SHERIFFDOM OF TAYSIDE CENTRAL AND FIFE AT ALLOA

DETERMINATION

by

Sheriff David N Mackie

in

Inquiry into the circumstances of the death of

Muireann CAITLIN McLAUGHLIN

in terms of section 6 of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976

ALLOA, **B327/08**

28th May 2009

The Sheriff, having resumed consideration of the Inquiry, DETERMINES as follows:

1. In terms of section 6(1)(a) of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976 that Muireann Caitlin McLaughlin, who was born on 9th

August 2005, and late of 19 Clifford Drive, Menstrie, FK11 7AQ, died there at about 4.30 p.m. in an accident at that time.

2. In terms of section 6(1)(b) of the Act that the cause of death was accidental asphyxiation by hanging sustained in the accident.

Sheriff David N Mackie

Finds in fact:

1. Muireann Caitlin McLaughlin ('Muireann'), born on 9th August 2005, and late of 19 Clifford Park, Menstrie, died there at about 4.30 p.m. as a result of accidental strangulation by a free hanging, looped window blind cord.

2. The death occurred within the upstairs bedroom located immediately to the right at the top of the stairs and referred to as Cian's bedroom. The bedroom window faced out to the front of the house overlooking the garage and driveway.

3. The window ledge was about 90 cm. above the floor and 14 cm. deep. Muireann was about 92.5 cm. in height. The window was dressed with a roller blind fitted within the frame of the window. A pair of curtains hung from a curtain rail fitted on the wall above the window.

4. The roller blind was fixed to a metal tube and operated by a ball chain cord located to the right side viewed from inside the room and running through a winding mechanism fitted to the tube. The two ends of the ball chain cord were joined by a metal connector to form a free hanging loop. The metal connector was incapable of passing through the winding mechanism.

5. The post mortem examination of Muireann disclosed a fresh bruise on the line of the lower jaw on the right side, the mandible, 4.8 cm. in length and up to 1.3 cm. in diameter. There was also disclosed a linear area of fresh superficial skin abrasion with foci of pale circular accentuation resulting from compression by the ball chain cord. Muireann was found by her father hanging by the neck suspended by the looped cord and facing into the room. There was an absence of pathological findings to suggest Muireann had attempted to remove the cord. She was quite still and lifeless.

6. By some means unknown Muireann climbed to a height sufficient to allow her head to be placed through the blind cord, she slipped or fell sustaining an impact against the window ledge on the right side of her lower jaw so severe that she was either rendered unconscious or was badly dazed and thereby incapacitated. She became suspended by the loop of the blind cord around her neck and rapidly succumbed within seconds to the consequence of compression of her windpipe and possibly compression of the blood vessels and nerves in the neck. She was beyond resuscitation.

7. An ambulance arrived within 8 minutes of being called. The deceased was admitted to Stirling Royal Infirmary Accident and Emergency department at 17.15 hours. There was no response to resuscitation and Muireann was pronounced life extinct at 1745 hours by Dr Ursula McIntosh, Consultant in Emergency Medicine.

8. The lowest point of the looped blind cord was approximately 1 cm. above the window ledge. Muireann was about 92.5 cm. in height. The top of her head was just above the level of the window ledge. In order to look over the window ledge and out of the window Muireann would have required to elevate herself.

9. The blind cord was within Muireann's reach but she would have required to elevate herself to place her head in a position in which it could pass through the loop.

10. The operation of the blind could be achieved with a cord which measured 1.15m. in aggregate whereas the actual length of the cord was 2.2m. Had the shorter length been used the bottom of the loop would have been approximately 0.5m. above the window ledge.

11. A central heating radiator was positioned underneath the window. It was fitted with a control valve to its right side when viewed from within the room. The control valve was capable of being used by Muireann as a step to gain access to the window ledge and blind cord.

12. A yellow box shown in photograph number 3, part of Crown Production 7, would have been capable of supporting Muireann's weight and of being used as a step up. A miscellany of other toys and objects in the room could have served a similar purpose.

13. The incidence of deaths of children mainly under 4 years of age by strangulation associated with blind cords since 1990 has been reasonably estimated to be one per year.

14. There was in the USA by the mid 1990's a knowledge and awareness within the window covering manufacturing industry and within the Consumer Product Safety Commission ('CPSC') of the strangulation hazard associated with free hanging looped blind cords. There was published in the USA through joint working between the Window Covering Manufacturers Association of America ('WCMA') and the appropriate government agencies a voluntary safety standard known as ANSI/WMCA100.1-1996. One of the its main requirements was for chain loops to be fixed in place by a tension device to prevent the loop to be free hanging.

15. A 2007 revisal of the American standard requires the strangulation hazard posed by operating loops to be reduced by meeting one or more of 8 design requirements. Where the safety device is intended to release or cut the cord loop such as in the event of a child becoming suspended, the separation load

should not exceed 2.27 Kg. or 5 lbs. and in a batch of 50 samples of any device the average separation load must not exceed 1.63 Kg. or 3 lbs

16. The British Blind and Shutter Association ('BBSA') is the trade association within the UK for businesses engaged in *inter alia* the supply and fitting of window blinds. Membership is voluntary. Many small businesses engaged in the supply and fitting of window blinds operate independently of the BBSA and are not members.

17. The Alloa Blind Company was not a member of BBSA and remains independent of it.

18. The BBSA published an article in its own periodical 'Openings' soon after the summer of 2004 referring to the death of Madeleine Whitehead. Certain recommendations were made to members when selling blinds or any products with cords or chains. These included enquiring as to whether young children were likely to be in the vicinity, ensuring that cord or chain lengths were appropriate to the circumstances, adjusting cords to keep them out of the reach of children, using readily available cleats, cord tidies, clips or tie downs and using alternative blind operating systems that do not have cords or chains that can cause a hazard. There was a further recommendation to attach warning labels to cords. The BBSA produced a number of warning tags complimentary quantities of which were sent to members who could purchase more on request. The article also referred to the forthcoming European Standard, EN 13120, published by BSI in June 2004.

19. The European Standard EN 13120:2004 was mandated under the Machinery Directive and dealt mainly with performance requirements including those relating to power-operated products. The only child safety requirement was in the following terms:

> "Clause 8.1 Where there is a risk of strangulation to children, the manufacturer shall provide a warning notice."

20. EN 13120 came under immediate consideration for revisal and amendment at the instigation of the BBSA through the relevant British Standards committee. The draft amendment was published for comment in 2006. It is to be known as EN 13120:2008 and is expected to be published imminently.

21. An awareness campaign entitled 'National window covering safety month' was mounted in the USA each October from 2003 to 2006 in recognition of the need for public awareness of the hazard from looped cords. The Canadian government launched a public information campaign in 1992 and subsequently developed a voluntary national standard, CAN/CSA – Z600, compliance with which was rendered mandatory under the Hazardous Products Act 2007. In Australia a safety warning was issued to consumers followed in 2004 by a prohibition order in several Australian states banning the supply of blinds with free-hanging loops.

22. The Alloa Blind Company was founded by Graham Patterson and has been in existence for some 20 years at the same location. It has never received a visit or any communication from the Trading Standards Officer.

23. Mr Patterson sold and installed the blinds and his one long term employee of 16 years, Ann Allan, manufactured them from components bought from a supplier for that purpose. It was Mr Patterson who took the measurements which he passed to Mrs Allan on an order form. She in turn made up the blinds within the workshop.

24. The Alloa Blind Company started to use plastic rather than metal links to form cord loops after the accident leading to Muireann's death. They were readily available from suppliers of blind manufacturing components. Plastic connectors sometimes give way in the course of ordinary use.

