SHERIFFDOM OF LOTHIAN AND BORDERS AT SELKIRK

DETERMINATION

by

JAMIE GILMOUR, Sheriff of Lothian and Borders at Selkirk

in Inquiry into the circumstances of the death of

DOUGLAS JOHN ARMSTRONG

under the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976

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APPEARANCES

For the Crown:	Mr A Fay, Procurator Fiscal Depute
For the Armstrong Family:	Miss L Houghton, Solicitor, Thompsons, Solicitors
For the Philiphaugh Trust:	Mr P Wade, Solicitor, Simpson & Marwick, Solicitors
For Sir Michael Strang Steel:	Miss J Geekie, Solicitor, Morisons, Solicitors

Selkirk, 28 August 2008

1. 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 ("the Act") that Douglas John Armstrong, aged 53 years, late of Gardeners Cottage, Philiphaugh, Selkirk, died on 18th October 2004 in the 'Road Field', Philiphaugh Estate, Selkirk.

2. In terms of Section 6(1)(b) of the Act that the causes of death were:-

   (a) an accident on the morning of 18th October 2004 at Harehead Hill, Philiphaugh Estate when the all terrain vehicle (ATV) he was driving rolled over; and

   (b) fractured pelvis, rupture of the bladder and internal bleeding caused by the ATV rolling on top of him.

3. In terms of Section 6(1)(c) of the Act, the accident resulting in the death might have been avoided if:-

   (a) an adequate risk assessment had been carried out to determine the experience and training of Douglas Armstrong in the use of an all terrain vehicle; and

   (b) time had been taken to familiarise Douglas Armstrong with the route he was to take to carry out his work task driving the specially adapted 450cc ATV loaded with grain.

4. In terms of Section 6(1)(c) of the Act, the death might have been avoided if Douglas Armstrong had been provided with a mobile telephone or instructed to carry his own mobile telephone for use in an emergency.

5. In terms of Section 6(1)(c) of the Act, the death might have been avoided if a contact system had been in place requiring Douglas Armstrong to check in with a work colleague or someone on behalf of the Philiphaugh Trust when he had completed his daily work task.

2. Legal Framework

Section 6(1) of the Act defines the purpose of an Inquiry which is in the following terms:-

"At the conclusion of the evidence and any submissions thereon……. the sheriff shall make a determination setting out the following circumstances of the death so far as they have been established to his satisfaction –

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

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

(c) the reasonable precautions, if any, whereby the death and any accident resulting in the death might have been avoided;

(d) the defects, if any, in any system of working which contributed to the death or any accident resulting in the death; and

(e) any other facts which are relevant to the circumstances of the death."

In terms of the Act the Procurator Fiscal has the responsibility in the public interest of investigating the circumstances of the death and placing before the court evidence bearing upon those circumstances. This procedure, accordingly, allows the circumstances surrounding the death to be brought under judicial and public scrutiny. It should be emphasised, however, that the Sheriff should make a determination in relation to each of the matters in Section 6(1) only so far as the circumstances have been established to his satisfaction. The court can only proceed on the basis of the evidence placed before it and cannot speculate about whether other circumstances existed which have not been raised in evidence. Having said that there was nothing to indicate that the investigations of the Procurator Fiscal had been anything other than thorough apart from the possibility of more evidence being adduced of the nature and extent of the personal effects found on Mr Armstrong when his body was discovered.

3. Factual Circumstances

The evidence led at the Inquiry concerned the personal circumstances of Mr Armstrong, his engagement to carry out game keeping tasks on the Philiphaugh Estate and the risk assessment carried out, the circumstances of the accident

resulting in his death and the accident investigation. There was also pathology evidence.

3.1 Personal circumstances

At the time of his death, Douglas Armstrong was 53 years old and single. He resided alone in a house on the Philiphaugh Estate. This accommodation at Gardeners Cottage was provided to Mr Armstrong by Sir Michael Strang Steel in April 2001 when Mr Armstrong asked if accommodation was available. There was no full time work for Mr Armstrong on the estate but he was engaged 2 days a week by Sir Michael Strang Steel as a gardener. Mr Armstrong was self employed and received payment not from the Philiphaugh Trust but from Sir Michael Strang Steel who farmed Philiphaugh Farm rented from the Philiphaugh Trust.

Mr Armstrong was essentially a private independent person and an educated man. He was a teacher and had previous game keeping experience from 1994 to 1998. He was also interested in bee-keeping. He spent much time working in the country.

3.2 Engagement of Douglas Armstrong and Risk Assessment

Ian Girdwood, aged 57, is the gamekeeper on the Philiphaugh Estate employed by the Philiphaugh Trust but reporting to Sir Michael Strang Steel as land manager. Mr Girdwood has 43 years experience in game keeping and has been on the Philiphaugh Estate for 31 years. Mr Girdwood was due to go to hospital on the morning of Monday 18th October 2004 for an operation on his shoulder and anticipated he would return to his home on the Philiphaugh Estate on the evening of 18th October. A previous scheduled attendance at the hospital for surgery had been postponed. It transpired that he was not released from hospital until the next day Tuesday 19th October to return to his house on the Philiphaugh Estate. During his period of convalescence, Mr Girdwood would require locum cover for the purpose of providing food and water for young pheasants enclosed in pens situated at 9 stations scattered over the Philiphaugh Estate. The question of cover was discussed by Mr Girdwood with Sir Michael Strang Steel and it was decided to ask Douglas Armstrong to carry out the tasks. Mr Girdwood was aware that Douglas Armstrong had done similar work on the Broadmeadows Estate adjacent to the Philiphaugh Estate. He was also aware that Mr Armstrong had driven a quad bike before, namely the 350cc version of what is known as an ATV. Mr Girdwood also reported that he had actually seen him operating a quad bike at Broadmeadows and also at Philiphaugh.

Steven Hague aged 25, was a gamekeeper employed by the Philiphaugh Trust. He had previously worked at the Philiphaugh Estate, Selkirk. In October 2004 he was living away from Philiphaugh some 16 miles away attending to the grouse moor. He had previous experience of feeding and watering the pheasants for about 5 weeks over a period of 2 years. He had carried out the task when Ian Girdwood was on holiday or extra help was needed with feeding. Stephen Hague explained that it took a couple of hours to go round the estate and feed the pheasants in the various pens. There was no check-in process but he carried his own personal mobile phone. He had experience riding a quad bike and had undertaken a year's course including training in operating a quad bike. His evidence was that using a quad bike was fairly straightforward.

As far as risk assessment was concerned, the decision to ask Douglas Armstrong to provide cover for Ian Girdwood was made on the basis that Mr Armstrong had done similar work at Broadmeadows driving a quad bike with panniers fitted to it. He was also very reliable and conscientious and would do the job properly. He was on the spot residing on the estate. If Stephen Hague had been asked to cover for Ian Girdwood then he would have required to have come down daily from the St Mary's Loch area some 16 miles away driving up and down a twisty road in possible difficult driving conditions.

