

SHERIFFDOM OF LoTHIAN AND BORDERS AT EDINBURGH

[2015] FAI 27

Case No: ED14021574

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

DETERMINATION

by

SHERIFF T WELSH QC
Sheriff of Lothian and Borders

following an Inquiry

into the circumstances of the death of

MAURICE FRANK WILLIS

At Edinburgh 16 November 2015; Following the hearing of evidence on 2 and 3 November 2015, the sheriff having resumed consideration of the cause determines that in terms of section 6(1) of the Fatal Accident and Sudden Deaths Inquiry (Scotland) Act 1976:-

- (a) Maurice Frank Willis (date of birth 14 September 1956) died in the Royal Infirmary of Edinburgh, Little France Crescent, Edinburgh, on 22 November 2014 at 22:05 hours. The accident which caused his death occurred in the car park at the rear of the Hawes Inn, 7 Newhalls Road, South Queensferry, Edinburgh, EH30 9TA, at approximately 13:15 hours on 22 November 2014;
- (b) The cause of his death was abdominal and pelvic injuries sustained in a vehicular incident, whereby, he was crushed between the driver's door and the cab chassis of a moving unmanned Volvo heavy goods vehicle (a bin lorry), registered number PN63 VUT, as it rolled forward, while the vehicle parking brake was off and the gear

- in neutral. The moving vehicle made contact with a stone pillar causing the driver's door to close over on Mr Willis as he was attempting to climb into the driver's cabin;
- (c) There are no reasonable precautions I can suggest whereby his death or the accident might have been avoided;
 - (d) No system of working was put under examination in the evidence;
 - (e) There are no other facts relevant to the circumstances of the death.

Note

[1] I attach this short note to the formal findings I make in this case. The deceased, Maurice Frank Willis (date of birth 14 September 1956), died at work on 22 November 2014. Mr Willis drove an HGV (bin lorry) for his employer Biffa Waste Services Limited. He had previously worked, in the same capacity, for Shanks UK before it was acquired by Biffa in 2013. Mr Willis was well qualified as a driver and by all accounts a conscientious worker. The tragic circumstances surrounding his untimely death were explored before me during a fatal accident inquiry conducted, in the presence of his widow and family, on 2 and 3 November 2014. It was obvious to me he was much loved, is sorely missed and was held in high regard by all his colleagues who gave evidence.

[2] An inquiry of this nature does not determine any question of civil or criminal fault or liability. In *Black v Scott Lithgow Ltd* 1990 SLT 612, Lord President Hope at page 615 explained the purpose behind holding an Inquiry:-

“The function of a sheriff at a Fatal Accident Inquiry is different from that which he is required to perform at a proof in a civil action to recover damages. His examination and analysis of the evidence is conducted with a view only to setting out in his determination the circumstances to which the sub section refers, insofar as this can be done to his satisfaction. He has before him no record or other written pleading, there is no claim of damages by anyone and there are no grounds of fault upon which his decision is required”.

[3] Section 6 of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976 (“the 1976 Act”) sets out the strictly limited statutory scope of the inquiry and provides:

“(1) At the conclusion of the evidence and any submissions thereon, or as soon as possible thereafter, 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.”

Factual Background.

[4] In setting out this factual narrative I rely heavily on an extensive joint minute of Agreement lodged by Mr Aitken the procurator fiscal depute who conducted the inquiry and Mrs Burgess, solicitor advocate, who appeared for the employer. The family of the deceased was not separately represented. The joint minute was augmented by oral evidence.

[5] From the facts agreed and the evidence led before me I was satisfied that at approximately 13:15 hours on 22 November 2014, Mr Willis was working, in the course of his employment, driving a large bin lorry, removing waste products, adjacent to the car park area situated at the rear of the Hawes Inn, 7 Newhalls Road, South Queensferry, Edinburgh EH30 9TA. That day Mr Willis was working with a colleague, Michael Preston. Mr Willis was the driver and Mr Preston did most of the manual lifting of the bins for emptying into the skip at the rear of the vehicle. Footage from a fixed CCTV camera, at the back of the Hawes Inn, captured images of the HGV, reversing into the area behind the Hawes Inn where the bins are kept. Mr Willis is seen leaving the driver’s cabin and heading in the direction of the rear of the bin lorry. A short time later he returns to the cabin door, opens it

