

SHERIFFDOM OF NORTH STRATHCLYDE AT OBAN

DETERMINATION

by

SHERIFF W DOUGLAS SMALL
Advocate, Sheriff of North Strathclyde at
Oban

In the Inquiry into the circumstances of
the death of
LYNN HERRIOT
residing latterly at 10 Pinewood
Road, Mayfield
Dalkeith

Under the Fatal Accident and
Sudden Deaths Inquiry (Scotland)
Act 1976 (Section 6)

Representation:-

Mr Justin Farrell - Procurator Fiscal at Oban in the Public Interest.

Mr Robert E More, Solicitor - Drummond Miller, Edinburgh for the family of Lynn Herriot

Mr Bill Speirs, Solicitor - Brechin Tindal Oatts for the Scottish Sub Aqua Club Limited, Gordon Rankin, Andrew Marjoribanks, Richard Nixon and Stephen Green

Oban 19 November 2008

The Sheriff having resumed consideration, DETERMINES as follows:-

(1) In terms of Section 6(1)(a) - **where and when the death took place:-**

(i) Lynn Herriot born 24 December 1964 and latterly residing at 10 Pinewood Road, Dalkeith, Midlothian, died at 1930 hours on 13 May 2006 at Lorn and Islands District General Hospital, Oban, following upon a diving accident; that the primary cause of death was drowning.

(2) That in terms of Section 6(1)(c) – **the reasonable precautions, if any whereby the death and any accident resulting in the death might have been avoided:-**

(a) If Scotsac had provided Lynn Herriot with detailed and proper instruction in the use of aqua lung equipment and methods of buoyancy control and had ensured that she had carried out “at least” two try dives with full aqua lung equipment in enclosed water before permitting her to “try dive” with the equipment in open water, her death might have been avoided;

I recommend that such training be compulsory before any open water “try dive” and furthermore that it be emphasised to trainee divers that dry suits must at all times “fit properly” and that divers must not remove mouth pieces unless their feet are firmly on the seabed and their heads are above water.

I further recommend that such training be certified as having been given by a qualified instructor and as having been received by the novice diver before open sea diving with aqua lung and associated equipment be permitted..

(b) If a dive leader whose specific duties included the appointment of a safety officer had been formally appointed Lynn Herriot’s death might have been avoided. In my opinion a safety officer would almost certainly have made provision for adequate and proper surface cover.

I recommend therefore that before any open water dive is commenced and in particular a “try dive” involving novice divers that a dive leader, safety officer and first aid officer be “formally” appointed.

(c) if Gordon Rankin had been wearing a “quick release” safety belt rather than a “Ralph Teck” weight harness, Lynn Herriot’s death might have been avoided..

I therefore recommend that “recreational divers” and in particular inexperienced recreational divers should not wear a “Ralph Teck” weight harness when diving but should instead wear a “quick release” weight belt.

(d) If Gordon Rankin had commenced his dive with a minimum of 150 bar in his main cylinder, Lynn Herriot’s death might have been avoided.

I recommend therefore that before any dive is commenced it be confirmed by the diver and his “buddy” that there is at least 150 bar in the diver’s main cylinder.

(e) If Gordon Rankin had quickly been able to locate the mouthpiece to his reserve supplies of air in his pony cylinder, Lynn Herriot’s death might have been avoided.

I therefore recommend that at all times when mouthpiece regulators are not in use they be attached and readily accessible within a triangular area to the front of the diver’s torso.

(f) If Gordon Rankin had surfaced and had indicated to Lynn Herriot to surface immediately his RBT warning showed on his dive computer, her death might have been avoided.

I therefore recommend that at all times when a diver is given an RBT warning on his dive computer either visually or audibly that he indicate to his/her buddy that both should immediately surface.

(g) If Lynn Herriot had not removed her mouthpiece when she surfaced, her death might have been avoided.

I suggest and recommend that the dangers of removing a mouthpiece whilst the diver is still afloat be emphasised in the training recommended at (a) above.

(h) If there had been appropriate surface cover with suitably equipped and experienced divers on board a boat close at hand, the death might have been avoided.

I therefore recommend that at all times when “try dives” are undertaken there be proximate surface cover which will include a boat within close proximity equipped with suitable rescue equipment and two fully equipped divers on board.

(i) Had a Risk Assessment been carried out prior to the dive, Lynn Herriot might not have drowned. An Assessment might have identified, amongst other things, the difficulties with surface cover which are referred to at (h) above.

I shall therefore recommend that a “Risk Assessment” be carried out before all open water dives, particularly dives involving novice divers.

(3) In terms of Section 6(1) (d) - **defects if any in any system of working:-**

As the circumstances of Lynn’s death arose in the context of a recreational dive and not in an employer/employee situation I have not made findings under this section in relation to procedures either followed or not followed. I have determined these matters under the provisions of Section 6(1) (c) and (e).

(4) In terms of Section 6(1) (e) – **any other facts which are relevant to the circumstances of the death:-**

(a) I consider that the lack of formalisation of the scuba dive training given at the Newtongrange Dive Club to be a fact relevant to the circumstances of the death.

I recommend therefore that in addition to formalised certification of “pre-try dive”, aqua lung instruction that scuba dive training be formalised to the extent that before any aqua lung training can be commenced there should be a record certified by both instructor and trainee of training given and received and that such records should be held by the Club and readily accessible when required.

(b) There was no “formalised” buddy system for novice divers diving with trained instructors. I consider this to be a “fact” relevant to the circumstances of the death.

I shall therefore recommend that trainee and instructors should at all times i.e. before and during diving assume the role of buddy and in that capacity should check each others equipment before commencing diving.

(c) The use of “barnacled rocks” and ankle weights to achieve neutral buoyancy was highlighted at the Inquiry and for various reasons regarded as “bad practice”. These were facts relevant to the circumstances to the death.

I shall therefore recommend that buoyancy control, if required to be by weights at the commencement of a dive should be by standardised weights and not rocks. I further

recommend that ankle weights should not be used by novice divers.

(d) I consider that because non-club members are not provided with the official Club documents that full members would get including Safe Practices Codes that before they undertake snorkel training or any form of sub aqua activity they should be required to read and sign an “understanding of risk” document. I accordingly so recommend.