NOTE:

[1] This Fatal Accident Inquiry into the death of Muireann Caitlin McLaughlin came before me on 12th March 2009. Evidence was led on that day, 13th March and 27th March 2009 when I also heard submissions, helpfully presented in written form. The Crown was represented by Mr Graham, Procurator Fiscal Depute, the family of the deceased by Mr MacLeod Q.C. and the Alloa Blind Company by their Solicitor Mr Batchelor.

[2] I heard evidence from Alistair Dornan, Scene Examiner, DS Graham Ferrie, Beryl Searle, grandmother of the deceased, Katherine McLaughlin and Angus McLaughlin, parents of the deceased, Jacqueline Punchard, paramedic, Dr Alan G Howatson, Consultant Paediatric & Perinatal Pathologist, Royal Hospital for Sick Children and Queen Mother's Hospital, Glasgow, Ann Allan, Graham Patterson and Hugh Hamilton, Trading Standards Officer, Stirling. The evidence of Dr Ursula McIntosh, Consultant in Emergency Medicine, Accident and Emergency Department, Stirling Royal Infirmary and of David Southerland, Team Leader, Consumer and Competition Policy Directorate, Department for Business, Enterprise and Regulatory Reform, was presented in the form of affidavits. In the course of the Inquiry both Mr and Mrs McLaughlin were recalled to give additional evidence.

[3] I here address the provisions of **section 6** of the **Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976**.

Section 6(1)

(a) – where and when the death and any accident resulting in the death took place and

(b) – the cause or causes of such death and any accident resulting in the death

The death

[4] Muireann Caitlin McLaughlin was just 2 ½ years old when she died on Tuesday 5th February 2008. She was at home with her two elder siblings Eoife Mairead McLaughlin, aged 6 at the time and Cian Michael McLaughlin who was aged

4. At about 3.30 p.m. their mother, Katherine McLaughlin, a teacher, left to keep a hospital appointment leaving her mother, the children's grandmother, Beryl Searle, baby sitting. Their father, Angus McLaughlin, a Radiographer Manager working in Glasgow, arrived home from work unexpectedly early just after 4.20 p.m. Beryl Searle took advantage of her son-in-law's early arrival to return to her own home in order to complete some housework.

[5] The family had moved into their new and modern home in June of 2007. The house was on two floors with stairs leading from the hallway on the ground floor. Cian's bedroom was to the right at the top of the stairs with a window overlooking the garage and out to the street. There were two other bedrooms facing Cian's and at the far end of the upper landing, to the left from the top of the stairs, was the master bedroom used by Mr and Mrs McLaughlin.

[6] Muireann and Cian were playing in Cian's bedroom. It seems that Muireann was engrossed in one of her favourite pastimes of playing with a set of small figures for whom she had made up voices. From downstairs in the hall Mrs Searle could hear Cian and Muireann playing upstairs as she prepared to depart. She called 'bye bye' upstairs at which Cian came running down. He stood at the door with his father to say bye bye and, to Mrs Searle's recollection, went back upstairs. Muireann stayed upstairs at all times. Outside the front door of the house and just as she was about to enter her car parked in the drive Mrs Searle received a text message from her other daughter. It was timed at 4.26 p.m. As she reversed her car out of the drive Mrs Searle saw Cian at the window of his bedroom waving. She did not see Muireann.

[7] As his mother-in-law was leaving and having bade her farewell, Mr McLaughlin made his way upstairs intending to change as was his normal practice. On the stairs he had a brief exchange with his eldest daughter Eoife whose request to use the computer to go onto the internet was denied causing her to become upset. He had some recollection of Cian brushing past him on the stairs on his way up. He ascended the stairs and at the top made for the master bedroom he and his wife used, situated at the far end of the landing from Cian's bedroom. Cian called to his father from his bedroom and asked, "Why isn't Muireann talking to me?" Mr McLaughlin was unable to see Muireann from where he was, his view obscured by a wardrobe but

he made his way immediately into the room. He was met with the sight of his daughter hanging by the neck from the looped blind cord at the right hand side of the window in Cian's bedroom and facing into the room. Her feet were a few centimetres off the floor and she was absolutely still. It is almost certain that she was already dead.

[8] He instantly lifted Muireann and removed the cord from around her neck. It was simply looped in front of her right ear, under her chin and around behind her left ear. He laid her on the floor on her back. He shouted at the top of his voice to rouse her but there was no response. He checked for vital signs but could find none. There was no respiration and he could not find a pulse. Trained in CPR Mr McLaughlin commenced chest compressions and intermittent breaths; 30 and 2 respectively. He would sustain this for some 45 minutes until the paramedics took over. He shouted for Eoife to bring the telephone which she eventually did. Mr McLaughlin immediately called his mother-in-law whilst maintaining chest compressions. She spoke of receiving a desperate call from her son-in-law in which he said simply, "Muireann's dead" to which she responded, "I'm coming". That call was timed at 4.32 p.m. just six minutes after Mrs Searle had received the text from her other daughter upon leaving the house.

[9] Mrs McLaughlin arrived home from the hospital just ahead of her mother. She opened the door to find her two other children there and Eoife screaming, "Muireann's dead". She rushed upstairs to find her husband administering CPR to their lifeless daughter. Having ascertained that an ambulance had not been called yet she immediately dialled '999'. She remained on the line with the Operator relaying information about Muireann. She cleared the floor around Muireann and started to undress her to help the paramedics. I heard from Jacqueline Punchard, an ambulance technician, that the call was received at 1636 hours and the ambulance arrived at 19 Clifford Park, Menstrie at 1644 hours, a highly creditable 8 minutes later.

[10] The paramedics did not want Mr McLaughlin to stop his attempts at resuscitation by CPR. They checked the child's airways, masked and intubated her. On arrival at the Accident and Emergency Department of Stirling Royal Infirmary at approximately 1715 hours Muireann was in cardiac arrest. Chest compressions were

continued with oxygen ventilation. Adrenaline, atropine and saline fluid were administered intravenously and there was attempted canulation of the right tibial bone. There was no response to resuscitation and Muireann was pronounced life extinct at 1745 hours by Dr Ursula McIntosh, Consultant in Emergency Medicine.

The accident

[11] Nobody saw the accident and so, while certain inferences can be drawn from the available evidence, it becomes ultimately speculative to attempt to discern the precise mechanism which led to Muireann's demise.

[12] The window ledge was about 90 cm. above the floor and 14 cm. deep while Muireann was about 92.5 cm. in height. The top of her head was just above the level of the window ledge but it is clear that she was too short to have been able to look over the ledge let alone out of the window. To achieve that she would have had to elevate herself. She was similarly too short to have been able to place her head in a position to have become entangled in the blind cord without climbing up. She would not have had to position her head much above the level of the window ledge, however, for the cord was fitted so that the lowest point of the loop was just 1cm. above the ledge. She could have reached the cord with her hands.

[13] Why would she have attempted to climb up in the first place? The suggestion most consistently advanced by witnesses and perhaps the most obvious was that she was attempting to copy her big brother in seeing and waving to her departing grandmother. There were signs of children's hand marks higher up on the window suggesting that one or more of the children had gained access to the ledge before.

[14] There seem to have been two means by which Muireann could have climbed to a height sufficient to place her head at risk of becoming entangled in the loop of the cord. One was by using the control valve of the central heating radiator positioned under the window as a step up. She might thereby have gained the necessary height albeit still under the necessity of reaching the cord over to the right side of the window. There was another possibility. A number of photographs in Production 7 taken by Alistair Dornan, the Central Scotland Police scene examiner, show the room, not as it was when Muireann was discovered but as it was after the frantic attempts to

resuscitate her. Mrs McLaughlin spoke of having cleared the floor of items including children's toys by just pushing them aside. There can be seen in photograph number 3 a yellow box situated under the window. This was in fact produced in the course of the Inquiry and, on being shown to Dr Hayward was considered by him to have been capable of supporting the weight of a child the size and weight of Muireann. There were a number of other children's toys and other objects around the room which might conceivably have served a similar purpose.