and reaches in. He then closes the driver's door and again heads to the rear of his vehicle. Almost immediately the bin lorry starts to roll forward and Mr Willis is again seen on screen, urgently trying to open the cabin door, before he and the vehicle move out of range of the fixed camera position and off the screen. Seconds later, Mr Willis was discovered by Mr Preston, lying injured, on the ground near the stone pillar which is shown at the opening of the car park leading to the bin area in photographs, Crown Productions 1/4, 1/5, 1/6, 1/7 and 1/8. Members of the public offered such first aid as they could. An ambulance was called for. The unmanned bin lorry continued to move forward down the hill, colliding with a car, two buildings, and some street furniture after which it finally came to rest over the pier's edge. It was a matter of agreement, that a member of the public, Martin Allan Dowling, aged 28 years, saw the bin lorry collide with a Jaguar motor car. He saw that there was no one in the Jaguar motor car. He also saw that the driver's door of the bin lorry was open and that no one was inside. He ran across and climbed into the moving vehicle. He tried to find the parking brake but could not. However, he removed the ignition keys from the lorry and jumped out. The vehicle then mounted the kerb and came to a halt having collided with the railings on the pier's edge. Mr Dowling handed the keys to the emergency services on their arrival. It was suggested by Mr Aitken that the keys to the bin lorry can only be removed if the gear is in neutral. At approximately 16:50 hours on 22nd November 2014, during the course of the recovery operation, Robert Thomas Beattie, a mechanic and recovery driver employed by MTS Recovery, Stirling attended at the Hawes Inn to recover the bin lorry and the Jaguar motor car. Mr Beattie climbed up the side of the bin lorry and entered the cab while it was still in its post collision position, overhanging the pier's edge. He saw that the parking brake lever was in the 'up' position, meaning that the parking brake was off. He was the first person to enter the cab of the vehicle after Martin Allan Dowling.

The gear display pad was photographed on 22nd November 2014, after recovery, and is shown in Crown Production 1/43. The photograph of the display pad shows the gear was in neutral.

[6] Fire, Rescue and Ambulance services arrived on the scene at approximately 13.23. Mr Willis was given extensive emergency treatment at the scene, by paramedics. Mr Willis was conscious but complained of pain in his legs and stomach. Mr Willis was urgently transferred by ambulance to Edinburgh Royal Infirmary. Approximately 5 minutes out from the hospital he suffered a heart attack. Vital emergency treatment was administered in the ambulance and continued to the hospital. He was immediately admitted to theatre where a team of doctors strived over several hours to save his life. Tragically Mr Willis succumbed to his injuries in theatre at 22.05 that night. On 25th November 2014 a post mortem examination was conducted by Dr Ian H Wilkinson and Dr Robert Ainsworth, both Consultant Forensic Pathologists, on the body of Mr Willis, and certified the cause of his death as 1(a) Abdominal and pelvic injuries and 1(b) Vehicular incident. Toxicology analyses for alcohol and drugs were both negative.

[7] On 25 November 2014, in the presence of Thomas Boyle and Edward Armour, both Constables of Police Scotland, at the premises of MTS Recovery, Stirling the bin lorry was examined by Paul Gordon Robertson, an authorised Vehicle Examiner, based at the Driver and Vehicle Standards Agency, Livingston. Mr Robertson carried out further examinations of the vehicle on 3 December 2014, 11 December 2014 and 17 December 2014. The results of the examinations are accurately recorded in Vehicle Examination Summary of Information, dated 6 January 2015, (Crown Production number 11). In particular, Mr Robertson found that the foot brake and the parking brake on the vehicle were operating correctly. He noted that the warning systems to show that the door had been opened with the parking brake off

were not operational. His examinations could not establish whether these systems were damaged during the collisions noted in paragraph [5] above or had been inoperative prior to the collisions. He did not find any other defects which would have caused or contributed to the collisions.

