

SHERIFF COURT OF GLASGOW & STRATHKELVIN

**UNDER THE FATAL ACCIDENTS AND SUDDEN DEATHS INQUIRY
(SCOTLAND) ACT 1976**

DETERMINATION by

SHERIFF SEAN FRANCIS MURPHY, Queen's Counsel,

In a

FATAL ACCIDENT INQUIRY

Into the death of

Dr. GRAHAM MELDRUM

GLASGOW, 5 January 2009

The sheriff, on resuming consideration of the evidence and submissions in the fatal accident inquiry, DETERMINES:

In terms of Section 6(1)(a) of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976:

That Dr. Graham Meldrum, born 21 September 1964, of 458 Castlemilk Road, Glasgow, died on the premises of ABF Grain Products Limited ("Allied Bakeries") at Balmore Industrial Estate, 180 Glentamar Road, Glasgow on 12 July 2005 at some time between 5.17 pm and 6.15 pm.

In terms of Section 6(1)(b) of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976:

That the cause of Dr Meldrum's death was a head injury consisting of depressed skull fractures with underlying associated brain damage to either side of his head.

That this injury was sustained in an accident at work. At the time of his death Dr Meldrum was in the basket washing area of Allied Bakeries' premises operating a Ratcliff Palfinger ("Ratcliff") RV1500LC column cantilever tail lift which was attached to the rear of a Montracon semi-trailer box van, numbered 05739, which was part of the Allied Bakeries vehicle fleet. This type of tail lift had an extension portion which folded out from the main section of the platform. Anti-luc plates were fitted to either side of the platform extension through which retaining pins should have been deployed in order to secure the extension to the arms of the tail lift when it was in the open position. These were defective so that the extension could not be secured in that way on the lift in question. Dr Meldrum was raising the tail lift with the platform opened out and the extension deployed. As he did so the platform began to move into its closed or stowage position. The extension folded forward suddenly from its open towards its closed position with the result that the nearside anti-luc plate attached to the extension struck Dr Meldrum on the right hand side of his head, forcing the left hand side of his head at the temple against a bayonet pin which projected from the tail lift column area and was part of the stowage gear which secured the lift against the rear of the vehicle when not in use. Death was instantaneous.

That the immediate causes of the accident were:

- the sudden and unexpected movement of the platform extension
- the defective state of the anti-luc plates and pins which meant that the extension could not have been secured
- the raising of the lift with the platform and extension opened out while the cam followers attached to the lift mechanism were deployed in the position which caused the platform and extension to begin to fold into its stowage position
- the position of Dr Meldrum's head within the arc of the plate as the extension flipped over.

As the accident could not have occurred in the absence of any one of the above factors I will consider each in turn in greater detail.

The Movement of the Platform Extension

The folding extension was attached to the main platform of the tail lift by a hinged section which contained within it torsion bars to assist in the deployment and folding away of the extension. Immediately before the fatal episode Dr Meldrum must have been pressing the operating button to raise the lift with the platform deployed to its horizontal position and with the extension portion also unfolded to the horizontal, i.e. in position for unloading the baskets which were in the trailer. Folding flaps attached to the extension had also been deployed to their operating position for use as loading ramps. The cam followers attached to the platform were still in their horizontal position so that as the lift was raised they engaged the cam at the rear of the trailer. This had the effect of moving the platform and its related extension towards the vertical, i.e. towards the position for stowage of the lift against the rear of the vehicle when the lift was not in use and the vehicle was to be driven. Once the platform reached an angle of about 55 degrees from the horizontal the extension section and its attached ramps flipped over forwards in a sudden and rapid movement towards the rear of the trailer. This movement caused the nearside anti-luce plate to strike the right hand side of Dr Meldrum's head forcing the left side of his head against the bayonet pin which projected from the rear of the vehicle as part of the lift stowage equipment. The speed of this action was much greater than that of the normal range of tail lift movements and would have taken less than 1.2 seconds from the point at which the main section of the platform reached the critical angle. It is a reasonable inference that Dr Meldrum would not have expected the sudden and rapid folding over of the platform extension to have occurred.