(e) At the time of this fatality Scotsac did not require their instructors to regularly update their rescue skills. This is a fact relevant to the circumstances of the death. Although I was advised by Mr Speirs that Scotsac have addressed this matter I consider it necessary to formally recommend that all instructors be regularly required to have certification of such update of their skills on record.

NOTE:

Lynn Herriot was born on 24 December 1964. She was 41 when she died in a drowning accident at Gallanach Bay near Oban on 13 May 2006. At the time she died Miss Herriot and her sister Joyce were participating as non club members in a “try dive” which had been organised by the Newtongrange Branch of the Scottish Sub Aqua Club. Lynn and Joyce had taken up diving in November/December 2005, neither had much experience of underwater diving and both wished to gain experience for their respective forthcoming holidays in 2006. Lynn was hoping to go to Cyprus and Joyce wanted to go to Mexico. It was Lynn who first made contact with Gordon Rankin, a Branch Diving Officer and a National Instructor with the Midlothian Sub Aqua Club. He invited both sisters to attend at the Newtongrange swimming pool where they had a “try dive” in the pool with “borrowed” equipment. After that the sisters attended each week at the pool for about 12 weeks during which time they received some basic training from which ever of the four Branch Training Instructors happened to be at the pool at the time. (Stephen Green, Andrew Marjoribanks, Richard Nixon or Mike Escott). Joyce Herriot told the Inquiry that she regarded herself and her sister as being members of the club. She reached that conclusion because she and her sister had regularly attended training and had paid £5 to the club for each attendance. In fact, neither of the sisters were official members of the club. Gordon Rankin was to inform the Inquiry that normal practice was to invite trainee

divers to become members after they had completed “snorkel training” and before they commenced “aqua-lung training”.

Joyce Herriot described the “try dive” that the sisters had when they first attended at the pool. She described how each wore a borrowed jacket, tank, mask and fins (14). Neither wore dry suits. Joyce Herriot said that thereafter she and her sister were provided with “training cards” with between six and eight specified tasks. She described the training as being “haphazard” with instructions being given by different Instructors and no theoretical or classroom training being provided (15). In addition she said that neither she or her sister were provided with the rules or regulations of the club, they were simply referred to the club’s website for that information (28).

Gordon Rankin did not agree with Joyce Herriot’s assessment of the training. He spoke about training being “structured” and told the Inquiry that trainees would progress through their “training cards” and learn the “basics” (155). He confirmed that training was provided by whichever of the Instructors was available and that novice divers would progress from snorkel training to formal aqua-lung training (152 & 154). He advised the Inquiry that normally trainees would only be invited to become members of the club after they had completed their snorkel training (151). Neither of the sisters, he said, had reached the stage of “formal” aqua-lung training before Lynn Herriot’s fatal “try dive” at Gallanach Bay on 13 May 2006 (154).

Mr Rankin told the Inquiry that when the sisters did their snorkel training in the pool they had their BCD’s on and “they would have been told” how to orally inflate their suits (156). He confirmed that at the time of Lyn Herriot’s death neither she or her sister were official members of the club and that neither of the sisters were informed of their “non member” status. He confirmed that as “non members” the sisters would not have been provided with a sub aqua club diving log book or a Scottish Sub Aqua Club certificate of club membership (Crown Productions 6 & 7). Nor would they have been provided with a copy of the Scottish Sub Aqua Club constitution or training schedule (Crown Productions 8 & 9).

THE FATAL DIVE

A diving trip to Oban was arranged by the Newtongrange branch of the sub aqua club for the 13 May 2006. Both sisters were invited to attend. Lynn Herriot had indicated earlier that she wished to see how her BCD equipment worked (157). The intention of the trip was that both of the sisters would have a “try dive” in the afternoon after the more experienced divers had dived on the wreck of the “Thesis” which is located in the sound of Mull. In total six persons (including Lynn and Joyce Herriot) took part in the trip. The other members of the group were Richard Nixon, Stephen Green, Andrew Marjoribanks and Gordon Rankin.

Joyce Herriot told the Inquiry that the group arrived at the Puffin Dive Centre at Gallanach Bay near Oban at 12.00 noon on 13 May 2006 and thereafter both she and her sister accompanied the more experienced divers to the wreck of the “Thesis”. The sisters remained on board the dive boat whilst the more experienced divers carried out their dive. (30 & 31).

After the dive on the “Thesis” the group returned to Gallanach Bay and arrived at the Puffin Dive Centre, which was identified by Gordon Rankin on the album of photographs lodged by the Crown (Production 4-photograph A) at about 5.00pm. It was shortly after they arrived that Gordon Rankin authorised a “try dive” for both sisters. He told the Inquiry that he was familiar with the site, that he had used it before and that diving conditions that day were “perfect ... sunny, flat, calm... ” (162). Joyce was “quite excited that we were going to have a shot....” (34).

It was agreed that Gordon Rankin should accompany Lynn Herriot on the dive and that Stephen Green would accompany Joyce (163). Joyce Herriot said that the only equipment that either of the sisters had which belonged to them were their snorkels and masks (34). The rest of their equipment was borrowed from the other two members of the group (Richard Nixon and Andrew Marjoribanks). The dry suits were borrowed from other club members who were not on the trip (35-36). Gordon Rankin confirmed that Lynn Herriot had borrowed her equipment from both Richard Nixon and from Michael Escott who was not on the trip. He confirmed that the dry suit that she was wearing belonged to Michael Escott (44). The Inquiry was to hear

from Andrew Marjoribanks that Michael Escott was between 5ft 8” and 5ft 9” in height (45). The post mortem evidence was that Lynn Herriot was 5ft 3” in height. The Inquiry was later to hear opinion evidence that a possible consequence of Lynn Herriot wearing an ill fitting dry suit was that her buoyancy could have become affected because of air trapped within (infra page 18). In that regard Joyce Herriot told the Inquiry that neither she or her sister had worn a dry suit before their dive at Gallanach Bay and that they had only been shown how to use buoyancy control equipment in the swimming pool. She was unable to recollect if the equipment used by her had been checked before she commenced her “try dive” and in particular could not remember if her BCD had been checked as regards inflating or deflating air or whether her weights had been checked. She told the Inquiry that the method of carrying weights on the “try dive” at Gallanach Bay was different from that used in the swimming pool. In the swimming pool she had used a weight release belt, whereas at Gallanach Bay she had been provided with a jacket and integrated weights. It was her evidence that she did not know how to release the weights from the jacket nor did she know how to take it off. She had no input in checking her partner Steven Green’s equipment (45).