To prepare Douglas Armstrong for the work he required to do, Ian Girdwood on one occasion took him round the route to the several pheasant pens. They travelled by quad bike. Douglas Armstrong drove a 350cc ATV. He was given no training in respect of this quad bike or the 450cc quad bike he drove on the day of the accident. Douglas Armstrong was not asked what training, if any, he had driving quad bikes. He had not previously driven the 450cc ATV at the Philiphaugh Estate. This ATV was fitted with a wooden box on the rear to carry grain to feed the pheasants. A gun holster had also been added. There was evidence from Mr Girdwood that the 450cc machine was more stable than the 350cc ATV. It had a wider track. At one stage Mr Armstrong requested a route map but then changed his mind.

No specific check-in arrangement was made for Mr Armstrong. Douglas Armstrong was, however, due to call in to see Ian Girdwood on Tuesday night to find out how he was after his operation and let Ian Girdwood know if he had any problems with the pheasant feeding. The supply of a mobile phone was not considered. Douglas Armstrong was not asked if he possessed a mobile phone but in evidence Mr Girdwood said that he had never seen Mr Armstrong use one. Helmets are supplied for use when driving an ATV. One was available for Mr Armstrong to use.

3.3 Circumstances of Accident

At about 7.30 am on Monday 18th October 2004 Andrew Kirkpatrick, aged 49, then engaged as a shepherd on the Philiphaugh Estate saw Douglas Armstrong feeding pheasants. He spoke to him. Mr Kirkpatrick's evidence was that Douglas Armstrong was in good spirits and he was dressed in a padded shirt to keep him warm. The weather was dry. His evidence was that he had never seen Douglas Armstrong before on a quad bike. Lady Strang Steel in her evidence indicated that she left out coffee for Mr Armstrong on Monday morning 18th October. He usually drank it mid morning but it was not consumed. Sir Michael Strang Steel stated he was away from Philiphaugh on business on 18th, 19th and 20th October. On Wednesday morning Ian Girdwood had realised something was wrong since Mr Armstrong had not passed his house. Ian Girdwood checked the workshop. The quad bike to be used by Douglas Armstrong was not there. Mr Girdwood's children checked the garage for the quad bike. Mr Armstrong's home was also checked. On Wednesday 20th October 2004 at about 12 noon, Andrew Kirkpatrick received a call from Ian Girdwood to assist in the search for Douglas Armstrong. Cameron Gray, then aged 16 who was friendly with Mr Girdwood's son and who occasionally helped out at Philiphaugh during his school holidays, happened to be at Philiphaugh that morning. He went out with Ian Girdwood to search for Mr Armstrong. They went up to Harehead Hill on a quad bike. On the hillside they saw the quad bike upright on its four wheels just below a steeper part of the hillside. There were divots in the grass. There were on the grassy slope 2 spills of grain which was feed for the pheasants. There was no more than 60 kilograms of grain on the quad bike. The evidence of Cameron Gray and Ian Girdwood was that the quad bike had rolled sideways. Ian Girdwood remained with the quad bike which was on a route taken at other times but was not on the correct route to the next pheasant feeding station. Ian Girdwood stated that when he saw the grain and the quad bike he knew Mr Armstrong had rolled it. The tank of the quad bike which had been filled with fuel on Sunday 17th October was now empty. Ian Girdwood calculated that at the fourth feeding station (there are 9 altogether) only a third of the main tank of fuel should have been used. His evidence was that the engine of the quad bike must have continued running until it ran out of fuel. Further, Mr Armstrong still had in his possession at the time of the accident rabbit remains destined for the midden which is situated between the fourth and fifth feeding stations.

Ian Girdwood sent Cameron Gray downhill towards Harehead Farm. Mr Girdwood remained with the ATV. Cameron Gray walked downhill through an open gate which was normally kept closed secured with a chain and catch. After going through the gate, Cameron Gray saw Mr Armstrong's body. The body was face down with clenched fists on either side of the head. Cameron Gray shouted for Ian Girdwood who came downhill some 200 yards from the quad bike to where Mr Armstrong's body was located. He checked for pulse and then dialled 999 for assistance on his mobile phone. He had no problem obtaining mobile phone reception.

Police Constable Clayton Lackenby based at Selkirk received a call at approximately 1.40 pm and arrived at the scene at approximately 2.05 pm. It took approximately 10 minutes to get to the location from Harehead Farm. A doctor arrived at about 2.20 pm. Access to the field where Mr Armstrong was found is by a track from the farmhouse itself. The field is known as the 'Road Field' on the Philiphaugh Estate. Police Constable Lackenby reckoned it was 1 mile to the field from the farm buildings. The ambulance which was called could go no further than the farm buildings. The problem for ambulance staff was getting to the hillside. PC Lackenby indicated that if Mr Armstrong had still been alive a farm vehicle would have been required to take him down to the farm buildings. The witness also indicated that it would be approximately 15 miles to Borders General Hospital from Harehead Farm.

3.4 Medical Evidence

A post mortem examination was carried out on 22nd October 2004 by Professor Anthony Busuttil, Forensic Medicine Section, The University of Edinburgh Medical School, Teviot Place, Edinburgh. His opinion as to cause of death was (a) a fractured pelvis and (b) a farming incident. His Report confirmed that Mr Armstrong had suffered a rupture of his bladder and bleeding into his pelvic cavity as well as damage to the sacroiliac joints and the muscles overlying them. The view was expressed that the injuries had been the result of a fall when using a quad bike in a field.

When giving oral evidence Anthony Busuttil, now retired, confirmed grazes to Mr Armstrong's forehead, skull, nose, face and thumb referred to in page 3 of his post mortem examination Report. He reckoned that these abrasions had been caused by friction with the ground. Apart from internal bleeding and damage to the bladder there had also been noted bruising to the ribs. Professor Busuttil's view was the pelvic injury had been caused either by a heavy blow or something falling on top of him i.e. a crush injury although there was nothing to tell specifically what had caused the injury. The important issue as far as the witness was concerned was the internal bleeding which occurred. Mr Armstrong could lose up to 1½ litres of blood. The damage to nerves around the pelvis would cause not only pain but shock. The bladder damage and the damage to the soft tissue would also increase the shock. He confirmed that a pelvic fracture is a very serious injury which can cause collapse, pulse rate up, blood pressure down and subsequent coma. His view, however, was that the mortality rate is low if there is early resuscitation. His view was that the injury to Mr Armstrong could have been treated and not necessarily fatal although death can be prompt if there is serious blood loss. It could take hours before actual death occurs. His view was that the window can be hours but a person can die from shock and the main cause of shock is blood loss. He emphasised that one complicates the other. When he did