[15] The post mortem examination of Muireann disclosed a fresh bruise on the line of the lower jaw on the right side, the mandible, 4.8 cm. in length and up to 1.3 cm. in diameter. There was also disclosed a linear area of fresh superficial skin abrasion with foci of pale circular accentuation resulting from compression by the ball chain cord consistent with the evidence of Mr McLaughlin of having found his daughter suspended by the looped cord of the window blind around her neck. The pathologist, Dr Alan Howatson, explained under cross examination by Mr McLeod that at the age Muireann was a child would have the instinct to claw at her neck to remove the cord. Muireann's nails were long enough to have caused scratches if such activity took place but there were no findings of scratch marks on the neck or tissue under the finger nails.

[16] It is possible to infer that Muireann climbed to a height sufficient to allow her head to be placed through the blind cord, that she slipped or fell sustaining an impact against the window ledge on the right side of her lower jaw so severe that she was either rendered unconscious or was badly dazed and thereby incapacitated. She became suspended by the loop of the blind cord around her neck and rapidly succumbed to the consequence of compression of her windpipe and possibly compression of the blood vessels and nerves in the neck. It was Dr Howatson's chilling evidence that death in such circumstances can occur in a matter of 15 to 20 seconds or a little longer. The finding of petechial haemorrhages in the head region was consistent with death being the result of asphyxiation due to accidental hanging in the circumstances described. I can be satisfied that despite the valiant, prolonged and exhaustive attempts at resuscitation Muireann nevertheless died at about 4.30 p.m.

Section 6(1)(c) – the reasonable precautions, if any, whereby the death and any accident resulting in the death might have been avoided

[17] It is no function of this inquiry to consider or to apportion fault or blame for the accident which resulted in Muireann's death. I was obliged to Mr Batchelor, solicitor for the Alloa Blind Company, for reminding me of the following well known and oft quoted observation by Lord President Hope (as he then was) in **Black v Scott Lithgow 1990 SC** 322 at 327:

> "There is no power in section 6(1) to make a finding as to fault or to apportion blame between any persons who might have contributed to the accident. This is in contrast to s. 4(1) of the 1895 Act which gave power to the jury to set out in its verdict the person, or persons, if any, to whose fault or negligence the accident was attributable. 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 sub-section refers, insofar as this can be done to his satisfaction. He has before him no record or other written pleadings; there is no claim of damages and there are no grounds of fault upon which his decision is required."

Written pleadings in actions for reparation in respect of personal injury raised in the Court of Session may be of less relevance than before and so the absence of notice of precise allegations of fault, often advanced in the past as a factor counselling against fault finding in fatal accident inquiries, is of less significance. Such proceedings nonetheless have as their focus the issue of liability so that the investigations, the preparations of parties and evidence at proof are directed to that end thus rendering such proceedings the proper forum for consideration of questions of fault. Untrammelled, then, by questions of fault and their implications, the Sheriff in a fatal accident inquiry is liberated to fulfil his statutory duty of giving objective consideration to the reasonable precautions, if any, whereby the death and any accident resulting in the death might have been avoided. The counterpart to the absence of a fault finding function of the Sheriff in Fatal Accident Inquiries is, therefore, the powerful freedom to undertake a thorough, candid and testing examination of the available evidence, without fear or favour, and, if appropriate, to make findings in terms of subsections (1)(c), (d) and (e) of the Act of 1976.

[18] Differing views have been expressed as to the meaning of **section 6(1)(c)** and in particular whether the Sheriff can approach the question of reasonable precautions with the benefit of hindsight. In support of a submission that it would be inappropriate for me to make any findings under this provision Mr Batchelor urged that a reasonable precaution is one determined having regard to the practice within the profession and the particular circumstances of the case, that it must take into account the knowledge throughout the industry and in the particular level of the industry, that it required balancing the risk against other considerations such as knowledge of the risk, severity of the risk, the availability, cost and efficacy of the precaution and industry practice. Moreover, he submitted that for something to be a reasonable precaution the consequences of the failure to do it must be foreseeable. He referred me to certain passages of the Determination of Sheriff Stephen in the **Inquiry** into the circumstances of the death of **Lynsey Myles (Edinburgh Sheriff Court, 27th February 2004, Unreported)** and in particular the following passage at page 30:

> "It is for obvious reasons that hindsight has been described as 'the cruel handmaiden of history' and, whereas it is a matter of necessity that inquiries are conducted in hindsight, it is my view that hindsight has no relevance to the issues which are raised in the context of a medical Fatal Accident Inquiry in assessing the proper approach to the Section 6(1)(c) test namely 'reasonable precautions'. That test is redundant unless it takes account of the precautions which are reasonable in the context of the circumstances of the treatment the patients and the actions of the treating doctors, all as pertained at the time the treatment was given and the clinical judgements made."

He argued that what is 'reasonable' in relation to an accident involves an assessment of risk and at the time the blind was fitted the assessment might have been so low that even the cheapest, simplest and easiest preventative measure might not have been reasonable. I was therefore invited by him to confine consideration of preventative measures to such findings as I might make under section 6(1)(e)[1].

[19] I was quite properly directed by Mr Batchelor to a differing view expressed by Sheriff Reith following an **Inquiry** into the death of **Sharman Weir (Glasgow Sheriff Court, 23 January 2003, Unreported[2])** when she said this:

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[1] **Section 6(1)(e)** of the **1976 Act** 'any other facts which are relevant to the circumstances of the death'.
[2] Referred to in **Carmichael, 'Sudden Deaths and Fatal Accident Inquiries', 3rd. ed. p. 420**

> "In my opinion a Fatal Accident Inquiry is very much an exercise in applying the wisdom of hindsight. It is for the Sheriff to identify the reasonable precautions, if any, whereby the death might have been avoided. The Sheriff is required to proceed on the basis of the evidence adduced without any regard to any question of the state of knowledge at the time of the death. The statutory provisions are concerned with the existence of reasonable precautions at the time of death and are not concerned with whether they could or should have been recognised. They do not relate to the question of reasonable foreseeability of risk at the time of death which would be a concept relevant in the context of a fault finding exercise, which this is not. The statutory provisions are widely drawn and are intended to permit retrospective consideration of matters with the benefit of hindsight and on the basis of information and evidence available at the time of the Inquiry. There is no question of the reasonableness of any precaution depending on the foreseeability of risk. In my opinion the question of reasonableness relates to the question of availability and suitability of the precautions involved … In my opinion the purpose of a Fatal Accident Inquiry is to look back, as at the date of the Inquiry, to determine what can now be seen as the reasonable precautions, if any, whereby the death might have been avoided and any other facts which are relevant to the circumstances of the death. The purpose of any conclusions drawn is to assist those legitimately interested in the circumstances of the death to look to the future. They, armed with the benefit of hindsight, the evidence led at the Inquiry and the Determination of the Inquiry, may be persuaded to take steps to prevent any recurrence of such a death in the future."