In the event Joyce Herriot did not proceed with her dive (46). She lost confidence at the point she entered the water when she said she “rolled over”. She said that she became exhausted and described how she was wearing a pony tank which was a “useless” piece of equipment (48) and how she was unsure of how her dry suit operated.

Joyce told the Inquiry that she did not see any checks being carried out on her sister’s equipment prior to her sister commencing her dive (53).

It was clear from the evidence that Lynn Herriot was unfamiliar with the equipment that she was wearing. Gordon Rankin confirmed that she would not have used the cylinder, BCD or weight harness that she had borrowed before she commenced her dive nor would she have previously used Michael Escott’s dry suit (166). In addition it was his evidence that she had been given no instructions as to how to operate the dry suit or how the valves on it worked (183).

Both Gordon Rankin and Andrew Marjoribanks helped Lynn on with her equipment. Gordon Rankin said that he “ran through” with her the various pieces of equipment and signals that might be used during the course of the dive (167). He told the Inquiry that he provided Lynn with a “dive briefing” of where they should go and was emphatic that he gave Lynn Herriot instructions on how to use her BCD and where the dump on the BCD was located (168 & 174). He was equally emphatic that he showed Lynn where the weights on her weight harness were located and how she could release the weights by pulling at the velcro straps attached to them and pull them from the velcro pockets. He conceded, however, that Lynn had never been given instructions or trained as to how she should pull the weights from the velcro pockets of the harness. Mr Rankin said that he checked that the valves on her BCD were working and checked that she was able to breathe air from her regulator before the start of her dive. Mr Rankin accepted that the weight harness was a far more sophisticated method of weighting than a simple weight belt and described the harness as being “a one pull release system” where “you have to pull with sufficient force to breach the velcro straps (170 & 171)

In addition to the weights in the Ralph Tech harness that Lynn Herriot had on she was wearing ankle weights for “buoyancy purposes”. Gordon Rankin explained to the Inquiry that some divers particularly novice divers had difficulty in keeping their legs down in the water and for those reasons Lynn Herriot had been given ankle weights (173).

In addition to “running through” her equipment at the start of the dive Gordon Rankin told the Inquiry that he checked how much air was in Lynn’s cylinder and found that it contained 130/140 bar (184). He checked the gauges on his own cylinder and found that he had 80 bar (185). He was “certain” of that volume and told the Inquiry that 80 bar would have lasted him “a good half hour”. It was he said “more than enough” for the dive which was planned to last for approximately 10 minutes and to a depth of between 3 to 5 metres of water (186)).

Mr Rankin told the Inquiry that in addition to the main cylinder that he was carrying he also had a pony cylinder which contained 90/100 bar of air and would have provided him, if required, with an extra 20/30 minutes of air (186). He considered

that even without the extra air in his pony cylinder he would have had sufficient air to cover any emergency situation (189).

PRE-DIVE CHECKS

Before commencing the dive Mr Rankin told the Inquiry that he carried out a “buoyancy check” with Lynn. He tried to get her to sit on the bottom of the bay at waist height (volume 2, page 12). He discovered that she was too light and decided to weight her down by putting two “rocks” into her pockets, one rock in each pocket (191). He did not check the weights of the rocks. He estimated that before the rocks were added Lynn was weighted with approximately 28lbs (ie 24lbs in the weight harness and 2lbs each for the ankle weights). He did not consider that her lack of buoyancy was caused by air trapped in her dry suit (191) and was quite emphatic that no air was in fact trapped in the dry suit (192). He said that he had been present when Lynn went through the procedure of squeezing air from the dry suit. It was Gordon Rankin’s evidence to the Inquiry that after he had added the stones to Lynn’s pockets she became neutrally buoyant.

THE DIVE

Having ensured that Lynn Herriot was neutrally buoyant Gordon Rankin described how they commenced their dive (197). They swam out into Gallanach Bay with him leading. They reached a depth of about 3 to 4 metres and a distance of 15 to 20 metres from the shore. It was at this point that Mr Rankin said that he became concerned. He told the Inquiry that Lynn “finned off” in a direction of her own. He described her as being at a distance of about “10 to 12 metres” away from him (volume 2, page 15). He put this down to her “inexperience” and “over confidence”. He followed her and signalled her to follow him. She in turn gave him an “okay sign” and followed on behind him. Shortly after, he turned round and discovered that Lynn had again swum off in a direction of her own. On this second occasion he estimated that she would have been 6 to 7 metres away from him (volume 2, page 18). Again he caught up with her and again signalled to her to keep close by him. Shortly after that he again saw her “heading off”. It was at this point that he decided to head back to the shore (volume 2, page 19). He took the decision because he was “responsible for keeping an eye on Lynn Herriot” and was concerned that “she was doing her own

thing, she was not keeping up with me”. He signalled to her to go back and checked that she was fine. She gave him the “thumbs up” (volume 2, page 19) and they headed back. As they did so Lynn Herriot signalled that “she wanted to come up” (volume 2, page 21). Mr Rankin said that at that point they started a “controlled ascent” from a depth of about 3/4 metres. Lynn carried out her ascent by “finning up from the bottom” as did he. She did not put air into her dry suit (volume 2, page 23).

EVENTS ON THE SURFACE

On surfacing Mr Rankin gave an “okay signal” to Lynn, at which point she removed her mouth piece. He explained to the Inquiry that divers should not remove their mouth pieces in case of an ingress of water into their mouth (volume 2 page 28). Lynn Herriot was told to put the mouth piece back into her mouth which she did. He turned to check his bearings and when he turned back saw that she had again removed her mouth piece. He again told her to put it back in and again turned away from her. When he turned back again he saw that for a third time she had removed the mouth piece. On this occasion he “pushed” the mouth piece back into her mouth and told her “quite forceably to keep it in” (30). He decided to inflate Lynn’s jacket and pull her back to the shore which at that stage “wasn’t that far away” (32). Mr Rankin marked on the album of photographs the point at which these events had unfolded (photograph D) and described the position as being level with the end of the pier shown in the photograph.