the post mortem examination there was no sign of hypothermia which can take a long time to develop if the person is wearing warm clothing and is otherwise healthy. He expressed the view that some people can die immediately after such an incident but this man was very determined illustrated by the fact that he had walked approximately 200 yards. He expressed the view that it was unlikely that the pelvic fracture was caused just by falling from the bike and that a high energy blow was necessary. He also expressed the view that by making his way downhill Mr Armstrong was in fact doing himself a disservice since he would lose more blood. There would be increased exertion and that would affect blood pressure. In turn there would be an increased level of shock. The shock can affect the thinking of an individual and can lead to loss of dexterity. Professor Busuttil indicated that it would have been better if Mr Armstrong had not moved. It would have increased his chance of survival. He was of the view that Mr Armstrong could have used a mobile phone particularly since he had the stamina to move the distance he walked. It was quite clear that Mr Armstrong would have had the dexterity to use a mobile phone in which event his chances of survival would have been much better. The chances of survival would have been quite good if help had reached him within 15 minutes. Mr Armstrong may have fainted and then come to before walking downhill. Disorientation could occur straightaway resulting in him not thinking straight but he drew attention to the fact that Mr Armstrong headed in the right direction and was able to open the gate secured by a catch. The witness did indicate, in the knowledge that there was evidence that the quad bike was upright with the engine running, that the shock suffered by Mr Armstrong may have made him act irrationally.

3.5 Accident Investigation

Lawrence Murray is an employee of the Health & Safety Executive and investigates accidents subsequently making reports. He was involved full time in agricultural matters from 1999 to 2007. The witness had also been trained in the use of quad bikes. He received a call from Galashiels Police and on Thursday 21st October 2004 he travelled to the scene of the accident. He took photographs of the location and surrounding area. He also took photographs of the ATV used by Mr Armstrong, the grain spills and the hillside showing the steepness of the ground where the quad bike had rolled over. The witness calculated that the incline was about 20 degrees. Mr Murray also checked to see how Mr Armstrong had travelled from the scene of the accident to where his body was found. Mr Murray checked the quad bike which was nearly new and had no defects. The tyre pressures were correct. The bike had a grain box fitted to the rear and a gun holster added to it. There was a plate stating the maximum weight to be carried at 60 kilograms but gave evidence that he was told that up to 90 kilograms of weight were carried on the bike.

Mr Murray's view was that the issues were the steepness of the slope where the quad bike rolled over and the question whether Mr Armstrong was used to a quad bike. He emphasised that the legislation stated that training was essential. In 1996 for example there had been 23 fatal accidents in the United Kingdom where individuals were using quad bikes. His view was that there should be adequate training for any person using a quad bike the best practice being training by a competent person or through the Scottish Agricultural College. He also indicated that refresher training was also beneficial since bad habits can develop. This is recommended by the Health and Safety Executive. Training on uphill areas is also very useful. Mr Murray's opinion that driving another quad bike up the hill beforehand was not adequate training. The quad bike would be difficult to control and handle on a slope. Mr Armstrong had only gone round the route once with Mr Girdwood. Ideally Mr Armstrong could have received training when Mr Girdwood knew he was going into hospital. Mr Murray had learned that Mr Girdwood was originally going into hospital earlier but his visit was postponed. The view was expressed that Mr Armstrong could have been followed round the route driving the quad bike he was going to use.

Mr Murray went on to indicate that driving a quad bike was surrounded by risks and that a risk assessment was required including, if necessary, summoning help and contacting the emergency services. A buddy system was also relevant. His view was that it is foreseeable that lone workers are at risk and a system should be in place. Mr Murray drew attention to the publication issued by the Health and Safety Executive 'Working alone in Safety – controlling the risks of solitary work'. This publication he indicated was aimed at employers. He drew attention to page 9 of the publication which indicated that 'lone workers should be capable of responding correctly to emergencies. Risk assessment should identify foreseeable events. Emergency procedures should be established and employees trained in them'. The publication also identified procedures that need to be put in place to monitor lone workers including supervision, regular contact, automatic warning devices and other devices designed to raise the alarm in the event of an emergency. Mr Murray indicated that a satellite telephone system had been in place since 2004. A mobile telephone would have helped Mr Armstrong in his situation since he had managed to walk 200 yards from where the quad bike was found. Further, Mr Armstrong had managed to open the gate secured by an "S" chain. Mr Murray concluded that physical strength would have been required to push the catch up to release the gate. The witness reported that he was told that a mobile phone had been found in Mr Armstrong's cottage but understood he had never used it. Mr Murray stated that what was important is that he had not been issued with a phone by the Philiphaugh Trust. The information Mr Murray received was that Mr Armstrong did not have a mobile phone on his person when found.

As far as reception was concerned, Mr Murray reported that there were three telephone masts close by and that there were adequate facilities to receive and make telephone calls. He emphasised that Mr Girdwood had used his mobile phone to contact the emergency services. Mr Murray was of the view that action should be taken if employees refused to take out mobile phones with them. He obtained a statement from Stephen Hague 51 days after the incident and contacted the Philiphaugh Trust since no action had been taken to issue mobile phones to employees. As a consequence an Improvement Notice was served on the Philiphaugh Trust since Mr Murray was of the opinion, as one of Her Majesty's inspectors of health and safety, that there was still no adequate system in place to ensure regular contact with employees who are lone workers.

The Philiphaugh Trust did eventually co-operate with the Health and Safety Executive. Although Stephen Hague had his own phone he was provided with a Bluetooth device so that he could take or receive a mobile phone call whilst riding his ATV. The Trust also complied in that Stephen Hague was requested to contact Ian Girdwood nightly. Mr Murray confirmed that an employee under s.3. of the Health and Safety at Work Act had a duty to comply with a system put in place. Importantly, the employer has to be seen to discharge his duty by having a system in place. As far as Mr Armstrong was concerned, the witness was not aware if he had ever had any training in the use of an ATV. Mr Murray did find out that Mr Armstrong was getting nightly phone calls from his girlfriend. Mr Murray was not aware of any formal contact arrangement between Mr Armstrong and Mr Girdwood apart from the fact that Mr Armstrong would pop in to see him.

Mr Murray concluded his evidence by indicating that concrete steps might have been taken which might have saved Mr Armstrong's life. These steps would have taken the form of (a) a risk assessment; (b) training in the use of the quad bike and (c) some form of emergency contact.

4. Scope of Determination

In his submissions Mr Fay for the Crown submitted that not only should a formal determination be made in terms of s.6.(1)(a) and 6(1)(b) of the Act but also invited the court to make findings in terms of subsections (c) and (d).

Miss Houghton for the Armstrong family also submitted that a formal determination in terms of s.6(1)(a), (b), (c) and (d) be made.

Mr Wade, Solicitor for the Trustees of the Philiphaugh Trust, proposed that findings be made in terms of s.6(1)(a) and 6(1)(b) but did suggest more detailed and specific guidance under subsection 6(1)(e).

Miss Geekie, Solicitor for Sir Michael Strang Steel, also invited the Court to make a determination under subsections (a) and (b) but invited the Court not to make any determination under subsections (c), (d) and (e).