It may be that upon closer scrutiny the differences between these passages are more apparent than real in respect that both Sheriffs recognise the retrospective nature of a Fatal Accident Inquiry and that by its nature it is conducted in hindsight. Both appear to recognise the need to test the reasonableness of a precaution by the standards pertaining at the time of the death and the availability and suitability of the precautions at that time. Both Inquiries to which these passages relate were in respect of deaths associated with medical treatment so that the risk or possibility of applying retrospectively protocols and procedure standards which might have changed or advanced between the date of death and the date of the Inquiry may have been heightened. In the event it appears that in the latter Inquiry Sheriff Reith, despite her more positive engagement with the concept of the benefit of hindsight, made no findings under section 6(1)(c) but made a number of recommendations under reference to section 6(1)(e).

[20] The Procurator Fiscal Depute, without engaging in submissions as to the meaning and effect of sub-section (1)(c) did consider that there was one reasonable precaution which, if taken, would have avoided the accident and four others which might have prevented the accident. Senior Counsel for the family adopted a similar approach. He felt it unnecessary to engage in a detailed analysis of the meaning and effect of sub-section (1)(c) submitting that the words of the subsection should simply be given their ordinary meaning and on that basis suggested that there were a number of precautions which, if taken, might have avoided the accident.

[21] A Fatal Accident Inquiry is indeed an exercise carried out in hindsight and with the benefit of hindsight. The terms of section 6(1)(c) require the Sheriff, so far as they have been established to his satisfaction, to set out the reasonable precautions, if any, whereby the death and any accident resulting in the death might have been avoided. It seems axiomatic that a reasonable precaution is one which was known of and available at the time of the accident. This does not necessitate an examination of what was reasonably foreseeable at the time of the accident but rather an objective consideration of what was possible; but what was possible according to the regulations, safety standards, knowledge and practice at the time of the accident. The Sheriff should not try to determine what precautions if any 'would' have avoided the accident for that would be an inappropriate quest for certainty. Nor should he enter the realms of what precautions 'should' have been taken for that would be to trespass into the field of blame. I respectfully adopt the guidance to be found in **Carmichael** at **paragraph 5.75, page 174 (3rd. ed.)** where the author writes:

> "Certainty that the accident or death would have been avoided by the reasonable precaution is not what is required. What is envisaged is not a 'probability' but a real or lively possibility that the death might have been avoided by the reasonable precaution."

I refer also to the further observations of Lord Hope in the case of **Black v Scott (*supra*)** at **page 327** when he said:

> "(The Inquiry) provides the first opportunity to canvass matters relating to precautions which might have avoided the death or 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."

In the final analysis my function is to give objective consideration to whether there were any reasonable precautions whereby the death and the accident resulting in the death might have been avoided. I find myself applying the ordinary meaning of the words of the sub-section and to that extent concurring broadly with the approach adopted by Senior Counsel for the family. Whether I consider that there were precautions which might have been taken to avoid the accident I will now go on to consider.

The nature of the hazard

[22] There is a simple but deadly risk of strangulation associated with looped blind cords especially for children aged 4 and under. A dearth of systematic recording of accidents involving, specifically, looped blind cords made it difficult to ascertain a scientifically accurate impression of the scale and frequency of incidents of strangulation. The Inquiry is, therefore, indebted to Dr Gordon Hayward for the painstaking research he undertook in piecing together from a number of different sources data concerning blind cord strangulation accidents enabling him to present a reasonably clear picture of the nature and extent of the risk in the UK.

[23] Three main sources of data were relied upon by Dr Hayward. The first was the Home and Leisure Accident Surveillance Systems ('HASS / LASS') maintained by the Royal Society for the Prevention of Accidents ('RoSPA'), formerly operated by the Consumer Safety Unit of the Department of Trade and Industry ('DTI') and indeed managed by Dr Hayward himself for a time. This is a database derived from a sample of hospitals across the country between 1977 and 2002 comprising several million records. It could not be relied upon as an accurate record of fatal strangulations as death commonly occurs within the first minutes but an analysis of the database yielded a file of 94 cases of injury from all manner of causes associated with window blinds and 4 cases involving strangulation or an injury to the neck[3].

[3] See copy Appendix 3 of the report by Dr Hayward annexed to this Determination.

[24] The second main source was the Home Accidents Deaths Database ('HADD') maintained by the DTI during the 1980's and 90's and developed by Dr Hayward himself whilst working in the Consumer Safety Unit of the DTI. This project followed the example set by the Consumer Product Safety Commission ('CPSC') in the USA but as many of the records, electronic and paper, of HADD have been lost or disposed of only an incomplete picture could be gleaned from certain reports retained by Dr Hayward himself.

[25] The third somewhat haphazard and partial source relied upon by Dr Hayward was the online archive records maintained by certain national and regional newspapers since around 2000. This produced the following results table which formed an Appendix to Dr Hayward's report and was spoken to by him in the course of his evidence, *viz.:*

Table 1 – Appendix 3 to Report by Dr Hayward

Year	Name	Age	Outcome	Country	Locality	Media sources
1996	Jake Inman	11 mon	Fatal	England	Bristol	Sunday Mirror
1999	Andrew Brookes	4 yrs	Fatal	England	Hartlepool	People Northn.Echo
1999	Sophie Davies	3 yrs	Fatal	England	Cumbria	Dly Record
2002	Arran Veale	20 mon	Fatal	Scotland	Glasgow	Dly Record Dly Telgrph
2003	Amy Croucher	18 mon	Fatal	England	Manchester	Dly Express Dly Star
2004	Thomas Crow	2 yr	Fatal	Scotland	Dalgetty, Fife	Dly record
2004	Madelaine Whitehead	23 mon	Fatal	England	Lichfield	BBC online The Mirror Bham Post Bham Mail
2005	Emily Haigh	4 yr	Rescued by brother	England	W Yorkshire	Dly Express Yorks Post
2006	Caide Hamill	22 mon	Fatal	N Ireland	Londonderry	The Mirror Belfast Telg
2007	Jay Mullan	10 yrs	Fatal	Scotland	Lanarkshire	Dly Record Scotsman The Mirror
2007	Owen Treanor	2 yrs	Fatal	Rep Ireland	Co Monoghan	Dly Mail The Mirror
2007	Adam ?	2 yrs	Rescued by father	?	?	The Mirror
2008	Muircann McLaughlin	2 yr	Fatal	Scotland	Clackmannan	Dly Record Scotsman Dly Express (and others)
2008	Lucy Cutts	2 yrs	Fatal	England	Bournemouth	The Mirror

This latter source disclosed certain unexplained geographical anomalies suggesting a bias in the incidence of deaths towards Scotland and the north west of England. A comparison with CPSC data from the USA disclosed that upon the basis of the newspaper data the overall rate of deaths in the whole of the UK was much lower at 0.02 per million of population against 0.10 in the USA whereas in Scotland the four media-reported deaths between 2000 and 20008 infers a rate of 0.09 per million of population, much closer to that in the USA. Focussing only on victims aged under 3 years, the comparative risks of a fatality in the USA was 2.0 per million of population, 1.9 in Scotland and 0.3 in the UK as a whole. The Scottish sample was very small and so it should be recognised that the figure could be materially altered by a relatively slight variation in numbers and the slightly uncertain start time.

[26] The picture which emerged from Dr Hayward's researches was a best estimate of actual numbers of accidental fatal child strangulations involving blind or curtain cords in the UK as follows:

1970 – 79	between	3 and 6
1980 – 89		5 and 7
1990 – 99		8 and 12
2000 – 08		9 and 11

It can be inferred that since 1990 the incidence of deaths of children mainly under 4 years of age by strangulation associated with blind cords has been one per year.