When Mr Rankin tried to inflate Lynn’s jacket he put his head under the water and removed his regulator. He described how he was able to get a few bursts of air into the jacket and that Lynn’s head was above the water when he did so(36). When he put his own regulator back in he turned to give Lynn the “okay signal”. At that point he noticed that her head was under the water and that her mouth piece was out of her mouth. He described it as having just “fallen away” and Lynn Herriot as having no “eye response” (48). He made an attempt to reach for her inflation valve but told the Inquiry that at that point she was sinking “head first” (39). He speculated that she sank because she had taken water into her lungs when he had attempted to put air into her BCD (41). He described her as dropping fairly quickly in the water. He followed and tried to reach for the inflation valve on her BCD.

As matters progressed Mr Rankin caught hold of Lynn's shoulder strap (42) and tried to "fin" with her to the surface. At this point he felt his own valves "getting tight". He explained to the Inquiry that this meant that he was running out of air (43). He was faced with a dilemma. He could choose to search for the valve to operate his pony cylinder or he could ditch his own weights and rise to the surface (46). He decided on the latter option as he was unsure of how long it would take him to locate the valve. He reasoned that if he ditched his own weights both he and Lynn Herriot would rise to the surface. He was still holding Lynn at this point (47).

Mr Rankin explained to Inquiry that he was faced with another dilemma. He found it difficult to remove the weights from his "Ralph Tech" harness with one hand and in attempting to do so he had to let go of Lynn(49). When he successfully ditched his weights he rose to the surface whilst Lynn continued to sink (50). Mr Rankin agreed with the Procurator Fiscal that he had run out of options at this stage. He had run out of air and could not inflate his BCD.

Matters became worse when Gordon Rankin reached the surface. He was unable to dive after Lynn as he had discarded his weights. He shouted for help. Richard Nixon, who was on shore at the time, "not specifically for the purpose of providing shore cover" heard his cries for help. At the time Mr Nixon was wearing his "unzipped dry suit" (170). He grabbed fins and a mask from Joyce Herriot who was nearby and asked Andrew Marjoribanks, also nearby, to zip up his dry suit before he finned out to Gordon Rankin.

Staff at the Puffin Dive Centre had also heard the cries for help. Michael Morgan, a professional diver of some 20 years experience and a partner at the Dive Centre, told the Inquiry that an "emergency pre arranged plan" was immediately put into operation.

When Richard Nixon reached Gordon Rankin he found him "very tired" and "hardly able to speak or breathe" (173). He held onto Gordon Rankin's tank "to keep him up". Gordon Rankin kept saying "she's down, she's down" (174). Whilst this was happening a boat from the Puffin Dive Centre with three men on board had reached the scene. These included Mike Morgan and two of his students. Gordon Rankin was pulled on board. Mike Morgan described him as being "incoherent" and "in a heightened state of anxiety". He kept saying that he had "lost his buddy". Mr Nixon

described how at this stage he saw Lynn Herriot's body beneath the water but was unable to dive after her because of trapped air in his dive suit and because he was not wearing a weight belt (175).

Lynn Herriot's body was recovered when another small boat with two divers wearing wet suits arrived on the scene. One of the divers who remained unidentified throughout the Inquiry dived in and brought her body to the surface(177). Initially she was held at the side of the boat whilst Mr Nixon and Mr Morgan, who by that time had returned to the scene, put "breaths" into her before she was pulled on board (178). On board there was no response from her (179). She was given more rescue breaths and CPR by Mike Morgan who described her condition as being "non breathing" and "with no response whatsoever" (34). Mr Morgan tried to get Lynn's diving equipment off her in the boat. He described having great difficulty in getting the weight harness off (35) which he described as being "inconvenient at best", "not easy for a beginner" and "inappropriate for an absolute beginner" (43).

All attempts at resuscitating Lynn on board the boat and on shore were unsuccessful. She was transferred by ambulance to Oban General Hospital shortly after being taken on shore and was pronounced dead at 1930 hours on 13 May 2006.

PURPOSE AND SCOPE OF THE INQUIRY

The purpose and scope of an Inquiry is not to find that someone committed a crime nor is it to establish a civil claim for damages. It's purpose and scope is best defined by referring to the helpful comments of Sheriff Kierney in his Determination into the death of Mildred Allan (14.11.85) (which is referred to by Sheriff Stoddart in his Inquiry into the death of Christine Jane Foster (25.2.02). In his Determination Sheriff Kierney said this "...Fatal Accident Inquiries may be regarded as having two essential purposes and one important corollary. The essential purposes are the enlightenment of those legitimately interested in the death ie, the relatives and dependents of the deceased as to the cause of death (and of any accident resulting in the death) and the enlightenment of the public at large including the relatives as to whether any reasonable steps could or should have been taken, whereby the death might have been avoided, so that lessons may be learned, or at least the attention of further Inquiries directed into ways whereby practices, which may have contributed to

the death, can be improved. The provisions in Section 6(1) (c) empowering the Sheriff to make determinations as to reasonable precautions whereby the death might have been avoided and the provision that evidence need not be corroborated gives the Sheriff a very wide power to make determinations, but the summary nature of the proceedings including the lack of written pleadings, must make the court cautious of drawing too sweeping conclusions from evidence which may be incomplete. The provisions of Section 6(1) (e) are still wider and in my view entitle and indeed oblige the court to comment upon and where appropriate make recommendations in relation to, any matter which has been legitimately examined in the course of the Inquiry as a circumstance surrounding the death, if it appears to be in the public interest to make such comments or recommendations. The corollary to these procedures is the accessibility to legitimately interested parties of the evidence made available to and adumbrated in the course of the Inquiry. The availability of such evidence enables those legitimately interested parties, if so advised, to establish negligence or other culpability in the ordinary courts, which, by their procedure of written pleadings which give advance notice of particular allegations, are well suited to dealing fairly and fully with such matters; hence no doubt the provision that the Sheriffs' determination in a Fatal Accident Inquiry may not be founded upon in any such subsequent proceedings.