Mr Fay, in relation to s. 6(1)(a) and 6(1)(b) of the Act submitted that there were no eye witnesses to the accident which caused Mr Armstrong's death and the time of his death could not be accurately determined. Mr Armstrong had been seen at the first pheasant feeding station around 7.30 am on Monday 18th October 2004. Andrew Kirkpatrick was the last person to see Mr Armstrong alive that morning and his body was discovered at approximately 1.30 pm on Wednesday 20th October 2004. The body was located near to the fourth pheasant feeding station on the Philiphaugh Estates in the 'Road Field'. The ATV that Mr Armstrong was driving was standing on Harehead Hill which was reached through a gate to 'Road Field'. There were 2 spills of grain on the hillside. Mr Girdwood, in his evidence, had indicated that he had never had grain spill from the feed box on the rear of the quad bike and he believed that the ATV had rolled over. This was also the view of Police Constable Lackenby and Lawrence Murray, the HSE investigator. The rolling over of the ATV is consistent with the injuries sustained by Mr Armstrong and no other suggestions had been put forward. Mr Fay went on to indicate that from the location of the grain spills it can be said that at the time of the accident Mr Armstrong was ascending a steep incline on his ATV, a slope estimated by Lawrence Murray to have been some 15 to 20 degrees. This slope does not form part of the route used by ATV's on the estate during the Autumn pheasant feeding and Mr Armstrong had therefore deviated from the route he was expected to take. There was evidence suggesting that after the ATV rolled and injured Mr Armstrong he made his way some 200 yards away from the accident site heading in the direction of the nearest buildings at Harehead Farm, making his way through the gate from Harehead Hill into the Road Field where he collapsed as a result of his injuries. Mr Fay submitted that since Mr Armstrong did not make use of the ATV which was undamaged and mechanically sound, it suggested he was suffering from shock or his injuries would not allow the use of the machine.

Mr Fay went on to indicate that there had been evidence that the ATV had been filled with fuel prior to Mr Armstrong taking it out and that to reach the position of the accident the ATV would ordinarily be expected to burn approximately one third of the fuel in the tank. When the ATV was recovered the main fuel tank was entirely empty suggesting that the engine had run itself dry at idle. This fact was indicative of the vehicle sitting in idle for some time and suggesting strongly that the accident occurred on Monday 18th October. This suggestion was supported by the fact that Mr Armstrong was still in possession of a bag of rabbit remains that he had been known to be taking to the midden which was the next stop after the fourth feeding station on the Monday morning. The evidence is that the entire pheasant feeding task takes about 2½ to 3 hours to complete. Given that Mr

Armstrong was seen between 7.30 am and 8.00 am by Mr Kirkpatrick and had completed less than half of his route, it would seem highly likely that the accident occurred during the morning.

Mr Fay concluded that Mr Armstrong died at an unascertained time on Monday 18th October 2004 in the 'Road Field', Philiphaugh Estate, Selkirk. His death was as a direct consequence of an accident that occurred that morning on the adjacent Harehead Hill some 200 yards away. The ATV he was riding up the slope there tipped over and caused him to sustain crush injuries, in particular to his pelvis, that were to prove fatal. The Court was invited to make findings in respect of s. 6(1)(a) and 6(1)(b) in these terms.

Miss Houghton for the Armstrong family substantially concurred with what was said by Mr Fay for the Crown but did indicated significantly in her submission that there had been evidence from Lady Strang Steel that Mr Armstrong did not drink the coffee she had left out for him on Monday 18th October 2004 which he usually drank mid morning.

Mr Wade, on behalf of the Trustees of the Philiphaugh Estate although in his submissions he went into some detail on the possible cause of the accident, did not disassociate himself from the observations made by Mr Fay or Miss Houghton on the circumstances surrounding the accident.

Miss Geekie on behalf of Sir Michael Strang Steel did not depart from what had been said about the circumstances surrounding the accident and death of Mr Armstrong but she did point out that the exact time of the death could not be determined.

Referring to s.6(1)(c) of the 1978 Act and the issue of reasonable precautions whereby the accident might have been avoided, Mr Fay, for the Crown, drew attention to the fact that Mr Armstrong who had been engaged as a gardener a couple of days a week working for Sir Michael Strang Steel, had been engaged to work as a gamekeeper to ride an ATV around a route on a shooting estate and feed pheasants on behalf of the Philiphaugh Trust.

The ATV Mr Armstrong was to use was fitted with a box to carry the feed for the pheasants. This box would change the balance and handling characteristics of the machine. Mr Fay drew attention to the fact that Ian Girdwood frankly admitted that the vehicle would be overloaded with feed at the beginning of its trip carrying more than the plated weight maximum. As a consequence the steering would be light at the outset but would improve over the course of the route as feed was dispensed at the various stations and the box became lighter. Further, the ATV driven by Mr Armstrong was larger and more powerful than the machine it was understood Mr Armstrong had previously driven. There was evidence that Mr

Armstrong had carried out pheasant feeding from a smaller ATV on the adjacent Broadmeadows Estate on even steeper terrain, the feed being carried in panniers rather than on the back of the ATV in a box. It was submitted that the evidence suggested that Mr Armstrong was an experienced user of ATV's but not at Philiphaugh. Neither the farm nor the Trust provided any formal ATV training to him and there was no evidence to suggest he had been formally trained elsewhere. Mr Fay submitted that body positioning and balance on an ATV were of crucial importance particularly on rough terrain and especially on slopes. The unusual configuration of this particular ATV and the increase in power over the equipment previously used by Mr Armstrong further increased the risk of mishap.

Attention was drawn to the fact that Mr Armstrong had been round the route he was to follow to feed the pheasants on just one occasion following Mr Girdwood and driving a smaller ATV. He did not have a route map to follow. The accident occurred a short distance away from the route he ought to have been taking on a different ATV track not ordinarily used in October. There was evidence to suggest that Mr Armstrong knew the estate well having worked as a beater there on some of the seven or eight annual shoots for each of the three years he had lived on the estate but he was not used to travelling around the estate on a quad bike. There was evidence, however, that Mr Girdwood would have provided Mr Armstrong with further guidance had he asked for it. Indeed, Mr Armstrong did at one stage ask for a route map but subsequently changed his mind and decided he did not require one.

It was mentioned that Mr Murray was of the view that Mr Armstrong should have been given time to familiarise himself with the route and the equipment perhaps with Mr Girdwood following him on a smaller ATV prior to undertaking the work alone. There was plenty of advanced warning that Mr Girdwood would be unavailable and the Court had heard of the careful consideration given by Sir Michael Strang Steel and Mr Girdwood as to who was best suited to carry out the feeding of the pheasants as Mr Girdwood recovered from his operation. Mr Fay submitted that it did not seem unreasonable to suggest that had equal consideration been given to ensuring, rather than presuming, that the person so chosen was in fact sufficiently experienced to safely undertake the task at hand and use the equipment provided the accident might have been avoided. It was submitted that it was not an answer to assert that the employee could or should have asked for further assistance if required. Being sure of an employee's capabilities and aptitude for a potentially dangerous task must surely be an essential precaution for an employer to take and not something an employee must opt into.

