

2010FAI 2

SHERIFFDOM OF GRAMPIAN, HIGHLAND and ISLANDS AT PETERHEAD

Under the Fatal Accident and Sudden Death Inquiry (Scotland) Act 1976

DETERMINATION

By

Sheriff J.A. Brown

In

Inquiry into the circumstances of the death

Of

Kevin Alexander Davidson

Peterhead 12th January 2010

The Sheriff having resumed consideration of the cause determined:-

The death and the accident resulting in death (in terms of section 6(1)(a) and (1)(b) of the 1976 Act

1. Kevin Alexander Davidson (date of birth 18.04.1975) resided at the time of his death at 98 Loirston Avenue, Cove Bay, Aberdeen. He died in the course of his employment at 12 noon on 22nd February 2007 at the Peterhead Offshore Supply Base, Peterhead.

2. The cause of death was multiple necessarily and instantaneously fatal injuries caused by part of the load of flotation modules he was delivering to the said Offshore Supply Base falling on top of him following release of securing strap or straps.

Reasonable precautions whereby death might have been avoided (in terms of Section 6(1)(c)

(1) The accident would not have happened had the flotation modules not been loaded three high to the front end of the lorry above the height of the side stanchions.

(2) The stability of the load should have been checked by Mr Davidson prior to removal of the restraining strap or straps.

Defects in any system of working (in terms of Section 6(1)(d)

There were no defects in any system of work which contributed to Mr. Davidson's death on 22nd February 2007.

Any other relevant facts (in terms of Section 6(1)(e))

The ultimate responsibility for the way in which a load secured upon a lorry rests with the driver and there appears to be no independent or objective check of how secure a load may be in any given set of circumstances. Drivers must always have regard to the Department of Transport Code of Practice 'Safety of Loads on Vehicles' (Third edition)

NOTEIntroduction

(1) This fatal accident inquiry followed upon the death of Mr. Kevin Alexander Davidson an HGV Driver.

I heard evidence that Mr. Davidson was a driver with around 15 years experience. He had worked in a family business with his father for some 9 years prior to working with other Companies. He was clearly well regarded in his line of business. His father Mr. Alexander Davidson gave evidence as to his son's work and family history. He will no doubt be sadly missed by his work colleagues and his family and I extend my condolences to Mr. Davidson's family members for their loss.

(2) The Crown was represented by Mr. Hutchison, Procurator Fiscal. Mrs. Moss represented ASCO UK Limited the proprietors of the Peterhead Offshore Base and Ms. Rushbury represented Mr. Hutchison of J&H Transport Aberdeen, Mr. Davidson's employers. I am grateful to them all for their assistance and submissions during this Inquiry.

The following witnesses gave evidence:-

(1) Sgt. John Andrew Smith, Grampian Police, who was a Scenes of Crime Officer and spoke to the taking of the photographs forming Crown Productions 1 and 2.

(2) Christina John Logistics Co-Ordinator with Saipem Uk, Bridge of Don who was responsible for organising the transportation of the buoyancy modules from Aberdeen Harbour to the Peterhead Offshore Supply Base.

(3) Stewart Anderson Wishart, Able Seaman who was involved in the removal of the buoyancy modules from the ship the Grampian Surveyor docked at Aberdeen Harbour on to Mr. Davidson's lorry.

(4) James Grant Hay, an employee of ASCO at the Peterhead Offshore Supply Base.

(5) Walter Alexander Green, employed by ASCO at the Peterhead Offshore Supply Base as a forklift truck driver.

(6) James Simpson, an employee of ASCO at the Peterhead Offshore Base.

(7) Alexander Davidson Senior the late Mr. Davidson's father.

(8) PC Gail Robertson, Grampian Police who attended at the scene of Mr Davidson's accident

(9) Dr. William Stewart Arnold, HM Specialist Inspector (Mechanical Engineering) with the Health and Safety Executive

(10) Keith Beveridge, former Logistics Co-Ordinator with ASCO at the Peterhead Offshore Supply Base

(11) Alan Murdo Mackinnon, Health & Safety Executive Inspector, Lord Cullen House, Aberdeen

Additional evidence

The Crown also lodged four Affidavits namely –

(1) Affidavit of Paul James Malner, Ambulance Paramedic regarding the declaration of death of Mr Davidson.