The state of knowledge in February 2008

[27] The strangulation hazard from looped blind cords was well known and well documented by February 2008 and had been for a number of years before that. The researches by Dr Hayward disclosed that the first report published in an academic journal specifically mentioning strangulation by a window cord is believed to have appeared in 1945 in the USA. A gradual and growing awareness of the hazard in that country led in August 1989 to a safety alert aimed at parents and published by the CPSA following discussions with the American Window Covering Manufacturers Association ('WCMA'). The use of warning labels by North American manufacturers alongside public information campaigns by the US and Canadian governments during

the early 1990's had little impact. At the behest of the CPSC the industry developed technical safety standards which were formalised in the voluntary standard ANSI/WMCA100.1–1996 published by the American National Standards Institute ('ANSI'). The key elements were a requirement for chain loops to be fixed in place by a tension device instead of being allowed to hang free and operating loops to be eliminated on other types of blind.

[28] It can be inferred from this evidence that by the mid 1990's there was in the USA a knowledge within the window covering manufacturing industry matched by the knowledge of government through the CPSC of the strangulation hazard associated with free hanging looped blind cords. The significant role of the WCMA, the 'trade' association, in recognising and not only addressing the need for but initiating the development of safety standards in manufacture to the point of participating actively in the development of ANSI/WMCA100.1–1996 is noteworthy. What was the situation in the UK and Europe?

[29] Those engaged in child and product safety in the early to mid 1990's, such as Dr Hayward, were aware of the potentially fatal hazard from blind cords, mainly from US publications. The Child Accident Prevention Trust ('CAPT') and RoSPA were aware of the hazard but not to the extent of lobbying for the creation of formal standards or a public awareness campaign. The situation was to change following deaths in 2003 and 2004 particularly that of Madeleine Whitehead when in about May of that year the late David Jenkins, Product Safety Adviser of RoSPA urged voluntary action by the industry and regulatory intervention by the Government using existing statutory powers. There were two developments, the first involving the British Blind and Shutter Association ('BBSA') and the second the promulgation of a European Standard.

[30] The BBSA is the trade association within the UK for businesses engaged in *inter alia* the supply and fitting of window blinds. Membership is voluntary. Many small businesses engaged in the supply and fitting of window blinds operate independently of the BBSA and are not members. That was the case in relation to the Alloa Blind Company which manufactured, supplied and fitted the roller blind concerned in Muireann's death. The BBSA published a periodical trade journal

entitled ‘Openings’ the circulation of which was restricted to its membership. Soon after the summer of 2004 an article referring to the death of Madeleine Whitehead was published in which certain recommendations were made to members when selling blinds or any products with cords or chains. These included enquiring as to whether young children were likely to be in the vicinity, ensuring that cord or chain lengths were appropriate to the circumstances, adjusting cords to keep them out of the reach of children, using readily available cleats, cord tidies, clips or tie downs and using alternative blind operating systems that do not have cords or chains that can cause a hazard. There was a further recommendation to attach warning labels to cords. The BBSA produced a number of warning tags complimentary quantities of which were sent to members who could purchase more on request. The article also referred to the forthcoming European Standard, EN 13120, published by BSI in June 2004 and this was the second development in the summer of that year.

[31] The European Standard EN 13120 was mandated under the Machinery Directive and dealt mainly with performance requirements including those relating to power-operated products. The only child safety requirement was in the following terms:

> “Clause 8.1 Where there is a risk of strangulation to children, the manufacturer shall provide a warning notice.”

This requirement was advanced without any indication as to what the warning should say or how it should appear. Despite the state of knowledge within the USA by the early 1990’s and a growing awareness amongst those engaged in product safety issues in the UK, the European Standard was silent as to the shortening of cords to keep them out of the reach of children, the use of cleats and cord tidies or the provision and use of safety devices such as pulleys or tie downs that would keep the bottom of the loop attached to the adjacent wall to prevent the looped cord from hanging freely and presenting a readily accessible strangulation hazard. Indeed the requirement for a warning label was not even specifically directed towards the manufacture and installation of window blinds but was generic in nature to machinery covered by the Directive. There was, therefore, no indication as to the form or content of the suggested warning notice.

[32] The shortcomings of EN 13120 were recognised at an early stage. I heard from Dr Hayward that almost simultaneously with its publication EN 13120 came under consideration for revisal and amendment at the instigation of the BBSA through the relevant British Standards committee. The proposed amendment was intended to address the cord strangulation risk in much greater detail and it was Dr Hayward's evidence that the draft amendment was published for comment in 2006. There were no other initiatives by any other bodies, governmental or otherwise, to address the issue of the strangulation hazard presented by blind cords.

[33] The government department with responsibility for the General Product Safety Directive (Directive 2001/95/EC), implemented in the United Kingdom by the General Product Safety Regulations 2005 (SI 2005/1803) ('GPSR') is the Department for Business, Enterprise and Regulatory Reform ('BERR'). Its predecessor was the Department for Trade and Industry ('DTI'). David Southerland is a Team Leader within the Consumer and Competition Policy Directorate with responsibility for consumer product safety legislation. His evidence, presented by way of affidavit, touched upon implementation of the General Product Safety Directive and certain regulatory presumptions in that regard which are of no direct relevance to this inquiry. He explained, however, that the issue of the safety of blind cords had arisen in the context of the revision of the harmonised standard for internal blinds and in light of additional controls for internal blinds in America and Australia. The shortcomings of the current harmonised European standard for internal blinds, EN 13120:2004, have already been touched upon and he explained that BERR had been pushing for a change requiring a warning notice to accompany the product warning parents, guardians and others installing internal blinds of the strangulation risk from the cord with advice to keep it out of the reach of children and to move beds and furniture away from internal blind cords.

[34] A more detailed revision to EN 13120:2004 has been driven mainly by the UK's standards body, the British Standards Institute ('BSI') at the instigation of BERR officials responsible for national general product safety legislation. For this they are to be commended but, despite their insistence, progress has been slow. Mr Southerland alluded to a certain inertia on the part of the European Commission and

other member states when he explained that questions presented in a paper by BERR to the European Commission requesting data from member states regarding the incidence of strangulation accidents associated with blind cords and the nature and extent of any controls of such a danger had met with no response at all. The revised standard, to be known as EN 13120:2008, first published for consultation in 2006 is now expected to be published imminently.

[35] There is attached as Annexe 1 a copy of a comparison between EN 13120:2004 and EN 13120:2008, part of the BERR paper to the European Commission, which conveniently highlights the main differences. The following improvements are contained within the proposed EN 13120:2008:

- The attachment of a warning notice in a conspicuous position and in a prescribed form;
- The provision by the manufacturer within the product package of a device for keeping cords, chains, tapes or similar out of reach of children or an appropriate safety device (with instructions for its proper installation and use) or the inclusion in the product design of a mechanism that will achieve the same result;
- Where the design requires a looped operating mechanism the provision by the manufacturer of the means to limit the risk, either by incorporating this into the product design, or by supplying an appropriate safety device with the product;
- Where practicable, operating cords, chains, tapes or similar should be kept as short as possible;
- The warning notice referred to above should include the following:

- **WARNING**
- **Young children can strangle in the loop of pull cords, chains and tapes, and cords that operate window coverings. They can also wrap cords around their necks.**
- **To avoid strangulation and entanglement, keep cords out of reach of young children.**
- **Move beds, cots and furniture away from window covering cords.**

(certain recommendations are made regarding the size of lettering to be employed).

- The inclusion of accurate instructions with safety devices provided along with the product to ensure their proper installation.

The content of the revised standard may be said to reflect the state of knowledge and awareness of that segment of the window blind industry which was organised within the BBSA and of those engaged in and having responsibility for product safety within the UK.