The Anti-Luce Fasteners

The extension portion of the tail lift when in full working condition was fitted on each of its nearside and offside edges with a metal plate which had a hole in its centre. When the extension was folded out these plates rested on the support arms of the tail lift mechanism and the hole in the plate passed over a small bracket or pin through which a retaining clip passed; the clip would then be fastened into position so as to secure the extension to the support arms of the mechanism. These items collectively

are known as anti-luce fasteners. On the tail lift in question the anti-luce fasteners were defective on either side. On the nearside the plate was still attached to the edge of the extension but the locating pin and clip were missing, having apparently broken off; on the offside the plate itself had broken off although the pin and clip remained. In each case the damage had occurred before the date of the accident without being repaired. Had the anti-luce fastener on either side been operational and deployed by Dr Meldrum the extension portion of the lift platform would have been retained against the support arm of the machinery with the result that the accident would not have occurred because the sudden flipping over of the extension could not have taken place when the tail lift was raised even if the cam strikers were operating so as to cause the platform to begin to fold against the rear of the trailer as it went up. Had the anti-luce fasteners been in working order I consider that they would have been deployed by Dr Meldrum because the platform extension would not have sat in its proper position without the fasteners being engaged, since it would in part have been resting on them; and because someone with his background and experience (in terms of his scientific education, his commercial driving experience and his personal interest in engineering) would have realised that they had an obvious function to retain the extension in position.

The Cam Followers

The tail lift was fitted with a semi-automatic cam closure system. This meant that when the lift was to be deployed, cam followers which were in a vertical position on either side of the tail lift when it was stowed against the rear of the trailer would be in contact with a cam as the unit was lowered and would follow it round to a horizontal position, allowing the platform to move out into the horizontal, ready for use as a lift. This position would be reached when the base of the platform was approximately 400 mm above the ground. In order for the platform to be raised and lowered for use in loading or unloading the trailer it would be necessary to lower the platform further until its base was about 50 mm above the ground, at which point the cam followers would clear the cam and would be pushed into a vertical attitude under spring loading. The system had been designed to operate in this way so that the cam followers would automatically assume the position necessary for the platform to be used as a lift. Once loading or unloading was complete the platform should have been returned to a

position on or just above ground level. A lever situated on the nearside edge of the platform was then to be used to lower the cam followers on both sides into the horizontal and the operative was to raise the platform by pushing the relevant button on the rear nearside of the trailer while holding the lever in position with his other hand until the cam followers engaged with the cam. Once they had done so, the lever could be released and the cam followers would run against the profile of the cam with the effect that as the platform unit was raised it would fold away against the rear of the trailer. The manual aspect of this part of the operation was designed to ensure that a deliberate step was required to deploy the cam followers against the cam so that the platform could not be raised with the cams engaged in such a way as to fold the platform towards the rear of the vehicle by accident. The system was thus semi-automatic in that the cam followers freed themselves from the cam automatically on deployment of the lift but could only subsequently be re-engaged manually for stowage of the lift. On the tail lift in question the semi-automatic cam closure device was faulty in several respects on the day of the accident. The spring loaders which were designed to disengage the followers from the cam were broken, the linkage designed to ensure that the nearside lever would raise both cam followers together was fractured, and subsequent testing of the lift indicated that the cam followers, once raised, would not sit at the correct angle. The most serious of these defects by far was the failure of the spring mechanism designed to free the followers from the cam automatically. The consequence of this fault was that the followers would have to be raised manually into the vertical position on either side before the platform could be used as a lift. This had not been done at the time of the accident which had occurred while the platform was being raised by Dr Meldrum. Consequently as he raised it the platform began to fold in towards the rear of the trailer with the result that the extension flipped over as described above.

Despite this, the extension section of the platform would not have folded forward if one or more of the anti-luce fasteners had been used to secure it. In normal use, when the lift was to be stowed against the rear of the vehicle, the platform extension and its attached flaps were to be folded away when the platform was approximately 400 mm from the ground, and the extension itself was secured to the main platform by means of a heavy-duty type of spring clip known as a Salveson clip.