Section 6(1) (c) of the Act specifies the reasonable precautions, if any, whereby the death or accident resulting from the death might have been avoided.

At this stage it is perhaps helpful to consider what is said by Iain Carmichael in his book "Sudden Deaths and Fatal Accident Inquiries" (3rd edition at page 174) and by Sheriff Andrew Lothian in his determination into the death of Kyle Robert Brown (referred to by both Mr More and Mr Speirs in their submissions) in relation to Section 6(1) (c). Ian Carmichael says this "what is required is not a finding as to a reasonable precaution whereby the death or accident resulting in the death "would" have been avoided but whereby the death or accident resulting in the death "might" have been avoided.

Sheriff Lothian puts it this way when he says "the way that I consider this matter is to conclude that the sense of "might" is that the chances of survival cannot be

completely ruled out..... My understanding of the use of the word “might” means effectively any chance at all, no matter how slim”.

With the above comments in mind I turn now to consider the evidence in relation to **Section 6(1) (a) – (e) of the Act.**

There was never any dispute that Lynn Herriot died from drowning and that her death took place on 13 May 2006. I have accordingly made appropriate findings under the provisions of Section 6(1) (a).

EQUIPMENT AND PRE-DIVE CHECKS

There was a considerable amount of evidence led at the Inquiry in relation to the equipment worn by Lynn Herriot and Gordon Rankin. There was much opinion evidence as to the suitability of the equipment being worn by Lynn Herriot, particularly with regard to it having been borrowed, being ill fitting and equipment with which she was unfamiliar. The experts were at one in concluding that at the time of her dive she was “over weighted” and at the end of her dive was unable to achieve positive buoyancy. There was opinion evidence given as to the quantity of air that Gordon Rankin would have had in his main cylinder at the start of his dive and of his failure to be able to access quickly his reserve supplies of air from his pony cylinder and there was general condemnation of the type of weighting (the “Ralph Tech” harness) worn by both Gordon Rankin and Lynn Herriot. Constable Kenneth Freeman and Bernard Walzak, both experts in diving matters and equipment, spoke at the Inquiry to their respective reports (Crown Productions 11 and 12) and Dr Martin Sayer, Head of the Dunstaffnage Hyperbaric Unit, near Oban, spoke to his report (Crown Production 16) which included a detailed examination and analysis of Gordon Rankin’s dive computer.

PC Freeman’s examination of Lynn Herriot’s dive cylinder found it to be in good condition and containing 80 bar (42). The stage regulators to the tank, operated “as would have been expected” (60).

Although Constable Freeman found that it was not possible to “orally inflate” Lynn’s BCD he concluded, as did Bernard Walzak, that this would not have been critical in

that oral inflation of the BCD would only have been required on the surface and in the event that there had been a loss of air (report page 4). Both Constable Freeman and Bernard Walzak considered that Lynn Herriot was “over weighted”. Constable Freeman told the Inquiry that the total surface weight carried by Lynn was 41½ lbs (made up of 25 lbs weight within the weight harness worn by her and 4 lb in the ankle weights). In addition “barnacled stones” that had been placed within her jacket by Gordon Rankin weighed 12½ lbs. A normal diver said Constable Freeman would carry “maybe 24 lbs” (89).

Constable Freeman considered that Lynn’s weighting problem was exacerbated because of her small stature and weight (5ft 3in and 54kgs). In his report he writes “in this case it would appear that the now deceased was over weighted and unable to achieve positive buoyancy.....” (6). He goes further when he states “it would appear that the now deceased died as a result of not being able to achieve positive buoyancy and remain on the surface”. Bernard Walzak, was equally condemnatory. He described Lynn as being “seriously over weighted” (5). He gave evidence to the Inquiry that he considered the evidence of Lynn Herriot swimming away from Gordon Rankin on two occasions as being indicative of her being “over weighted”. He described how people who are over weighted find difficulties in maintaining neutral buoyancy and “fin a lot” (65 & 71). It was Constable Freeman’s opinion that the only way that Lynn Herriot would have been able to achieve positive buoyancy when she surfaced would have been either to inflate her BCD or dry suit or to have released her weights.

The three expert witnesses were at one in criticising the fact that both Gordon Rankin and Lynn Herriot were wearing “weight harnesses” rather than “quick release” weight belts.

LYNN HERRIOT AND GORDON RANKIN’S WEIGHTING

Both Lynn Herriot and Gordon Rankin were wearing a “Ralph Tech” weight harness. Bernard Walzak concluded this method of weighting to be “more suited to a technical diver who did not necessarily want to jettison weights (54). He spoke about the considerable amount of physical exertion required to release the weights from the harness and explained that in order to remove the weights which are contained within

velcro pockets, the velcro pockets have to be pulled open by means of velcro straps attached (93 & 94). He thought that even if the procedures for releasing the weights were explained to a diver it would be difficult for anyone to remove the weights in a stressful situation (report page 6). His observations are particularly significant in light of Gordon Rankin's evidence to the Inquiry of his difficulties in jettisoning his weights whilst at the same time attempting to rescue Lynn.

There was in fact no evidence that Lynn Herriot struggled or even attempted to jettison her weights from the harness although there was evidence of the difficulties that she would have experienced if she had (Supra page 13). As mentioned, Gordon Rankin's position was different. He required to make a "life preservation" decision at the time he was attempting to rescue Lynn, either he let go of Lynn and release his weights which he said was not possible with one hand or continue to hold on to her and sink with her. He told the Inquiry that had he been able to release his weights he would have been able to achieve positive buoyancy and rise to the surface whilst still holding Lynn and her life might have been saved.

In my opinion and in relation to the weight harnesses being worn by Gordon Rankin and Lynn Herriot a reasonable precaution, whereby the death "might" have been avoided, would have been if Gordon Rankin had been wearing a "quick release" weight belt as opposed to a weight harness. Furthermore if Lynn Herriot herself had been wearing a quick release belt and had been trained in its use and in methods of buoyancy control, the accident might also have been avoided. I have made appropriate recommendations in relation to these matters under Section 6(1) (c) and (e).

