which contributed to Liam's death.

Section 6(1)(e)

[47] There was no evidence that justified a determination that there were any other facts that were relevant to the circumstances of Liam's death.

[48] For all these reasons I have made the determination that I have.