The Position of Dr Meldrum

It is stating the obvious to say that the accident would not have occurred if Dr Meldrum's head had been beyond the arc of the plate attached to the edge of the platform extension at the material time. However, that does not mean that his positioning was an operative cause of the accident. The evidence indicated that the tail lift was operated by a "push to run" system, which means that it moved upwards for so long as the up button was being pressed or downwards for so long as the down button was being pressed. Once an operative ceased to press the button the lift would stop at once in whatever position it had reached. It was an electrically driven hydraulic system with two sets of operating buttons, one placed externally at the rear nearside of the trailer, and one placed within the trailer itself also to the rear nearside. At the time of the accident Dr Meldrum was standing outside the trailer at the rear nearside and he was found with his hand close to the external set of operating buttons. While the flip-over motion of the platform extension was very rapid, the normal operating movements of the machinery were gradual. Raising the lift platform from its deployed to its stowage position by continuous application of pressure to the button would take about 15 seconds. Dr Meldrum's body was found in a position where his head was a safe distance from the nearside arm of the machinery and he would have been in no imminent danger of being struck by any part of it in the absence of the folding over of the platform extension. The motion of the extension in flipping over was described in evidence as counter-intuitive, in the sense that it was not a movement which would have been expected by someone who was unfamiliar with the location and condition of the torsion bars within the hinge, which were not visible in normal operation. Therefore, while the plate would not have struck Dr Meldrum if his head had been outwith its arc, no criticism is attached to him because of that in the circumstances of this accident.

In terms of Section 6(1)(c) of the Fatal Accidents and Sudden Deaths (Scotland) Inquiry Act 1976

That the maintenance by Allied Bakeries of the anti-luce fastener plates and pins on the tail lift in a proper, serviceable condition was a reasonable precaution whereby the accident which resulted in the death might have been avoided.

That the maintenance by Allied Bakeries of the semi-automatic cam closure device fitted to the tail lift in a proper, serviceable condition was a reasonable precaution whereby the accident which resulted in the death might have been avoided.

That the provision of adequate training by TNT Logistics UK Ltd (“TNT”) to Dr Meldrum in the use of this type of tail lift was a reasonable precaution whereby the accident which resulted in the death might have been avoided.

That the ensuring by duty managers at TNT that all drivers, including agency drivers, were familiar with the operation of all equipment they were required to use was a reasonable precaution whereby the accident which resulted in the death might have been avoided.

In terms of Section 6(1)(d) of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976

That the following defects in the system of working operated by Allied Bakeries contributed to the accident resulting in the death:

- the maintenance regime failed to keep pace with the level of depreciation of the tail lift;
- the maintenance regime failed to ensure the safe upkeep of items of the tail lift equipment with a safety aspect

That the following defects in the system of working operated by TNT contributed to the accident resulting in the death:

- the system of driver evaluation and training failed to identify all requirements which were placed upon drivers such as Dr Meldrum;

In terms of Section 6(1)(e) of the Fatal Accidents and Sudden Deaths (Scotland) Act 1976

The facts relevant to the circumstances of the death are set out in detail in the note below.

NOTE

The inquiry heard evidence on a total of twenty three days between Wednesday 19 March 2008 and Thursday 14 August 2008. Thereafter legal submissions on the evidence were heard between Monday 15 September 2008 and Thursday 18 September 2008.

The parties were represented by:

Ms Sultan, Procurator Fiscal Depute, for the Crown

Ms Hay, solicitor, for Ceva Logistics UK Limited (formerly TNT Logistics Ltd)

Mr Wade, solicitor, for Allied Grain Products Limited

Mr Borland, advocate, for Ryder Limited

Mr Neilson, solicitor, for Colin Hutton Group Limited

Mr Maillie, solicitor, for Zurich Risk Services, and

Mr Caskie, advocate, for Ms Karen Thomson and the family of the deceased.

I am grateful to each of them for their assistance during the inquiry.

Background

Dr Graham Hamilton Meldrum was 40 at the time of his death. He was unquestionably a gifted and interesting person who contributed in a significant way to the society in which he lived. At the outset I wish to express sympathy to his partner, Ms Karen Thomson, to his daughter, Heather, and to all of Dr Meldrum's family over his very sad and untimely loss. Dr Meldrum held a B.Sc. in chemistry from the University of Strathclyde and a Ph.D from the University of Manchester Institute of Science and Technology. Having worked with Esso and others during the period of his doctoral studies, he declined to pursue what was likely to have been a lucrative