[8] On 3 December 2014 the vehicle was examined by Duncan Graham, Regional Technical Manager, Volvo Group UK Limited, Warwick. The results of said examinations are accurately recorded in Volvo Truck Technical Incident Report dated 12 December 2014 (Crown Production number 10). In particular, Mr Graham downloaded and analysed the error codes contained in the Electronic Control Unit of the vehicle. There were no error codes in respect of the braking system or any other system showing prior to the collisions on 22 November 2014. Mr Graham's report confirms that opening the door of the bin lorry, with the parking brake off and the ignition on, should trigger an audible warning buzzer to sound, the park brake warning lamp on the dashboard to illuminate, the park brake warning to flash in the driver's information display and a red warning stop triangle to illuminate on the dashboard. These warnings continue for approximately thirty seconds. These warnings are triggered by the same switches that operate the interior courtesy lights. All of the aforementioned items had been fitted to the vehicle by Volvo at the time of manufacture. He found that the switches on both the driver's and passenger's doors were faulty at the time of his examination of them. Other than the switches, the parking brake warning systems were operational at the time of examination.

[9] On 11 December 2014 at the premises of MTS Recovery, Stirling, the vehicle was examined by Owen Fletcher, an engineer from Mitchell Powersystems. Mr Fletcher downloaded electronic information from the Transmission Control Module which monitors the automatic gearbox and associated operating systems which are fitted to the bin lorry.

The electronic information was passed to Sean McGrath, a representative of Allison Transmission, Ampthill, Bedfordshire, the manufacturers of said automatic gearbox.

Analysis of electronic information showed that there were no failure records recorded and no technical issues with the automatic gearbox and operating systems prior to the collisions on 22 November 2014.

[10] In January 2015 a switch from the nearside (passenger's) door, a switch from the offside (driver's) door and an audible warning system, fitted by Biffa Waste Services Limited to the vehicle, were removed and delivered to the Health and Safety Laboratory, Buxton for examination by Dr Wray BSc PhD, a Control Systems Specialist, Major Hazards Unit, Health and Safety Laboratory, Buxton. Dr Wray found that the audible warning system fitted on the instructions of Biffa Waste Services Limited was operating correctly but that both door switches were inoperative. Both switches had succumbed to mechanical failure, at a point where the bending action would have been greatest, suggesting that the failures resulted from fatigue. A series of photographs showing aspects of Dr Wray's examination are contained in Incident Report Number: MH/15/15 dated 19 February 2015 (Crown Production number 12). Dr Wray classified both the switches as 'inoperative' due to the breaks in the internal metal components detailed in his report. However, both switches were still liable to occasional, fortuitous, random movement of the internal components causing electrical contact to be made. In the opinion of Dr Wray the damage noted to both switches is not likely to have been caused by impact in the course of the collisions on 22 November 2014. Also, it is unlikely that both switches failed at exactly the same time. The failures are due to fatigue and therefore likely to have occurred at different times. Although it is not possible to establish how long either of the switches had been in an inoperative condition, Dr Wray considered it likely that both switches were in that condition prior to 22 November 2014.

However, this cannot be conclusively established. Dr Wray considered it unusual for switches of this kind to fail due to fatigue at this age and that they can usually be relied on to operate for far longer than the anticipated operational life of a Volvo heavy goods vehicle. He found no obvious flaw in the design or the materials used in the construction of the switches.

[11] On 25 February 2015 at the said Hawes Inn, a reconstruction of the beginning of the incident which occurred on 22 November 2014 and resulted in Mr Willis sustaining fatal injuries was carried out. The disc (Crown Label number 2) contains a true and accurate copy of a video and audio recording made during the reconstruction.

[12] The purpose of the reconstruction was to test a theory as to how the accident, which caused the death of Mr Willis, might have been caused. The theory was variously referred to as 'a working hypothesis', 'a theory' and 'a reasonable explanation', in the material before me. It was hypothesised that on 22 November 2014, in the position the vehicle is shown in the CCTV footage, it was resting on a slight declining gradient. The vehicle was likely in reverse gear, as it had been backed into position. If so, could the power to the wheels from the engine, taken in conjunction with the weight of the vehicle, on a gradient of the angle involved, produce perfect equilibrium, whereby the vehicle was retained in a stationary position, without the application of either the foot brake or the parking brake? It was that hypothesis which the reconstruction was designed to test. It was suggested by Mr Martin Wolffe, the Fleet Manager for the employer and the author of the theory, that when the gear of the HGV is in reverse, the rear lifting apparatus, which hoists bins to be emptied, is less effective. If the gear is put into neutral, that gear switch transfers engine power, from the HGV's wheels to the rear lifting apparatus. It was suggested that the CCTV footage which shows Mr Willis returning to the cab and reaching inside, may have shown the precise