[36] The anticipated publication of EN 13120:2008 represents a certain progression in the development of product safety in relation to looped blind cords within the UK and Europe. It is a development, however, which considerably lags progress in the US, Canada and Australia. The Inquiry heard from Dr Hayward that it was as early as 1989 that, in consultation with the WCMA the CPSC published a product safety alert followed in the early 1990's by the voluntary use of warning labels by North American manufacturers. A voluntary standard was published in 1996 by ANSI requiring, *inter alia*, that continuous chain loops be fixed in place by a tension device rather than to be allowed to hang free. The ANSI standard was revised in 2002 to take account of a newly recognised danger from the inner cords supporting slatted blinds but otherwise remains in force. An awareness campaign entitled 'National window covering safety month' was mounted each October from 2003 to 2006 in recognition of the need for public awareness of the hazard from looped cords. The Canadian government launched a public information campaign in 1992 and subsequently developed a voluntary national standard, CAN/CSA – Z600, compliance with which was rendered mandatory under the Hazardous Products Act 2007. In Australia a safety warning was issued to consumers followed in 2004 by a prohibition order in several Australian states banning the supply of blinds with free-hanging loops.

[37] The paradox of the situation in the UK is that the strangulation hazard from looped blind cords and the means of minimising that hazard have been known of for nearly 20 years, the shortcomings of the only official safety standard in relation to these products were clear as soon as they were published in 2004, public awareness is recognised as an important means of minimising the danger to children and yet far

from receiving publication of the danger with publicity campaigns as in the US and Canada this country has seen no such campaigns and, as a result of bureaucratic delays at the European level, publication of the revised safety standard has been slow. The evidence presented to this Inquiry suggests that the only measure approaching a publicity campaign in relation to the strangulation hazards associated with looped blind cords has been the 2004 publication in its trade journal 'Openings' by the BBSA referred to above, circulation of which was restricted to its membership.

Trade knowledge and practice

[38] Those engaged in the manufacture, supply and fitting of window blinds fall into two categories; those who are members of the BBSA and those who are not. The Alloa Blind Company which manufactured, supplied and fitted the blind associated with Muireann's accident, was not a member. While specific numbers were not presented it was apparent from the evidence of Mr Patterson, proprietor of the Alloa Blind Company, and of Dr Hayward that there is a large number of small businesses comparable to the Alloa Blind Company throughout the UK which operate independently and without regulation.

[39] I heard from Mr Patterson that his business had been in existence for some 20 years and that throughout that time he had operated from the same location. In the absence of any formal regulation within the industry the only official scrutiny to which the Alloa Blind Company might be subject has been by the Trading Standards Officer for Clackmannanshire Council but in 20 years he had never been visited by Trading Standards or had any other contact with that office. The Trading Standards Officer, Hugh Hamilton, gave evidence to the Inquiry that his office has inadequate resources to be able to carry out any systematic supervision of small businesses within its area, and relies upon the random observations of his officers to notice new businesses. While he was generally aware of the existence of the harmonised safety standard EN 13120:2004 no measures were taken by the Trading Standards Officer to either ensure Mr Patterson's awareness of it or to check compliance with it. The inadequacy of a database of local small businesses the maintenance of which depends upon the random observations of Trading Standards Officers was revealed by the fact that in 20 years Mr Patterson of the Alloa Blind Company had never received a visit

and the Trading Standards Officer was unaware of the existence of the Alloa Blind Company.

[40] My impression of Mr Paterson was of an honest, conscientious businessman distraught with the knowledge that a blind manufactured, supplied and installed by his business was associated with the death of a little girl. He was unaware until after Muireann's death of the existence of EN 13120:2004 being of the understanding that his business was not subject to any regulation. He had chosen not to join the BBSA membership of which would have involved a financial outlay and required scrutiny of his accounts by the Association, something he was disinclined to subject himself to. He did not think there were any dangers associated with the blinds he installed and said that he had never heard of cases of deaths of children by strangulation by blind cords. He took a pride in the quality of the blinds he manufactured and supplied which he stated were made to a good standard. He explained that he was able to maintain a good standard of product by seeing blinds manufactured by other, larger companies passing through his hands and manufacturing his to a similar standard. I inferred that he was and continued to be self taught in the absence of evidence of formal continuing training of any kind.

[41] The Alloa Blind Company operated to a very simple business model. Mr Paterson sold and installed the blinds and his one long term employee, Ann Allan, manufactured them from components bought from a supplier for that purpose. It was Mr Patterson who took the measurements which he passed to Mrs Allan. She in turn made up the blinds within the workshop. In accordance with what Mr Patterson understood to be good practice he fitted the blind cord so that it hung to within a centimetre of the window sill. The only training Mrs Allan had received was in her early days in Mr Patterson's employment when he showed her how to make up a blind. She was otherwise also self taught having received no other formal training or education in relation to the manufacture and installation of window blinds.

[42] While Mr Patterson was unaware of the strangulation hazard posed by loose hanging looped blind cords there were clues as to the existence of some danger and an awareness within the industry in that boxes delivered to his business premises from component suppliers carried warning notices. Mr Patterson explained that those went

straight to Mrs Allan and that he had not seen or noticed the warnings. Mrs Allan for her part was generally aware of the existence of the notices if not their specific content. She made the observation that whatever warning was on the box there were no warning labels supplied with the components inside the box. She further observed that the rolls of cord from which she cut lengths for blinds she was making up carried no warnings at all.

[43] It became Mr Patterson's practice after the tragedy involving Muireann to use plastic rather than metal links to connect the two ends of the ball chain cords fitted to his blinds. He had made enquiries of suppliers and found that these were readily available. The plastic links were not ideal in some respects in that they had a tendency to give way in the course of ordinary operation. Certain customers had requested that the plastic connectors be replaced with metal ones. Some, particularly elderly, customers found that if the plastic connector gave way there was a risk of the cord end being pulled through as far as the cog mechanism creating an attendant risk associated with reaching up perhaps on a chair or small steps to retrieve it.

[44] The absence of evidence of wider industry practice among suppliers and installers of roller blinds makes it difficult to determine the extent to which the Alloa Blind Company did or did not conform to industry norms in the manufacture and installation process. Mr Patterson believed he was conforming to normal good practice for example in fitting the cord to hang within a centimetre of the window sill. Notwithstanding the publication in 2004 in the BBSA trade journal of an article drawing attention to the strangulation hazard there was no evidence before the Inquiry as to whether members of the Association did or did not follow the recommended practices in relation to the provision of warning notices, the shortening of cords to minimum lengths or the use of cleats, cord tidies and the like. I did hear anecdotal evidence from Mr McLaughlin to the effect that a large retail store in Edinburgh was selling blinds with metal ball chains without warning notices of any kind.

Possible precautions

[45] The precautions which may be taken to avoid or minimise the strangulation hazard presented by free hanging, looped blind cords are of two types. There are those which have the effect of placing the offending cord outwith the reach of young

children and there are those of a technical nature which incorporate into the design of the blind or its mechanism a safety or fail safe device.

[46] The simplest and most obvious means of placing a free hanging looped blind cord outwith the reach of young children is to use cleats, cord tidies or clips. These were said by the BBSA in their 2004 publication to be readily available then. Another means of keeping cords outwith the reach of children is to keep cords shortened to their minimum length. It was explained by Dr Hayward that in the present case, for example, the cord was fully 1m. longer than it needed to be to allow for opening and closing of the blind on the window in question. Had it been shortened to its minimum length the bottom of the loop would have been almost 0.5m. higher than it was and outwith Muireann's easy reach. He explained that the link connecting the two ends of the cord and creating the loop was incapable of passing through the cog mechanism to which it was attached at the right end of the blind pole but that as the blind was located 1.07m. above the window sill that represented the distance the blind required to be lowered. The lowering of the blind could be achieved with a cord which measured 1.15m. in aggregate whereas the actual length of the cord was estimated by him to be 2.2m. Had the cord been restricted to its minimum operating length the risk of it becoming draped around a child's neck would have been much reduced.