It had been suggested that formal ATV training could have been provided by the employer. The Court was invited to consider the suggestion made by Mr Murray that Mr Armstrong should have been taken round the route riding the quad bike

he was going to drive. Mr Fay drew attention to the fact that the Court had heard evidence that both the farm and the Trust have subsequently taken steps to ensure formal refresher training is available to their staff. It was submitted by Mr Fay that this was appropriate and sensible recognising the import of acting to minimise risk of accidents. It was also submitted that the Court might find that, had such steps been taken before the accident, it might not have happened in the first place.

On the matter of reasonable precautions whereby the death of Mr Armstrong might have been avoided, Mr Fay drew attention to the fact that the deceased lived alone and was to follow a route involving areas of hillside not regularly travelled by anybody but the gamekeeper feeding pheasants. Mr Murray had told the court that it was reasonably foreseeable that, should Mr Armstrong have an accident, he would not be discovered for some time. It was precisely this sort of eventuality that the Health and Safety Executive guidance on lone workers is designed to avoid.

Reference was also made to a 'check in' system, known as a buddy system and the fact that it was not popular with workers. In addition, the suggestion was made that a failure to check in could lead to false alarms causing needless inconvenience and potentially a burden on the emergency services and/or a risk to the safety of those who go out looking for the person who has not checked in.

Mr Fay went on to submit that Mr Armstrong was not carrying any means of personal communication with him at the time of the accident. The Trust had assisted with the provision of mobile phones or in paying bills for work related calls made from personal mobile telephones by employees and was doing so in the case of Mr Girdwood prior to Mr Armstrong's accident. It was also not disputed that, at the scene of the accident, there was mobile telephone reception. The court had also heard about other means of emergency communications such as cybertrack telephone and GPS tracking devices. Mr Armstrong, it was submitted, was denied the opportunity to get assistance as soon as possible.

With reference to s.6(1)(c), Miss Houghton for the Armstrong family mirrored much of what was said by Mr Fay for the Crown. She emphasised, however, that Mr Armstrong had never ridden Mr Girdwood's 450cc quad bike with a loaded feed box and had only been shown the feeding route once. When Mr Armstrong followed Ian Girdwood around the route, the 350cc ATV he was riding had no load attached. There had been evidence that the bike was overloaded at the outset.

Miss Houghton also emphasised the evidence of Lawrence Murray that an adequate risk assessment should have been carried out to ascertain what training the employee had received in respect of riding a quad bike. Mr

Armstrong had not been asked what training or experience he had on ATV's. They assumed he had sufficient experience. Mr Murray had indicated that the best practice was to arrange for training by a competent person or through the Agricultural College. There was evidence that Stephen Hague had received training on riding a quad bike. The Court was invited to conclude that training was a reasonable precaution which should have been taken before to avoid the accident.

Attention was also drawn to the lack of time given to Mr Armstrong to familiarise himself with the route and the equipment. It was submitted that it was a reasonable precaution which could have been taken to avoid the accident, Mr Armstrong using the actual bike he was going to drive when familiarising himself with the feeding route. He would not have deviated on to a steeper track up the hill. It was also added that loading less grain on to the quad bike would have improved the handling particularly for someone not used to driving this particular vehicle. This was also a reasonable precaution which could have been taken to avoid the accident.

As far as the death of Mr Armstrong was concerned, Miss Houghton drew attention to a system being set up to allow contact with lone workers. HSE had issued a leaflet for the information of employers. She emphasised that Lawrence Murray had indicated that Mr Armstrong's employer should have considered in the risk assessment the fact that he lived alone and confirmed whether or not he carried any personal communication with him before sending him out to work alone. She drew attention to precautions undertaken in other industries. Mr Murray had described that in forestry the use of a control system where a beacon alerts colleagues to a problem. Reference was also made to an electronic diary system and anyone going out alone had to take a mobile phone issued by their employer with them. Where there was no mobile phone reception, employees were given a cyber track phone which has a device when pressed brings help and specified the location of the operator. Miss Houghton drew attention to the fact that Mr Murray had advised that when an employer is doing a risk assessment they should consider what would happen in an emergency and whether the person would be able to call emergency services or summon help. It was suggested a reasonable and cheap precaution would be a buddy system or provision of a mobile phone.

It was submitted that Mr Murray was of the view that it was the employer's responsibility to ensure that their employees have adequate means of communication when working alone and that employers should enforce the carrying of mobile phones if this is required for health and safety reasons. Attention was drawn to the fact that Professor Busuttil expressed the view that Mr Armstrong immediately after the accident would have had the dexterity to operate a mobile phone. Further, Mr Girdwood had used his mobile phone to call the

emergency services when Mr Armstrong's body was found. The Court was invited to make a finding that providing a mobile to Mr Armstrong was a reasonable precaution whereby the death might have been avoided.

Mr Wade for the Trustees of the Philiphaugh Estate, submitted that as part of the risk assessment, Sir Michael Strang Steel and Mr Girdwood had considered engaging Stephen Hague to undertake the pheasant feed, this proposal was rejected on the basis that it represented a risk this being that Stephen Hague would require to travel a significant distance in the early hours of the morning possibly on icy untreated roads. Mr Armstrong on the other hand was enthusiastic about such employment, he had relevant recent direct experience of pheasant feeding at Broadmeadows and he was able to drive a quad bike. He was also well known to the Estate. He had lived in a house within the Estate for a number of years. He was employed as a part time gardener and had also been employed casually on many occasions as a beater.

Ian Girdwood took the precaution of taking Mr Armstrong round the route observing him in the operation of the quad bike reassuring himself that Mr Armstrong was capable of riding a quad bike. He also showed Mr Armstrong the designated route to the feeding stations. The fact that Mr Armstrong at first requested a map and then cancelled the request illustrated firstly that he was not slow to ask for help and secondly he must have been satisfied that he was familiar with the route after it had been shown to him.

There was evidence that Mr Armstrong owned a mobile phone but seldom, if ever, used it. As far as the route of the pheasant feed was concerned, mobile phone reception was "patchy". Mr Wade accepted that there was certainly mobile phone reception at least on some networks, at the locus of the accident. However, the proportion of the pheasant feed route on which there was mobile phone reception was not established.

It was submitted that there was general evidence that Mr Armstrong was experienced in the use of quad bikes. He had driven a quad bike when undertaking similar activities at another nearby estate. His background was such that it was likely he would have used quad bikes before. Mr Girdwood, who was experienced himself, had the opportunity of assessing Mr Armstrong's competence when he took him round the route. Mr Wade emphasised that there was no evidence about the extent of any training that Mr Armstrong had received in the use of the quad bike. From all that is known, Mr Armstrong might have been fully trained. He was certainly experienced in the use of quad bikes.