career in the oil industry. Instead he joined Green City Wholefoods, a co-operative organisation which pioneered the importation and distribution of fair trade produce in Scotland. He became the transport manager for the co-operative and the holder of its operator's licence ("O' licence"). Having been with that organisation for about 16 years, in the spring of 2005 he took a six-month sabbatical. After visiting his sister in New Zealand, he returned to Scotland in late March 2005 and contacted a number of driving agencies seeking short-term employment as a heavy goods vehicle driver. He had held a full HGV licence since 1991 but his experience with the wholefoods co-operative had been with 7.5 tonne and Class 2 box vans. His intention was to gain experience of modern large capacity vehicles, including articulated ones, because Green City Wholefoods was expanding to the extent that the purchase of larger capacity vehicles was becoming necessary. It was this idealistic path which led him to Suziline Limited ("Suziline"), a Bellshill-based driving agency which had placed him with TNT at the time of the accident in July 2005. A former racing cyclist, he had built his own bicycles. He was also a keen motorcyclist who had built his own motorised trike. He was clearly conscientious about his duties at work: when he experienced a problem as an agency driver while placed with Barr & Co, he undertook a HGV driver's refresher course with a driving school.

Suziline first placed Dr Meldrum with TNT on 27 April 2005. TNT had a contract with Allied Bakeries to transport bakery produce. Allied Bakeries' delivery programme was divided into two sections. Drivers directly employed by Allied Bakeries delivered to wholesale and retail outlets using vehicles from Allied Bakeries' own fleet. Produce which had to be moved between Allied Bakeries' own depots (inter-bakery deliveries) was taken by TNT in terms of the contract, using vehicles from Allied Bakeries' own fleet. These deliveries usually required the use of larger types of vehicle. Allied Bakeries had a depot in Glentaner Road in Glasgow where a number of its vehicles were based. TNT had a management presence on the site in order to co-ordinate its own drivers who were undertaking inter-bakery deliveries. They augmented their own team by using agency drivers whenever they were likely to be short of staff. Some of the agency men were eventually employed directly as TNT drivers. Dr Meldrum was working as an agency driver within this TNT operation as an inter-bakery driver on the day of the accident, which was his twentieth such day with TNT.

The final matter to be considered in this section is the issue of Dr Meldrum's employment status. A number of submissions were made about this at the conclusion of the evidence in the inquiry. As was accepted, this is something of a side issue because the question of responsibility for such areas as equipment maintenance and training does not depend in the circumstances here upon Dr Meldrum's employment status, and the issue of civil or criminal liability is not a matter for this inquiry. He was employed with Suziline Limited, a driving agency which has subsequently gone out of business, in the sense that he was paid by them. However that agency's role was to offer his services to companies which required suitably qualified drivers. By virtue of that arrangement those companies assumed some of the features of an employer. Suziline's standard application form had a section which allowed the employee to record the types of vehicle and equipment of which he had experience. Dr Meldrum's form (Crown production number 6) contains a tick in the section relating to tail lifts although it seems that his previous experience lay with the underslung type. Details of the driver's licence and its categories were also noted. Suziline did not provide training to its drivers because it was an agency and its drivers might be expected to operate a broad range of vehicle types during different placements. Valentine Brown, the former director of Suziline, confirmed that the agency had not provided training and he indicated that efforts were made to provide appropriate drivers for particular jobs. He also testified that Dr Meldrum had contacted him for advice when he had concerns at a placement. Mr Brown was a former HGV driver himself and he regarded such contact from Dr Meldrum as a positive sign.

At the material time Dr Meldrum had been provided by Suziline to TNT as an agency driver and his duties were conducted in terms of the contract between TNT and Allied Bakeries by which the former provided inter-bakery haulage services to the latter. His relationship with TNT displayed some of the characteristics of an employee/employer relationship. The critical factor, however, is that he was operating under the direction of TNT at the material time rather than that he was a directly employed. As such they had clear obligations towards him in terms of Section 3 of the Health and Safety at Work etc Act 1974 ("the 1974 Act"), Regulation 3 of the Provision and Use of Work Equipment Regulations 1998 ("PUWER"), and Regulation 3 of the Lifting

Operations and Lifting Equipment Regulations 1998 (“LOLER”). Allied Bakeries certainly did not employ him in any meaningful sense but he was operating equipment owned and maintained by them; therefore Allied Bakeries owed obligations towards Dr Meldrum as a user of their equipment under the 1974 Act, under Regulation 3 of LOLER and under Regulation 3 of PUWER.