[47] One of the main requirements formulated within the American National Standards of the mid 1990's (ANSI/WMCA100.1–1996) was for chain loops to be fixed in place by a tension device, occasionally referred to during the Inquiry as a pulley or cord tidy. This would take the form of a small retaining wheel at the bottom of the looped cord fixed to the adjacent wall or window frame through which the cord would run thus prevented from hanging free.

[48] A means of ensuring a failure of the cord should the weight of a small child become entangled in it is to introduce a plastic rather than a metal link to join the two ends. This would give way releasing the two ends of the cord from each other thereby eliminating the strangulation hazard. This is the device now routinely used by Mr Patterson and the Alloa Blind Company following the accident to Muireann. It may not be an ideal solution for the reasons alluded to above of the clip giving way during ordinary usage and thereby creating, in addition to the inconvenience, the potential

danger of requiring to retrieve the loose ends of the cord. It is a solution which has received advanced consideration in the USA reflected in a 2007 approved version of the relevant voluntary standard in the USA, ANSI/WCMA A.100.1 entitled 'Safety of Corded Window Covering Products'. According to Dr Hayward it provides for the attachment of warnings but in addition requires the strangulation hazard posed by operating loops to be reduced by meeting one or more of 8 design requirements. Where the safety device is intended to release or cut the cord loop such as in the event of a child becoming suspended, the separation force is to be measured in a standardised procedure. In essence, no loop should support a weight greater than 2.27 Kg. or 5 lbs. and in a batch of 50 samples of any device the average separation load must not exceed 1.63 Kg. or 3 lbs. It was observed by Dr Hayward that a separation force of 1.63 to 2.27 Kg. or 3 to 5 lbs was so light as to bring into question the operational viability of a blind where there was bound to be a high probability of cord separation during ordinary operation. There was a risk that in order to overcome the nuisance of cords separating users might knot the separator out of the loop, something Dr Hayward was able to easily demonstrate during his evidence. The provision represented, however, the distillation of current thinking on the matter in the USA.

Section 6(1)(c) Conclusion

[49] I am satisfied upon this analysis that at the date of the accident leading to Muireann's untimely death the strangulation risk associated with free hanging looped blind cords was well known and well understood in the USA, Canada and Australia. Knowledge and awareness of the danger could be traced to at least the early 1990's and before. The hazard was equally known and understood in the UK, by those engaged in ensuring product safety such as the DTI / BERR, a significant portion of those whose commercial business it was to manufacture, supply and install window blinds namely those who were members of the BBSA, the relevant trade association, and by those in the voluntary sector having a concern regarding product safety or the prevention of accidents such as RoSPA and CAPT.

[50] The means of avoiding or minimising the risk associated with free hanging looped blind cords were known and understood. They are, in the main, simple and cheap.

[51] I have no reason to consider that Mr Patterson who and whose firm manufactured, supplied and installed the blind associated with Muireann's death was not telling the truth when he testified that he was unaware of the strangulation hazard presented by looped blind cords. I accepted his evidence that he did not understand his trade to be subject to any form of regulation and that he was unaware of any British or European safety standards affecting his line of business until he took legal advice in advance of this inquiry. He was unaware of any need to inform himself of such matters and in 20 years of trading, itself, perhaps, a testament to his products, service and reputation, had never received visits, inspections or advice from the Trading Standards Officer. He was not alone in this state of ignorance for there was sufficient evidence to enable me to infer that there is a significant number of small businesses like Mr Patterson's who operate independently of the BBSA and without any form of regulation or oversight. The lack of awareness on the part of Mr Patterson is, however, nothing to the point that at the date of Muireann's death and on any objective view the danger and the means of avoiding or minimising it were well known and well understood. This leads me to the conclusion that there were certain reasonable precautions whereby the death and any accident resulting in the death might have been avoided.

[52] The accident might have been avoided if the cord were placed out of Muireann's reach. This could have been achieved by the use of a cleat. The use of such a device would have had the additional benefit of avoiding the looped cord hanging free. Such a device would only have operated successfully if used consistently at every raising and lowering of the blind. The need to use it would only be understood if there was an awareness of the hazard in Muireann's parents. They were in fact quite unaware of the hazard. This state of ignorance might have been alleviated by a warning notice being affixed prominently on the blind.

[53] Another means by which the looped cord might have been kept out of Muireann's reach was for it to have been shorter than it was so that the bottom end of the loop was placed out of Muireann's easy reach. This would only have happened by the supplier being aware of the danger and the trade advice, now reflected in the proposed revisal to EN 13120:2004. That same trade advice, if followed, would have

led to Mr Patterson enquiring at the time of supply and installation whether there were children in the house and warning of the danger.

[54] A cord tidy or cord tensioning device would have retained the cord against the wall adjacent to the window, prevented the cord from hanging free and thereby reduced the hazard.

[55] In the hitherto unregulated world of internal window blinds the precautions outlined above would have been unlikely to have been utilised without an adequate awareness in both the supplier and the householders, Muireann's parents. This might have been achieved by publicity campaigns being mounted by any or all of the DTI / BERR, BBSA, RoSPA or CAPT. The evidence of Dr Hayward, taking account of the American and Canadian experience of the early to mid 1990's, was to the effect that a single campaign was unlikely to achieve the desired level of awareness and that repeated campaigns would have been required to maintain awareness in the public consciousness. I consider that on an objective view this knowledge and understanding was available before the date of Muireann's accident and the precaution of such campaigns might have heightened the awareness necessary to promote use of the safety measures I have outlined. It appears that the inertia since the publication in 2006 of the proposed revisals to EN 13120:2004 exemplified by the failure of member states to respond at all to the BERR initiative for change has placed a brake on other non regulatory measures such as the dissemination of public information as to the danger from looped blind cords. I am able to observe now, with the benefit of hindsight, that the bureaucratic delays in finalisation of the revised harmonised safety standard heightened the need for informal publicity campaigns to at least warn the public and uninformed suppliers and installers such as Mr Patterson of the known hazard.

[56] The facility with which the Alloa Blind Company were able to source plastic connector clips for the cords on blinds manufactured by them soon after the accident lends weight to the view that such components were available before. It was Dr Hayward's unequivocal evidence that such plastic connectors would have given way under the 14 kg. weight of Muireann's body so that whatever injury she might have sustained in her fall she might not have suffered accidental asphyxiation by hanging.

Section 6(1)(d) The defects, if any, in any system of working which contributed to the death or any accident resulting in the death

[57] I have no observations to make under this provision.

Section 6(1)(e) Any other facts which are relevant to the circumstances of the death

[58] The potentially life threatening danger to children under four years of age from free hanging looped blind cords is too significant for the use of simple and cheap safety precautions to be dependent upon adherence to a voluntary safety standard by those engaged in the manufacture, supply and fitting of window blinds or their components. The evidence before this Inquiry suggests that there is a significant number of small manufacturer / suppliers of window blinds who are not members of the BBSA and are unaware of the strangulation hazard. The evidence further suggested that large retailers may be unaware also, selling blinds with long cords or all metal ball chains without warning labels attached. The extent to which those who are members of the BBSA adhere to the recommendations contained in the 2004 article published in their trade journal and now reflected in the revised EN 13120:2008 was not clear. Senior Counsel for the McLaughlin family closed his submissions with a forceful call for regulation in relation to the manufacture, supply and installation of window blinds. It is a view with which I respectfully concur.