As far as the box loaded with grain on the back of the quad bike was concerned, it was submitted that the weight of the feed might exceed the maximum recommended limit for the quad bike at the outset but it was likely by the time Mr

Armstrong had reached the locus of the accident he would have distributed sufficient feed to have reduced the load to within the stated capacity of the quad bike. In any event there was no evidence by those investigating the circumstances of the accident as to the weight of the feed which was being carried at the time of the accident, some of which remained in the box with the rest being on the ground. It was submitted there was no evidence to establish that the accident was caused by or contributed to by any form of overloading.

Further, it was submitted by Mr Wade that there was no evidence to established that the accident was caused either by a lack of experience or training. The observations of Mr Murray of the HSE, unsupported by evidence assumed that Mr Armstrong was inexperienced or untrained. It was equally consistent with evidence that the accident might have occurred as the result of a moment's inattention in the same way that a moment's inattention on the part of any driver of a motor vehicle has the potential to bring about tragic results.

Mr Wade went on to refer to the search carried out on Wednesday 20th October 2004 after the alarm was raised by Mr Girdwood. He indicated the reason the alarm was not raised earlier was due to an unhappy series of circumstances which included (a) Mr Girdwood not being released from hospital on the Monday but being delayed overnight into Tuesday 19th October; (b) Sir Michael Strang Steel being away on business for several days; (c) Lady Strang Steel being focused in relation to issues associated with the illness of her mother and the funeral of a friend's son and (d) the deceased living on his own. As far as Mr Armstrong using a mobile phone is concerned, it was not possible to say whether the deceased, if he possessed a mobile phone would have used it and secondly had he used the mobile phone whether medical assistance would have arrived in time to save his life. Mr Wade concluded that the evidence suggested it was unlikely that the deceased would have used a mobile phone (in the sense of taking one with him if it had been issued to him). He apparently possessed a mobile phone but was never seen to use it. Reference was made to the evidence of Andrew Kirkpatrick employed as a shepherd by Sir Michael Strang Steel. Notwithstanding his knowledge of the circumstances of this incident he, when issued with a mobile phone, effectively refused to use it.

Miss Geekie, for Sir Michael Strang Steel submitted that in respect of s.6(1)(c) and the reasonable precautions to prevent the accident repeated what Mr Wade had said about there being no evidence to the effect that Mr Armstrong lacked appropriate training. Mr Armstrong was shown to have experience working as a gamekeeper on two different estates from 1994 to 1998. He also taught agricultural courses and had done so over a period of 20 years. It was not disputed that he was experienced in using a similar bike to that involved in the accident and there was no conclusive evidence that particular training is required

when using a 450cc bike as opposed to a 350cc bike. Mr Girdwood in fact had stated that the 450cc bike was more stable and had a broader wheel base.

Again, repeating points made by Mr Wade, there was no causal connection between the accident and the overloading of the vehicle. In any event it was impossible to draw any inference that the bike had toppled backwards. Had the bike been overloaded, the plated warning on the machine was sufficient precaution to discharge any duty on the employer to users of the bike.

On the issue of lack of proper information about the route and proper instruction in carrying out the job, Miss Geekie emphasised that Sir Michael Strang Steel as land manager of the Philiphaugh Trust delegated the day to day game keeping function to Ian Girdwood a game keeper with over 30 years experience on the estate. He instructed Mr Girdwood to prepare Mr Armstrong to provide cover for him. The principal part of such preparation was showing Mr Armstrong the route to be taken to the various feeding stations. Mr Armstrong had been sufficiently confident of the route to indicate that he did not require a map. The scale of a plan or map, had Mr Armstrong obtained one, would not have prevented Mr Armstrong deviating from the route since the departure from the more established track was only a minor one. Mr Armstrong in fact had taken a route equally safe for accessing the pheasants at another time of the year.

As far as precautions to prevent the death as a result of the accident are concerned, again Miss Geekie mirrored observations made by Mr Wade that there was no evidence to establish that mobile phone reception was uniform across the estate but it was not in dispute that there was reception allowing Mr Girdwood and Mr Murray to use mobile phones at the point where Mr Armstrong's accident occurred. Miss Geekie submitted that evidence produced from all the witnesses who knew Mr Armstrong and worked with him raised a strong inference that even if the Trust had made a mobile phone available to him, he would have been extremely unlikely to use it. No one could recall seeing him use a mobile phone. A mobile phone was found in his house following his death and he obviously did not think it necessary to take it with him when he went out onto the estate. Any argument that a second mobile phone would have made him more likely to use this form of communication is extremely difficult to accept. Andrew Kirkpatrick gave evidence about the resistance of individuals such as Mr Armstrong to the use of such technology. Mr Kirkpatrick was issued with a mobile phone following his accident but by the time he left his employment at Philiphaugh he returned the phone unused and still in its original box. It was submitted that Mr Armstrong would have adopted this similar attitude. The evidence of Mr Murray as to the duty on an employer to compel use of mobile phones to the point that an employee could be sacked for refusal to use one is hard to accept. This was even more particularly the case where Mr Armstrong was a self employed person who was contracted to do work for the Trust.

As far as the provision of a buddy system to check up on lone workers was concerned, Miss Geekie pointed out that Sir Michael Strang Steel's two employees engaged in forestry work worked in pairs in any operation involving the use of a chainsaw, an undertaking which was clearly more high risk than that being undertaken by Mr Armstrong at the time of his accident. Miss Geekie reported that the Philiphaugh Trust was a small operation with only two game keepers, one was resident on the estate while the other required to work on a grouse moor some 16 miles away. The only means of one game keeper checking up on another would be by use of a mobile phone and this would be frustrated by the attitudes of employees referred to previously.

On the issue of nightly checks on lone workers and the observation of Mr Murray that there should be a system for contacting a designated individual in order to check in with him was not a popular one illustrated by what was said by Stephen Hague. Miss Geekie illustrated the difficulty of such a system which could result in a search being instigated for someone who failed to check in. This could put more employees at risk if it was dark or the weather conditions were adverse. In the case of Mr Armstrong, he led an extremely full and active life. There were probably few evenings he could be found at home. He was also involved in bee keeping and gardening on the estate together with teaching at night classes. It was understood that his girlfriend had tried to contact him in the period during which he was missing. Because of his lifestyle there was no reason for her to experience alarm when she could not contact him and there was nothing to suggest that the Trust should bear any more pressing concern for one of its contractors.

Referring to s.6(1)(d) of the Act and defects in the system of working which contributed to the accident or death of Mr Armstrong, Mr Fay for the Crown was of the view that there was considerable overlap between subsections 6(1)(c) and 6(1)(d). The elements identified by him relative to precautions could be recast as a defective working system that contributed to the death of Douglas Armstrong. In short, Mr Fay maintained it was precisely the failures to take precautions that were the defects in the working system. He submitted that how the grain was carried on the ATV may well have contributed to the accident. The feed for the pheasants was transported in a non-standard home made box on the back of the ATV. Mr Armstrong was known to have driven an ATV with panniers and given the evidence suggesting the ATV rolled over it was likely that the balance of this particular ATV was affected and was, in part, to blame for the accident. It was submitted that the lack of experience on this particular machine, loaded in that particular way, on that particular route clearly contributed to the accident. Allowing Mr Armstrong to go out with insufficient experience of the machine and of the route could be seen as a defect in the working system that contributed to the accident.