THE USE OF ANKLE WEIGHTS AND ROCKS FOR WEIGHTING

Neither Constable Freeman or Bernard Walzak were impressed by Gordon Rankin use of "barnacled rocks" to give Lynn Herriot added weight. Both referred to possible difficulties in extracting the rocks. Constable Freeman thought that the barnacles on the rocks could have potentially punctured Lynn's BCD. He did not consider the use of rocks for added weight to be "good practice" nor were the experts impressed by the fact that Lynn Herriot had been wearing ankle weights. Constable Freeman thought that ankle weights ought only be worn if "absolutely necessary". Ankle weights, he

said, were no substitute for “good practice”, ie, squeezing out air from the dry suit. Both experts identified the difficulty of removing ankle weights in a stressful situation in that the diver requires to bend his or her knees and stretch downwards to be in a position to discard the weights. Constable Freeman thought that ankle weights were “difficult/impossible” to remove in a stressful situation.

I have recommended under Section 6(1) (e) that novice divers ought not to use rocks or wear ankle weights as a means of achieving neutral buoyancy.

THE DRY SUIT WORN BY LYNN HERRIOT

Lynn Herriot was wearing a borrowed dry suit which was excessively large for her. The actual condition of the suit was not criticised. In fact Constable Freeman told the Inquiry that its condition was “good”. What was at issue in the Inquiry was the potential for air to become trapped within the suit because of it being excessively large and consequentially leading to buoyancy problems. Bernard Walzak told the Inquiry “the dry suit that Lynn Herriot was wearing was too big for someone who was 5ft 3” tall and weighed about 53kgs... this could allow for a lot of air to be trapped inside the suit that if not removed would lead to Miss Herriot being over weighted for her to submerge” (5). He thought that the accident had occurred because the buoyancy check at the commencement of the dive, which was described as a “fin pivot” in 3 feet of water (*supra*), could have left air trapped within the suit. It was his opinion that as Lynn dived, trapped air was squeezed from her dry suit and any air left in the dry suit was expelled through the dump on her left shoulder when she surfaced (64 & 65). He considered that the problem of trapped air in the dry suit had not been properly addressed at the commencement of the dive by expelling this trapped air. Instead the problem had been dealt with by adding extra weight (65).

It seemed perfectly clear from the opinion evidence which I accepted that Lynn Herriot was over weighted when she started the dive. This was the most likely explanation for her being unable to achieve neutral buoyancy at the commencement of her dive and at the end. I consider that this problem became exacerbated because the dry suit that she was wearing was excessively large and that in all likelihood there remained air trapped within it which was squeezed out during her dive and at the end of the dive through the dump valve (*supra*).

I consider that had reasonable precautions been taken before the dive started, to ensure that Lynn Herriot had a properly sized dry suit, that excess air was squeezed from the suit and that had she been fully trained in the use of her equipment, she might not have drowned.

I do not consider on the evidence adduced that the “fin pivot” method of expelling air described by Mr Rankin was effective with an ill fitting dry suit.

I have made what I consider to be appropriate findings and recommendations in relation to those matters under the provisions of Section 6(1) (c).

REMOVAL BY LYNN HERRIOT OF HER MOUTH PIECE

Although I deal with what I consider to have been inadequate training of novice divers below (infra pages 23-24) and have made recommendations in that regard under Section 6(1) (e) I consider that the failure to emphasise the importance of not removing her mouth piece prior to the dive was a reasonable precaution, whereby Lynn Herriot’s death might have been avoided. Gordon Rankin’s evidence and opinion evidence is indicative of this as a contributory factor in the death. I have accordingly made a specific determination and recommendation in relation to this matter under Section 6(1) (c).

GORDON RANKIN’S DIVE COMPUTER

Gordon Rankin’s dive computer was analysed by Dr. Sayers’s who spoke to his report (production 16). The analysis showed that Mr Rankin had dived for 6 minutes and to a maximum depth of 4.7 metres (page 4, production 16). On two occasions there had been warnings given. A “remaining bottom time warning” activated at 1 minute and 40 seconds into the dive and a “rapid ascent warning” which occurred in the last 20 seconds of the dive. Dr. Sayers explained to the Inquiry that the remaining bottom time warning was both an audible “beep” and a visual warning. Gordon Rankin would not have heard the audible warning as it would only sound at a depth of over 7 metres (176). The visual warning, however, ought to have been seen by him as divers

are expected to regularly view their dive computer. Dr. Sayers considered that the RBT warning was a “major issue” (62 & paragraph 8 of Report). It was, he said “highly suggestive” of a problem with breathing gas delivery that could have occurred and considered that this problem could have occurred (a) because Gordon Rankin started with an empty air cylinder, (b) because his tank may not have been turned on at the start of the dive or (c) because the tank may only have been turned on partially. Dr Sayer considered the first option to be the most likely. He explained that his analysis of the “SMART” track download showed that 29 bar of air had been used during the dive and it was his opinion that Gordon Rankin had started his dive with between 29 to 40 bar. In referring to his report he stated “to place this into context, the normal pressure in a cylinder that a diver should start with is in the region of 200 to 240 bar. It would be regarded as extremely bad practice to start any dive with a tank pressure as low as 40 bar or less” (paragraph 31 of Report). Dr Sayers considered the “maximum amount of air” that Gordon Rankin could have had in his cylinder at the start of the dive would have been about 50 bar. He considered “very low reserves of breathing gas would hamper a diver’s ability to assist another who may be in distress” (paragraph 34).

Both B J Walzak and Mike Morgan gave opinion evidence that the minimum amount of air that a diver should commence a dive with would be 200 bar. Mike Morgan said that there was a protocol operated by the Puffin Dive Centre in which divers never entered the water with less than 200 bar because “one could never foresee what might occur in a dive” (91).