[59] The deficiencies of the only existing safety standard in relation to window blinds have already been highlighted containing as it does only an imprecation to attach a warning label where there is a strangulation hazard without offering guidance as to where such a hazard might exist or as to the wording of any such warning label. It seems that the formulation of a suitable harmonised safety standard within Europe has been hampered by the classification of window blinds as falling within the scope of the Machinery Directive. The existing safety standard is said to be mainly concerned with performance requirements of motorised blinds so that the particular safety issues highlighted by this tragic accident and others like it have not been targeted or properly addressed. The proposed revisals to EN 13120:2004 go a long way to redressing the balance but will remain ineffective unless accompanied by purposeful publicity, adherence by all concerned with the window blind industry

whether members of the BBSA or not and supervision by BERR through Trading Standards Officers.

Recommendations

[60] I consider that public safety and especially the safety of young children most at risk from this strangulation hazard will be best served by a system of direct regulation rather than a dependency upon the indirect regulation of a safety standard alone. This is the means by which a universal adherence to the safe manufacture, supply and installation of window blinds is most likely to be achieved, may lay the foundation for an appropriate system of supervision and provide consumers with appropriate and ready redress. The BERR fulfils the role of regulator in respect of the General Product Safety Directive (Directive 2001/95/EC) and it is to that department that I therefore make the **recommendation** that consideration be given to the promulgation of regulations to govern the design, manufacture, supply and installation of window blinds so as to minimise if not eliminate the strangulation hazard presented by free hanging looped blind cords. It would be fitting for the UK and Europe to lead advances in product safety relating to internal blinds rather than to continue to lag behind developments in the USA, Canada and Australia.

[61] I **recommend** that in the formulation of appropriate regulations consideration be given to banning the use of looped blind cords at all but not so as to create other, different hazards or to render blinds effectively inoperative.

[62] Where the operational viability of window coverings necessitates the use of looped cords then I **recommend** that safety measures should contain the following elements, *viz.*:

- Safety warnings on the outer packaging of blinds and blind components;

- Safety warnings permanently attached to cords along with conspicuous warnings for the purchaser / supplier / fitter;

- The use of minimum cord lengths commensurate with operational viability;

- The use of safety devices such as plastic connectors designed to give way, separating the two ends of the blind cord forming the loop, in the event of a sudden load such as that of a small child becoming suspended;

- The use of a cord tidy or tension device to hold the bottom of the loop fixed to the adjacent wall or frame and eliminating the free hanging characteristic of looped blind cords;

[63] I have done no more here than to outline the safety precautions which are already known, recommended and applied to varying degrees in the USA, Canada, Australia, Europe and the UK. They are incorporated in the proposed revision of EN 13120:2004. It is not for me to set out in this Determination the detailed requirements for warning labels, cord lengths or separation tensions these being the preserve of the experts in the field to be determined after appropriate research, evaluation and consultation. Nor are these recommendations to exclude other safety devices or precautions yet to be disclosed or developed. Rather they represent a common sense minimum of safety requirements based upon current knowledge and practice which, if utilised, may not eliminate completely any risks associated with window blinds but are likely to minimise those risks to a large degree. Had they been implemented in relation to the blind at the centre of this Inquiry it is likely that Muireann's death would have been avoided.

[64] These precautions will be to no avail, however, if manufacturers, suppliers, fitters and most of all the general public are unaware of the strangulation hazard posed by free hanging looped blind cords. Dr Hayward made the valid observation in the course of his evidence that many homes have blind cords already fitted and in place for many years. Homes where there were no young children and no obvious danger can become the homes of such children. Homes occupied by senior adults not at risk from blind cords can become the playground for visiting grandchildren. The

replacement of many thousands of existing blinds and blind cords will take decades. The need for public awareness is, therefore, paramount.

[65] I **recommend** that BERR, BSI, BBSA, RoSPA and CAPT give consideration to promoting a co-ordinated, repeated publicity campaign in order to raise public awareness of this hazard. It strikes mercifully rarely but it does so randomly and indiscriminately with potentially lethal consequences. While actual deaths have been at the rate of one per year since 1990, recorded near deaths have numbered at least 20 times that number. It is reasonable to suppose that other near deaths go unreported where they do not result in the need for medical attention.

[66] If even some of the foregoing recommendations are followed, if public awareness is raised not least by the publicity which will be attendant upon publication of this Determination and the loss of a young life can be avoided in this and future years then the family of little Muireann will have the slight consolation that her untimely and tragic passing will not have been entirely in vain.

[67] I close by paying tribute to the dignity and courage displayed by Muireann's family throughout this Inquiry which must, at times, have been highly distressing, in the giving of evidence by them and to the obvious determination they have displayed in ensuring that everything that can be done by them to prevent another tragedy such as theirs will be done. Their contribution to this Inquiry goes a long way to achieving that aim.

Sheriff David N Mackie

Alloa,
28th May 2009

Table of Abbreviations

ANSI	American National Standards Institute
BBSA	British Blind and Shutter Association
BERR	Department for Business Enterprise and Regulatory Reform (successor to the DTI)
BSI	British Standards Institute
CAPT	Child Accident Prevention Trust
CCP	Consumer and Competition Policy Directorate
CEN	European Standardisation Body
CPSC	Consumer Product Safety Commission in the USA
DTI	Department of Trade and Industry
GPSD	General Product Safety Directive, 2001/95/EC
GPSR	General Product Safety Regulations, SI 2005/1803
HADD	Home Accidents Deaths Database
HASS / LASS	Home and Leisure Accident Surveillance Systems
RoSPA	Royal Society for the Prevention of Accidents
WCMA	Window Covering Manufacturers Association of America

Annexe 1

Internal Blinds - Comparing BS EN 13120:2004 with EN 13120:2007

	BS EN 13120:2004	EN 13120:2008
Warnings (strangulation)	8.1 Where there is a risk of strangulation to children, the manufacturer shall provide a warning notice.	8.2 Risk of strangulation arises where products are operated by cords, chains, tapes and similar that can form a loop or where the operating mechanism is of a loop design. **Where there is a risk of strangulation to children or other vulnerable persons with cords, chains, tapes and similar, the manufacturer shall attach a warning notice to the product in a conspicuous position. The warning shall be as specified in clause 15.2.2** **In addition, the manufacturer shall either provide within the product package a device for keeping cords, chains, tapes or similar out of reach of children or an appropriate safety device (with instructions for its proper installation and use) or include in the product design a mechanism that shall achieve the same result.** **Where the design requires a looped operating mechanism, the manufacturer shall provide the means to limit the risk, either by incorporating this into the product design, or by supplying an appropriate safety device with the product.** **Where practicable, operating cords, chains, tapes or similar should be kept as short as possible.** NOTE Complete elimination of the strangulation risk can only be achieved by keeping cords, chains, tapes or similar out of the reach of children. Use of additional safety devices may reduce the risk of strangulation but cannot be considered foolproof (see Annex C). Motorisation eliminates the risk associated with looped and pull-cord operating mechanisms but the risk relating to inner tapes and cords remains. Persons in charge of children are ultimately responsible for following the safety instructions provided by the manufacturer (see clause 15.2.2). **15.2.2 Additional warning for cord, chain and tape operated products** **The warning notice referred to in clause 8.2 shall include the following:** – **WARNING** – **Young children can strangle in the loop of pull cords, chains and tapes, and cords that operate window coverings. They can also wrap cords around their necks.** – **To avoid strangulation and entanglement, keep cords out of reach of young children.** – **Move beds, cots and furniture away from window covering cords.** **The word "WARNING" shall be in upper case and not less than 8mm high. The rest of the text shall be in no less than 3mm high letters.**
General instructions		**15.3.2.2 If safety devices are provided (see clause 8.2) accurate instructions shall be included to ensure that their proper installation.**