As far as defects contributing to the death are concerned, Mr Fay submitted that the system of work the Philiphaugh Trust had in place at the time allowed Mr Armstrong to lie in a field undiscovered from Monday until the Wednesday. As earlier mentioned by Mr Fay the defects were the failure to provide any means of communication for the lone worker and a failure to put in place any mechanism to monitor Mr Armstrong's safe return. It was recognised that earlier knowledge of the accident may not have been enough to save Mr Armstrong's life given the nature of his injuries but he had been denied the opportunity to get any form of medical intervention or advice.

Miss Houghton for the Armstrong family also submitted there was some overlap between s.6(1)(c) and s.6(1)(d) and also mirrored much of what was submitted by the Crown. She went so far as to ask the Court to make a finding that the system of overloading a make shift box on the back of the ATV with feed and sending Mr Armstrong out alone for the first time he had ridden the quad bike contributed to the accident.

As far as defects contributing to the death are concerned, Miss Houghton submitted that the failure to have a proper recognised check-in system for Mr Armstrong, as a lone worker, was a defect in the working system particularly since it was foreseeable that Ian Girdwood would not be available. Further, the system was defective in that although Sir Michael Strang-Steel recognised the need for a means of communication and believed mobile phones to be better than radios, no check was made whether Mr Armstrong had a mobile phone and employees were not issued with mobile phones before the accident. It was submitted that the lack of an adequate system to monitor the safe return of lone workers and provide them with a means of contact, on the balance of probabilities, contributed to Mr Armstrong's death.

With reference to s. 6(1)(e) of the Act, Mr Wade submitted that the Court should not be making any determinations in respect of s. 6(1)(c) and 6(1)(d) of the Act but should consider whether the existing guidance as far as lone workers in rural communities is concerned, is inadequate and that the HSE should consider whether to produce a more detailed guidance note or code of practice for the agricultural community. The consultation process involved in the production of such a document would ensure that the relative risks and practicability issues were fully addressed. In particular, Mr Wade submitted that the need to have a mobile phone was not in the HSE Code of Practice. He indicated that no statistical information was produced which would provide any basis for saying what benefit there would be achieved by the issue of mobile phones to lone rural workers. No information had been presented to the Court on the number of deaths caused by accident which would have been avoided had the injured party available to him a mobile phone. Mr Wade submitted that before the Court could

make any determination of a general nature that information would require to be available.

5. Consideration of Determination

It is clear from the evidence where Mr Armstrong died. What perhaps was less clear was when he died. Anthony Busuttil, when providing the Court with his expert medical evidence, spoke of the pelvic fracture being likely to cause collapse, low blood pressure, increased pulse rate and subsequent coma. Mr Armstrong's internal injuries and internal bleeding would increase shock. The witness was of the view that death could be prompt if there is serious blood loss but on the other hand it could take hours before actual death occurred. Significantly he indicated that Mr Armstrong was obviously very determined illustrated by the distance he walked after the accident. It is not known, however, how long after the accident he made his way downhill. I found other snippets of evidence significant. There was evidence that the fuel tank of the ATV was filled on Sunday 17th October. When found by Mr Girdwood the tank was empty although the machine would only have been expected to have used approximately one third of the fuel in the tank by the time it reached the fourth feeding station. The engine had run itself dry after the accident. Further, Mr Armstrong was still in possession of a bag of rabbit remains which he was taking to the midden which was between the fourth and fifth feeding stations. Again, the whole feeding pheasant operation could take up to three hours to complete indicating that, under normal circumstances, Mr Armstrong would have returned by about 11.30 am. Again, significantly, Lady Strang Steel indicated that she was in the habit of leaving out coffee for Mr Armstrong but he had not drunk the coffee she left out for him on the morning of Monday 18th October. She indicated he usually drank the coffee mid morning. Further, Anthony Busuttil in his report and in his oral evidence noted that there were no signs of hypothermia when he conducted the post mortem examination. It is not possible to ascertain the exact time of death but I have reached the conclusion on the evidence that Mr Armstrong died in the 'Road Field' on the Philiphaugh Estate, Selkirk on 18th October 2004.

As far as the cause of death is concerned, I was satisfied that Mr Armstrong had an accident whilst driving the ATV on Harehead Hill. The evidence of Ian Girdwood, Cameron Gray and Lawrence Murray pointed to the fact that the quad bike had rolled over. There were two spills of grain on the hillside and divots had been noted on the grass. Further, the ATV was found by Ian Girdwood in an upright position, the engine having run dry of fuel. The pelvic fracture also pointed to the fact that the vehicle had struck Mr Armstrong. As Anthony Busuttil indicated, this injury had been caused either by a heavy blow or something falling on top of Mr Armstrong. The injury was a crush injury. Mr Armstrong's death

came as a consequence of the fractured pelvis, rupture of the bladder and internal bleeding all caused by the incident referred to. I was fully satisfied with the evidence given to the Court in this regard by Professor Busuttil, now retired.

In respect of s.6(1)(c) of the Act and the issue of the reasonable precautions whereby the accident might have been avoided, the evidence of Lawrence Murray was not insignificant. He had been involved in agricultural matters in connection with this employment for some nine years and he also had training in the use of quad bikes. He indicated that driving an ATV was surrounded by risks and a risk assessment was required. Health and Safety legislation stated that training was required. Any person using a quad bike should be adequately trained. Steven Hague, a gamekeeper employed by the Philiphaugh Trust, indicated that using a quad bike was relatively straightforward, as he put it, but he had undertaken an agricultural course which included training in operating a quad bike. From the evidence it was known that Mr Armstrong had previously driven a 350cc quad bike. It was also known he had done similar work feeding pheasants on the neighbouring Broadmeadows Estate. In readiness for the task, Mr Armstrong had been taken round the route to the several pheasant feeding stations following Ian Girdwood whilst driving a 350cc quad bike. That was the extent of the risk assessment carried out.

It is my opinion, following the view of Mr Murray, that Mr Armstrong could have been followed round the route he was to take driving the quad bike he was going to use loaded with grain. That ATV had been specially adapted to carry grain to the pheasant feeding stations spread out over hilly terrain. Such a move would have given Mr Girdwood, on behalf of his employer, the opportunity to assess Mr Armstrong's ability to carry out the task. I did not support the view that his competence to drive the ATV was satisfactorily determined by Mr Girdwood seeing him drive round the route with an unloaded 350cc quad bike. The 450cc vehicle was more powerful than any other ATV he was known to have driven. The loading on the rear of the vehicle was bound to have an effect on its handling characteristics even although the evidence was that by the time Mr Armstrong reached the fourth feeding station the vehicle would not have been overloaded. Both Mr Wade and Miss Geekie submitted that there was no evidence that Mr Armstrong lacked the appropriate training and experience. It was suggested, speculatively, that he might even have been fully trained. The accident may, indeed, have been caused by momentary inattention on the part of Mr Armstrong as suggested by Mr Wade but the bald fact is that no enquiry was made to determine the training and experience or otherwise of Douglas Armstrong. Such enquiry might have caused Mr Girdwood for the Philiphaugh Trust to come to the conclusion that Mr Armstrong should receive training before embarking on his pheasant feeding task. Such a precaution might have prevented the accident. It had simply been assumed that Douglas Armstrong had sufficient experience to drive the adapted rear loaded 450cc ATV over terrain which was steep in places.