In his submissions to the Inquiry Mr Speirs maintained that it was “entirely credible” that there had been 80 bar of air in Gordon Rankin’s cylinder at the commencement of the dive. He submitted that analysis of the dive computer showed 29 bar of air had been used and Bernard Walzak had said in evidence that it was likely that there was 10 bar left at the end of the dive. Mr Speirs submitted that those facts together with Dr Sayers evidence that the RBT warning would sound at 1 minute 40 seconds into the dive, was supportive. He referred also to the evidence of Joyce Herriot of hearing a noise “like air coming out of their tanks” (58) as also being supportive of this proposition. In conclusion Mr Speirs referred to Crown Production 16 and paragraph 29 in which there is reference to many models of regulators delivering inconsistent supplies of air at 20 bar or below. The short point, in my opinion, in relation to this

matter is that Gordon Rankin himself, felt that he was running out of air when he abandoned his rescue attempts. Whether that was because his regulator was supplying inconsistent amounts of air because the level of air had dropped below 20 bar is nothing to the point that he had insufficient amounts of air in his main cylinder to continue with his rescue efforts. He was also unable to access the air in his pony cylinder. Had he had more air in his main cylinder or had he been able to access the air in his pony cylinder he might have saved Lynn from drowning. Mr Walzak, in his evidence, suggested that if Gordon Rankin had had a full cylinder when he started the dive, that would not only have reduced the chances of him running out of air but would have provided him with sufficient air for him to inflate his BCD and maintain positive buoyancy rather than being forced to drop his weight belt (2).

The expert witnesses expressed differing opinions as to what would have been an appropriate amount of air to commence a dive with. Mike Morgan spoke about “a thirds rule”, in which recreational divers including “try divers”, allow for a third the amount of air required to get to the furthest point of the dive, a second third for the ascent and a final third subject to there being a minimum of 50 bar left at the end of the dive (181). Mr Speirs, however, pointed out that to have applied this rule to the fatal dive at Gallanach Bay, which was to a depth of no more than 4 metres, would have meant that the minimum amount of air that Gordon Rankin would have had in his tank when he commenced the dive would have been only 70 bar. This was quite clearly insufficient. Mr Speirs suggested that the figure of between 200 and 240 bar suggested by Mr Sayers and 200 bar suggested by Mike Morgan and Bernard Walzak as a minimum volume was more suited to “occupational diving”. He advised the Inquiry that following this accident Scotsac had recommended a requirement of 150 bar in a 10 litre cylinder for instructors and try divers at the commencement of any dive.

It was perfectly clear from the evidence that had Gordon Rankin had that amount of air in his cylinder at the commencement of the dive then he would not have run out of air and “might” have been able to save Lynn. In my opinion 150 bar would be the absolute minimum amount of air that an instructor and try diver should have before commencing a dive. I have made an appropriate recommendation in that regard under Section 6(1) (c) of the Act.

GORDON RANKIN'S PONY CYLINDER

Bernard Walzak said “if Gordon Rankin had a pony cylinder he should have utilised it if his main cylinder had run out of air” (2). As it happened Mr Rankin was unable to quickly locate and utilise his pony cylinder when he most needed it. Because of that and for reasons of self preservation he chose to “ditch” his weights so that he could surface rather than waste time searching for the valve on his pony cylinder (supra). Had he been easily able to locate the valve of his pony cylinder he would have accessed his reserves of air and would have been in a position to continue with his rescue attempts of Lynn. At the time of this accident Scotsac had no regulations which required main cylinder and pony cylinder regulators when not in use to be secured within a “triangular area” on the front portion of a diver’s torso. Mr Speirs advised the Inquiry that that had now changed in as much as Scotsac had decided that this should be a requirement not only for try divers but also for instructors.

It is perfectly clear that had this precaution been in place at the time of the dive Lynn’s death might have been avoided. I have made a determination in that regard and a suitable recommendation under Section 6(1) (c).

STATUS OF NOVICE DIVERS

Formalisation and documentation of pre-membership training

Joyce Herriot herself was unclear as to what status she and her sister held within the Club. She considered herself to be a member when in fact she was not an official member but rather a non-member undergoing snorkel training. Formal aqua-lung training as was explained to the Inquiry only took place after novice divers became members of the Club. The consequence of this non-membership status is that non-club members such as Lynn and Joyce who at the time of the accident did not have access to official club documents and the Safe Practices Code of Conduct that official club members have (Supra page 7). Mr Speirs, in his submissions, recognised this. He pointed out that non-Club members had no access to Scotsac’s Safe Diving Practices Code of Conduct before they commenced their snorkel training. He advised the Inquiry that Scotsac intended to introduce a system whereby novice divers participating in snorkel training or sub aquatic activity are required to read and sign

“An Understanding of Risk” document setting out a Code of Conduct prior to their commencing that activity. I agree.

I have referred to this matter under Section 6(1) (e).

Formalisation and documentation of pre-membership training

Joyce Herriot described the training given to herself and Lynn as being “haphazard”. She spoke about task cards with whichever of the instructors happened to be at the pool at the time. This lack of formalised training, in my opinion, at the scuba dive stage is inadequate. I consider that the trainee diver and instructor should be required to keep a record of what training the trainee has received. I consider that before trainee divers are permitted to progress from snorkel training to aqua lung training there ought to be a record signed by the instructor and by themselves as to what training they have received. I consider and in agreement with Mr Speirs that the records should be held by the Club and should be readily accessible when required. This deficiency in training, in my opinion, is a fact relevant to the circumstances of the death. I have made suitable recommendations under Section 6(1) (e).

TRAINING OF NOVICE DIVERS

Lack of instruction in the use of aqua lung equipment and buoyancy control prior to “try diving”

Neither Lynn or her sister Joyce had received any formal aqua lung training before they went on the trip to Gallanach Bay. Their dive at the Newtongrange swimming pool had been to encourage their interest in the hope that they might become full members (Supra). It was equally clear that Lynn Herriot’s try dive in Gallanach Bay was not part of any “formal aqua lung training”. Gordon Rankin said that such formal aqua lung training was only provided to trainee divers after they had become Club members. At the time Lynn Herriot undertook her fatal try dive she had dived only once with an aqua lung and associated equipment in the Newtongrange swimming pool. What information she was given about the equipment that she were wearing at Gallanach Bay and how it functioned and how it should be operated was quite inadequate. Gordon Rankin said only that he “ran through” the various pieces of equipment with Lynn before her dive and conceded that she had never received

instructions as to how she should jettison weights from the Ralph Teck weight harness that she was wearing.