(2) Affidavit of James Hutcheon confirming at the time of his death Mr Davidson was working in the course of his employment with Mr. Hutcheon.

(3) Affidavit of Dr. Duncan W.S. Stephen, Senior Clinical Biochemist, Department of Clinical Biochemistry, Aberdeen Royal Infirmary, Foresterhill, Aberdeen to which was attached his report confirming that Mr. Davidson's specimens of blood, stomach content and vitreous humour proved negative for the presence of drugs or alcohol.

(4) Affidavit of James Henderson Kerr Grieve, Registered Medical Practitioner, Forensic Medicine Unit, Department of Pathology, University Medical Buildings, Foresterhill, Aberdeen, AB25 2ZD to which was attached the Joint Post Mortem Report prepared by Dr Grieve and Dr. Susan Robinson.

Evidence

The evidence which I heard in the case regarding the circumstances of Mr Davidson's fatal accident essentially fell into three chapters.

The first chapter of evidence dealt with the circumstances surrounding the loading of the fourteen buoyancy modules from the Grampian Surveyor Ship onto Mr. Davidson's lorry.

The second chapter dealt with the circumstances of the arrival of Mr. Davidson's lorry at the Peterhead Offshore Supply Base and the preparation for unloading.

The third chapter of evidence led dealt with the investigation by the Health & Safety Executive and in particular the Report prepared by Dr. Stewart and the Health & Safety Executive's observations on the accident.

The remaining evidence contained within the Affidavits lodged dealt with formal matters relating to the findings post mortem and confirming Mr Davidson's employment.

The loading of the lorry at Aberdeen Harbour

There was no dispute in the evidence heard regarding the loading of the lorry at Aberdeen Harbour on 21st February 2007.

Fourteen buoyancy modules had been brought to Aberdeen Harbour on board the Grampian Surveyor. They were strapped down on board ship in three rows and stacked two high.

Each module consisted of two buoyancy chambers constructed from 12mm thick polyethylene. Each chamber was 1.86m in length. A steel tube connected each module and there was a distance

of 0.26m between each module(giving an overall length of 3.98m.) The modules were 0.8m square and weighed 900kg. Each module sat on a curved saddle with a width of 0.45m and which allowed the module to be attached to pipes on the sea bed.

The modules required to be taken from the ship and transported to Saipem UK who were leasing a storage facility at ASCO(South Base) at the Peterhead Offshore Supply Base, Peterhead.

The modules were removed from the ship by crane and loaded onto the lorry. The significant feature of the evidence led regarding the loading of the lorry was the decision to stack the load lengthwise on the lorry three high to the front of the lorry.

Mrs. John the Logistics Co-ordinator gave evidence to the effect that she was concerned that the load was to be stacked in that way and had suggested stacking the buoyancy modules breadthwise across rather than along the lorry. She stated, however , that Mr Davidson had not agreed with that suggestion. She had left the lorry for some minutes to deliver paperwork to the Security hut and upon her return two or three of the buoyancy modules were already lengthways in the lorry.

Her evidence, which concurred with all of the other evidence which I heard about the issue of the loading of the lorry was that it was the driver's responsibility to ensure that the load was stacked in a manner which was safe and with which he was entirely satisfied. Mrs John confirmed that had the driver expressed any concern about the way in which the load was stacked prior to leaving the harbour the lorry would have been unloaded and loaded to the driver's satisfaction.

No such concern was expressed by Mr. Davidson. Mr Davidson had secured the load with the ratchet restraining straps personally. At the time of leaving the harbour the load appeared secure. Mr Davidson left Aberdeen Harbour at around 6.30pm. the lorry was parked overnight at a lorry park known as Aberdeen Truck Stop before being taken to the Peterhead Offshore Supply Base next morning (22/2/2007).

Peterhead Offshore Supply Base

There was again little issue with the evidence heard about what happened after Mr. Davidson's lorry arrived at Peterhead.