On the question of reasonable precautions which might have avoided the death of Douglas Armstrong again, there was cogent evidence from Lawrence Murray who drew attention to the Health and Safety Executive publication issued for the benefit of employers with lone workers referred to above. I accepted his evidence that such workers should be in a position to respond to emergencies. His view, which I accepted, was that any risk assessment should take account of events which are foreseeable. He was clearly of the view that possession of a mobile telephone would have permitted Mr Armstrong to contact the emergency services. The fact that he would have been able to do so was reinforced by the evidence of Professor Busuttil that Mr Armstrong would have had the ability to use a mobile phone after his accident illustrated by the fact that his determination to survive saw him walk some 200 yards downhill despite his serious injuries. It was speculative not to say unconvincing to suggest that even if he possessed a mobile telephone, he would not have used it. I find it difficult to imagine that if Mr Armstrong had a mobile telephone in his possession immediately following the accident he would not have used it.

The fundamental point is that in the risk assessment carried out prior to his engagement, the possession and use of a mobile phone was not considered. Mr Wade drew attention to the fact that the need for a mobile telephone was not included in the Health and Safety Executive Code of Practice but the publication referred to by Lawrence Murray on Working Alone in Safety specifies that a procedure needs to be put in place to ensure lone workers remain safe. That procedure included contact by radio or telephone. There was much evidence and comment relating to the possession of a mobile telephone, the reception in the area for the use of a mobile telephone and the likelihood or otherwise of a mobile telephone being used. There was also evidence referred to above about the remoteness of the location of the accident and the distance to Borders General Hospital. There was also indeterminate evidence of how long after the accident Mr Armstrong died but I have to come to the conclusion that had Mr Armstrong been provided with a mobile telephone or instructed to carry one for emergency use as part of the risk assessment then, although there can be no certainty, his life might have been saved.

On the matter of a check-in or buddy system for a lone worker, whilst it was suggested that such a system was not popular and could result in unnecessary searches where a lone worker omitted, as requested, to check in, I accepted the evidence of Mr Murray that such a system should be in place. At the time of the accident there was no contact system for the lone worker. No formal check-in instruction was given to Douglas Armstrong. In my opinion there was an inherent defect in the working system of the Philiphaugh Trust where it took two days to discover that Douglas Armstrong was missing. I do not support Mr Wade's contention that the reasons the alarm was not raised earlier was due to the

delayed release from hospital of Mr Girdwood, the absence of Sir Michael Strang-Steel, the domestic concerns of Lady Strang-Steel and the fact that Mr Armstrong lived alone. Simply put, the alarm was not raised earlier because no check-in system existed for him as a lone worker. Both Monday and Tuesday passed before his absence was noticed. It will never be known how long Douglas Armstrong lay in the field before he died but I am of the view that had a buddy or check-in system been in place requiring him to make contact when his daily task was completed, the absence of contact with a work colleague or someone else on behalf of the Philiphaugh Trust might have triggered a search enabling the searchers to find him alive. His death might have been avoided.

S6.1(d) of the Act permits the Court to draw attention to defects in the system of working which contributed to the death or any accident resulting in the death. To make any such determination, as indicated at the outset, the Court can only proceed on the basis of evidence placed before it and cannot speculate on the circumstances of the accident and subsequent death. I am satisfied there were defects in the working system to which attention has been drawn in relation to the reasonable precautions which could have been taken whereby the accident and death of Mr Armstrong might have been avoided. However, the question is whether such defects contributed to the death or the accident resulting in the death. A distinction requires to be made between subsection 6(1)(c) and 6 (1)(d). The former entitles the Court on the evidence to indicate the precautions which should or could have been taken to possibly avoid the death or the accident resulting in the death. The latter subsection permits the Court to specify the defects which contributed to the death or any accident resulting in the death. Whilst it is clear that the failure to take precautions were indeed the defects in the working system, I am of the opinion that the Court cannot go so far as to come to the conclusion that the defects actually contributed to the accident or the death. I come to this view fundamentally on the basis that the exact cause of the accident has not been established although Mr Armstrong was driving the rear loaded ATV up a steep incline at the time. Further, the length of time between the accident and Mr Armstrong's death has not been established beyond the fact that he died on 18th October 2004 being the date of the accident. Professor Busuttil was unable to determine when death occurred although it was recognised that Mr Armstrong survived long enough to make his way downhill some 200 yards and the expert witness indicated that the chances of survival are good if there is early resuscitation and that an individual could survive hours before actual death occurs. I did not consider that the evidence was sufficient to conclude that the failure to determine Douglas Armstrong's experience and training in the use of ATV, the failure to provide a means of communication to Mr Armstrong or a failure to instruct him to carry his mobile phone, being defects in the working system, actually contributed to his death. Further, I did not consider that there was sufficient evidence to conclude that the absence of a check-in or buddy system contributed to his death since, again, the time of death was unknown.

I do not propose to make any determination in respect of s6(1)(e) of the Act. Mr Wade suggested that the Health and Safety Executive might be asked to consider producing a more detailed guidance note for the agricultural community and in particular lone workers but I am of the view that the publication Working Alone in Safety referred to above for the benefit of employers provides adequate guidance on safe working arrangements for lone workers.

The death of Douglas Armstrong illustrates the need for employers to assess the risks to lone workers including self employed people like Mr Armstrong engaged by the Philiphaugh Trust. It is the responsibility of the employer to take steps to avoid or control risk and carry out an adequate risk assessment which, in the present circumstances, would include the aspect of training and a means of communication.

6. List of Witnesses who gave evidence in the Inquiry

1. Police Constable Clayton Lackenby, Lothian & Borders Police, Bridge Street, Galashiels.

2. Ian Girdwood, The Kennels, Philiphaugh Estate, Selkirk.

3. Steven Hague, 132 Tweedholm Avenue, Walkerburn.

4. Lady Sarah Strang-Steel, Philiphaugh House, Selkirk.

5. Sir Michael Strang-Steel, Philiphaugh House, Selkirk

6. Andrew Kirkpatrick, 2 Thrift Farm Cottages, Baldock Road, Royston, Hertfordshire.

7. Lawrence Murray, Health and Safety Executive, Belford House, 59 Belford Road, Edinburgh.

8. Professor Anthony Busuttil, late of University of Edinburgh Medical School, Teviot Place, Edinburgh.

9. Cameron Gray, 24 Murray Place, Selkirk.