Whilst it is self-evident that trainee divers have to begin at some point with a “try dive” if they wish to progress to the use of aqua lungs, it seems quite clear that such try dives ought in the interests of safety to be preceded by some form of “formal” training and instruction. Indeed, Bernard Walzak in his evidence suggested “I wouldn’t like somebody putting something on me and not telling me how it worked” (26). Mr Walzak considered that each piece of equipment ought to have been explained to the diver before undertaking an open-sea try dive and in particular the buoyancy control device and operation of the dry-suit. He agreed with the Procurator Fiscal that a dry suit is a “complicated piece of equipment and that if one was to be worn in the sea it ought to be tried first in a swimming pool” (29). It was Mr Walzak’s suggestion that before open-water diving was undertaken with an aqua-lung the equipment ought to be thoroughly explained to the trainee diver at least “twice”. I agree.

I consider that before a novice diver is permitted to undertake any form of diving using aqua-lung equipment it ought to be mandatory requirement that the diver be given training and instructions as regards the equipment itself, its function and how to operate it. I have made an appropriate recommendation under Section 6(1) (c).

Furthermore standing that Lynn Herriot’s difficulties arose as a consequence of “buoyancy control” problems which might have been avoided had she been properly trained I consider that before any diver undertakes training with an aqua lung that certification of him or her having received formal instruction in the use of this equipment should be a mandatory requirement. I have made recommendations in that regard under both Sections (6) (1) (c) and (e).

PRE-DIVE PRECAUTIONS

Risk Assessments, lack of appointment of dive leader with defined responsibilities, failure to appoint safety officer, failure to appoint first aid officer, buddying and checking of buddy’s equipment

There was no formal written risk assessment carried out in relation to this dive. The fact that the more experienced members of the group including Gordon Rankin were familiar with the location of the dive which was described by Mr Rankin as being a “shallow dive and no more than 5 metres” (162) did not mean that there should have been any less regard for safety awareness. In my opinion there ought invariably to be a risk assessment carried out before any dive is undertaken particularly in open water. A risk assessment might in this case have highlighted the absence of adequate surface and shore cover. I consider that the failure to carry out a risk assessment was a reasonable precaution whereby Lynn’s death might have been avoided. I have accordingly made an appropriate determination and recommendation under the provisions of Section 6(1) (c) of the Act.

Lack of appointment of a dive leader with defined responsibilities and failure to appoint a safety officer and first aid officer

It was apparent from the evidence that there was no formally appointed dive leader. Andrew Marjoribanks told the Inquiry that Gordon Rankin seemed to have been unofficially appointed simply on the basis that he was the best qualified member of the group (39 & 40). It was equally apparent that there was no formal appointment of a safety officer or a first aid officer in the group. I do not consider that the failures to appoint a dive leader or first aid officer directly contributed to Lynn Herriot’s drowning although I do consider that these matters fall into the category of “other facts” relevant to the circumstances of the death. I have made recommendations as regards appointment of a dive leader and first aid officer under Section 6(1) (e).

However as regards the failure to appoint a “safety officer”. It seems to me that this was a reasonable precaution whereby Lynn’s death might have been avoided. Had a safety officer been appointed whose duties included ensuring adequate surface cover and support, Lynn’s death might have been avoided. I have made a determination and appropriate recommendation under 6(1) (c) in respect of this matter.

Buddying

The arrangement whereby divers dive together never more than one arms length apart and are involved in checking not just their own equipment before the dive but that of their buddy, was spoken to at length by Bernard Walzak in his evidence. He advised

the inquiry that PADI operated buddy checks in which one buddy would check the other's equipment (3). He referred to it as BWRAF ie buoyancy, weights, release of air fins and final checks. Mr Walzak described this process as being useful for instructors to familiarise their pupils with their equipment whilst at the same time being able to check their own equipment. Although there was some conflict in the evidence as to how much air had been in Gordon Ramsay's cylinder at the commencement of the dive (Supra) it was perfectly clear that he ran out of air at the point that he was attempting to rescue Lynn Herriot. Had it been the case that my recommendation in relation to the minimum amount of air required before commencing a dive and my recommendation as regards accessibility of mouth pieces were in place at the time of this accident these matters would likely have been picked up by Lynn before the dive. I have felt it appropriate to deal specifically with "buddying" under Section 6(1) (e).

PRECAUTIONS ON THE SURFACE DURING DIVE

Notwithstanding the "emergency plan" operated by the adjacent Puffin Dive Centre and spoken to by Mike Morgan as having been immediately activated when Gordon Rankin's distressed situation became apparent, it was, in my opinion, a matter of concern that there was no formalised shore cover being operated by the expedition itself at the time. Richard Nixon who was not diving was on shore as was Andrew Marjoribanks. Stephen Green, according to Joyce Herriot, had departed the area in order to go for a dive by himself. Neither Richard Nixon or Andrew Marjoribanks were officially providing cover. Neither were fully kitted up for that purpose (supra). If there had been proper surface cover at the time of this accident as a reasonable precaution then in my opinion Lynn Herriot's death might have been avoided. I have made a finding and recommendations in respect of this matter under Section 6(1) (c).

RESCUE SKILLS

In his submissions to the Inquiry Mr Speirs accepted on behalf of Scotsac that prior to Lynn Herriot's death there was no requirement for instructors to regularly renew or refresh their rescue skills. He advised the Inquiry that Scotsac intended to remedy that deficiency and put in place a requirement that all their instructors be required annually to demonstrate competence in rescue skills to either their branch diving

officer, regional instructor or an examiner from Scotsac. This, in my opinion, is a deficiency worthy of a finding under the provisions of Section 6(1) (e) of the Act.

CONCLUSION

Lynn's death was a tragic accident. To her family, her partner and to those who have been bereaved by her death may I express sympathy not just from myself but from all who participated in the Inquiry.

The evidence at the Inquiry clearly showed that Lynn's death might have been avoided had she been given proper pre-dive training and had appropriate precautions been taken before and during the dive.

The Inquiry emphasised that potentially diving can be dangerous at even the most basic levels. It emphasised the need at all times for conscientious compliance with ensuring that divers are not exposed unnecessarily to risk. It is well known that diving is a popular sport and in that regard I hope that the findings of this Inquiry will help to ensure that a similar accident to that which caused Lynn to drown will not happen again.

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