Both witnesses James Grant Hay and James Simpson spoke of becoming aware of the lorry entering the site. The vehicle had to drive a distance of two to three hundred yards and negotiate a corner to reach the unloading area. Both of these witnesses spoke of being aware of the load on the lorry appearing to move from one side of the lorry to the other.

In the unloading area Mr. Davidson met with Mr Walter Green who was the forklift truck driver who was to unload Mr Davidson's vehicle. Mr Green had told Mr Davidson to take his vehicle around another corner and remove the ratchet restraining straps to await unloading.

When Mr. Green arrived with the forklift truck some minutes later he found that part of the load had fallen from the driver's side of the lorry, where the load had been stacked three high, and the

lorry driver on the ground severely injured. Mr. Green had not seen any obvious instability with the load upon its arrival.

Observations of the Health and Safety Executive

Dr. William Stewart Arnold spoke to the terms of the detailed Accident Investigation Report together with the photographs and addenda thereto. He was clear in his evidence that the reason for the accident had been the inherent instability of stacking the load three high to the front of the lorry, a height well above the side support stanchions. He also described how module numbered 83 located on the second tier nearside in the middle section of the lorry had its saddle missing causing that module to lean downwards at the front. Further a saddle was being used as packing between the modules at the front of the lorry and the headboard of the lorry. This caused the module numbered 80 and located on the bottom tier immediately behind the headboard to tilt outwards and slope downwards towards the nearside. He further described viewing CCTV footage of the vehicle leaving Aberdeen Harbour and referred to still photographs (Prod3 figure 11) which appeared to show that almost as soon as the vehicle had left the Harbour one of the rear modules had moved position. Dr Stewart went on to refer to the number of ratchet restraining straps shown on the same CCTV still photographs and compared that with the position as shown on still photographs of the vehicle arriving at the Peterhead Offshore Supply Base next day. He pointed out that it appeared that Mr Davidson had added additional straps to the load suggesting that at some point between leaving Aberdeen and arriving in Peterhead Mr Davidson may have considered that the load had become insecure and had taken steps to add extra ratchet restraining straps.

Dr Stewart considered that the load had not been properly secured to the extent that the modules had moved and the saddle below the module numbered 88 located on the third tier front nearside had slipped over the edge of the module numbered 82 beneath it. This has caused the weight of the module numbered 88 to rest entirely against the module numbered 89 located on the third tier front offside whereby the entire weight of the module numbered 89 rested against the ratchet restraining strap. When the ratchet restraining strap was removed the module numbered 89 had fallen from the lorry onto Mr. Davidson .

Dr. Arnold referred to the Department of Transport Code of Practice "Safety of Loads and Vehicles" Third Edition in particular paragraphs 1.4, 2.5, 7.2(b) and 7.3. He confirmed that in terms of this published guidance the driver was responsible for the load. He suggested that the error in this case had been the way in which the load had been stacked. He suggested that the safer way to stack the load would have been in two tiers, nine on the lower tier and five on the second tier. This would have required Mr. Davidson to remove the side stanchions on the lorry but this would have been the safer and more stable arrangement as a result of the lower centre of gravity of the load.

Dr. Arnold's view was supported by the evidence and observations of Alan Murdo Mackinnon, Health & Safety Executive Inspector. Mr. Mackinnon advised that the Health & Safety Executive had considered if it would be possible to propose that particular training for HGV drivers be put in place giving training and direction regarding the way in which lorries are loaded but the Health & Safety Executive had concluded that there was such a variety of different loads and vehicles to take into account it would be impossible to determine specific regulations or procedures.

Submission

The submissions made by all parties were relatively brief.

Mr. Hutchison for the Crown submitted that formal findings under Section 6.1(a) and (b) of the 1976 Act could be made. In terms of Section 6.1(c) he suggested that a reasonable precaution would be to take on board Dr. Arnold's comments regarding the way in which the load had been stacked and that had the lorry been better loaded then the accident might have been avoided. In discussion with Mr. Hutchison on whether or not any form of procedures or regulations might be considered and implemented he suggested that such a regulatory system would be difficult to lay down and it would be difficult to set out any practical framework for regulation in the future. Mr. Hutchison did not consider that there were any defects in any system of working in terms of Section 6.1(d) nor did he invite me to consider any other relevant facts in terms of section 6(1)(e) Mrs. Moss for ASCO UK Ltd. had no submissions to make other than to pass on ASCO UK Ltd's condolences to the family.