moment he switched the gear from reverse to neutral. It was suggested, according to this theory, that that switch of gear position would, on the gradient involved and given the weight of the vehicle on 22 November 2014, have removed the reverse engine thrust needed to maintain equilibrium, thereby releasing all restraint and enabling the bin lorry to roll forward unmanned, in neutral gear, from its stationary position, assuming the parking brake was also off. The exact weight of the vehicle was ascertained from the on-board computer and recreated for the reconstruction.

[13] I considered the theory was highly speculative. There was no contradictor represented at the Inquiry to test the soundness or validity of the thinking behind it. There was no evidence from Mr Preston who was responsible for lifting the bins, that the rear lifting apparatus was inadequate to lift, that day, if the suggestion was that Mr Willis changed the gear from reverse to neutral to divert more power to the rear lifting apparatus. Nor did the reconstruction test whether the rear lifting apparatus was compromised by the lorry being in reverse gear. Further, the court can only proceed upon evidence properly elicited from witnesses. The procurator fiscal led this reconstruction evidence without objection. I can understand why the employer would not object to this because the sole purpose of the exercise, it seemed to me, was to establish that Mr Willis was the author of his own misfortune. Had the family been independently represented I consider this chapter of the evidence would have been objected to and I can well understand why. There was no evidence to establish that Martin Wolffe had any expertise in accident reconstruction. The reconstruction occurred in the presence of Health and Safety Officers and the Police, who seemed to me to be no more than passive observers. However, the police officer who gave evidence at the inquiry, Alan Beattie, who is the author of the police report, could not even tell me what the gradient was at the point the vehicle was positioned, as part of the

reconstruction. Nor was the precise weight of the vehicle established evidentially on 22 November 2014 or at the reconstruction. Nor was the reverse thrust of this HGV positioned at that angle established in evidence. Nor was the theory tested on any other vehicle for comparison. I formed the distinct impression the reconstruction was set up to confirm a conclusion already reached rather than to test a hypothesis. I consider this exercise was designed to establish the driver was solely or partly at fault for what happened. In my opinion that is not the purpose of an inquiry and the procurator fiscal ought not to have led the evidence before me, at a fatal accident inquiry. Accordingly, I was not satisfied I could make any findings at all based on the theory or the reconstruction.

[14] I was satisfied that the parking brake was off at the material time on 22 November 2014 because the bin lorry was moving when the driver was outside the cab and the braking system was not found to be faulty on subsequent inspection, by the authorised vehicle examiners. Further, the parking brake was found to be in the off position when Mr Beattie, the recovery mechanic, accessed the cabin that afternoon, as part of the recovery operation. I concluded the gear was in neutral because, when photographed later, on 22 November 2014, after recovery, the visual display indicated the gear was in neutral. I considered it reasonable to infer from the forward movement of the vehicle while the driver was out of the cabin, the photograph (Crown Production 1/43) and the agreed evidence of Mr Beattie, that the gear was in neutral and the handbrake off, when Mr Willis was fatally injured by the vehicle door. To attribute blame for that state of affairs is not part of my function.

[15] Mr Aitken invited me to make recommendations about the fitting of audible alarms in HGVs. I did not consider it appropriate to make such a recommendation as Biffa Waste Services Limited have already taken this precaution for all their vehicles as standard. Nor did I consider it would be appropriate on the basis of one case to make recommendations

about standard fittings in HGVs which should properly be the subject of industry wide consultation and possible legislation.

[16] At the close of the inquiry I conveyed my condolences to the widow, family and friends of Mr Willis who died in this tragic accident. I repeat these again, now.

[17] I am grateful to parties for agreeing so much evidence which greatly helped focus the issues for determination.

Sheriff T Welsh QC

Edinburgh Sheriff Court

16th November 2015.