Ms. Rushbury for JH Hutcheon of J&H Transport, Mr Davidsons employers at the time of the accident concurred that formal determinations should be made in terms of Section 6.1(a) and 6.1(b).

In terms of Section 6.1(c) she proposed that a reasonable precaution which might have caused the accident to be avoided would have been if Mr. Davidson had checked the stability of the load prior to removing the securing straps.

In respect of Section 6.1(d) she concurred with Mr. Hutchison that there was insufficient evidence to suggest any defect in any system of working.

In respect of Section 6.1(e) she considered that it was relevant that there appeared to have been no independent or objective checking of the load either prior to its departure from Aberdeen Harbour or upon the lorry's arrival at the Peterhead base. She referred to the Department of Transport Code of Practice Regulations and the overall responsibility of the driver in respect of the load.

Issues

I regret that I have come to the conclusion that this was a tragic accident and I regret to say that the cause of the accident and Mr. Davidson's untimely death was the way in which flotation modules had been stacked on Mr. Davidson's lorry. Whilst I am sure Mr. Davidson was an

experienced driver it seems to me that the stacking of the flotation modules three high to the front of the lorry was an error of judgement. When loaded in this manner the third tier of the flotation modules was above the height of the side securing stanchions on the lorry and given the saddle beneath the main body of the flotation modules would only have been less than 0.2m away from the edge module below this gave very little margin of error if the load in any way shifted or moved during transit. The fact that Mr Davidson had added additional restraining ratchet straps at some point during his journey from Aberdeen to Peterhead infers that he had become aware of a difficulty or potential difficulty with the load and this ought, perhaps, to have led to greater caution at the time of preparation for unloading.

This is clearly a consideration in terms of the Department of Transport Code of Practice and in particular paragraph 1.4. which is in the following terms;

" Loading and unloading should be carried out by trained staff who are aware of the risks involved. Drivers should also be aware of the additional risk of the load or part of the load moving when the vehicle is being driven. This applies to all vehicles and all types of load. The driver is ultimately responsible for the load on their vehicle, whether or not they were involved in securing of the load" In this case Mr Davidson directed how the buoyancy modules should be loaded and the secured the load himself.

The guidance given by the Department of Transport in their Code of Practice deals in general terms with a variety of issues regarding the safety of loads on vehicles. The evidence which I heard from all of the witnesses involved with heavy goods, including Mr. Davidson's father, indicated that the training any driver has comes from simply working in the industry and is training obtained on a hands on basis. It is clear from the evidence led that it is accepted that the driver of any vehicle is responsible for the security of the load on the vehicle in transit. Equally it appears to be accepted that the driver should be satisfied that the load is positioned safely and is stable and secure. No doubt a significant of common sense is applied in any set of circumstances by any driver depending on the load being carried and the nature of the vehicle being used. Some loads will be more awkward than others. I have no doubt that the variety of circumstances which may arise in the HGV industry in respect of the loads that may require to be carried lead to the conclusion that it could be extremely difficult to impose any particular set of regulations or directions that could be generally applied. It may be that at the end of the day too much responsibility rests with the driver in terms of determining the safety and security of any particular load and it may be that some consideration should be given to a system in which the driver and at least one other person is directed to always carry out a final inspection of the vehicle and its load before setting off on any journey and that an inspection of any load should be undertaken by the driver and at least one other individual prior to the removal of any retaining or security straps prior to unloading. It may be that such procedures are undertaken informally in the bulk of deliveries but perhaps the Department of Transport Code of Practice could be amended to incorporate such a procedure as part of their guidance. I should also emphasise the importance of

Transport Operators ensuring that they themselves are aware of the terms of the Department of Transport Code of Practice and the need to ensure that their employees are also aware of its terms and that they have regard to the very practical guidance provided therein.

Sheriff J A Brown