Allied Bakeries and TNT each recognised their responsibilities towards Dr Meldrum after the accident. Each admitted offences under Sections 3 and 33 of the 1974 Act, the details of which are set out in the complaint which formed Ryder production number 52 at the inquiry.

Operating Procedures.

At Glentanar Road both Allied Bakeries and TNT used similar daily procedures, although each provided its own accompanying paperwork. An onsite transport controller would allocate duties for the day to each driver who was issued with a daily running sheet detailing the runs he was required to make. Accompanying the running sheet was a vehicle checklist which detailed a number of equipment checks which were to be made by the driver on the vehicle and its equipment which he was to use that day, including a check of the functioning of any tail lift fitted. Defects were to be reported immediately. If there was a significant defect the driver would be allocated another vehicle while repairs were carried out. Ultimately the driver was responsible for deciding if any particular vehicle was fit to be used or not. The daily running sheet was used to record where the driver went each day, his arrival and departure times at each site he visited, and broad details of the load taken to and from each site. If any equipment failed on the road, on his return to the depot the driver would complete a driver vehicle condition report (“DVCR”) giving details of the difficulty, which would be handed to his controller so that the problem could be reported to the repair team and rectified. Because of the shift pattern at Glentanar Road, DVCRs from all drivers were usually returned to the TNT controller at the conclusion of a daytime shift for action to be taken. It was clear that there was considerable interaction between the Allied Bakeries controllers and the TNT controllers with significant mutual co-operation onsite. Their offices were positioned close to each other. The evidence suggested that it was common if not usual practice for DVCRs to be

submitted by all drivers to the TNT controller who would pass them on for action to be taken. In the same way a TNT controller would receive a DVCR back from the Ryder technician once repairs had been completed with details of the work done noted on it. He would then pass it on the Allied Bakeries controller when one was available onsite.

The Maintenance & Repair Regime

Allied Bakeries owned the fleet of vehicles based at the Glentaner Road depot. Originally there had been a vehicle maintenance facility on the site, operated by Allied Bakeries itself, but that had closed in 2001 as part of a rationalisation exercise. Thereafter there had been a contract between Ryder PLC (“Ryder”) and Allied Bakeries whereby Ryder had serviced and maintained Allied Bakeries’ Glasgow fleet. All vehicles, including the trailer and tail lift in question, had been independently inspected by the Freight Transport Association (“FTA”) to ensure that they were in good condition at the commencement of the contract. However, in October 2004 the trailers, including 05739, had been taken off the contract and from that point onwards they had been serviced by Allied Bakeries at its own maintenance depot in Stockport. Once again an FTA inspection was carried out, for the same reason as before, when the vehicles were transferred back into Allied Bakeries’ own maintenance scheme. From the same date Ryder became responsible for carrying out *ad hoc* repairs at Glentaner Road on the vehicles and trailers as reported in the drivers’ DVCRs. This was the situation at the time of the accident.

In practice Ryder had a daily presence at the depot. Certain types of repair were passed out by them to specialist sub-contractors. Fabrication work on trailers and their equipment, including tail lifts, was passed out to the Colin Hutton Group Limited (“Huttons”) who had a mobile welding unit which could attend at the depot when required. From time to time engineering repairs were required to tail lift equipment and Ryder would pass that on to Johnston Engineering who were tail lift specialists. Once items raised in a DVCR had been dealt with, the repairer would note that on a copy of the DVCR which would be returned to the duty controller. The evidence indicated that where a defect had been reported but no such defect could be identified by the repair mechanic, he should raise the matter with the controller to

seek clarification; where no defect could ultimately be traced, best practice was to note that position on the DVCR before it was returned to the controller. Clarification was required from time to time and that was understandable from the evidence heard in the inquiry. To give a single example, the cam followers, which were metal levers which pivoted at one end, were referred to as “cam followers” “cam strikers” “cams” “cam levers” “lifters” or “landing legs” by various witnesses.

Although DVCR forms might be transmitted via the TNT controller, there was never any doubt that the repairs were being carried out for Allied Bakeries and on Allied Bakeries’ vehicles. Where any significant question arose as to whether something should be done to a vehicle or not, the Ryder mechanic would seek instruction from Allied Bakeries staff and all Ryder invoices were sent to Allied Bakeries.

Inspections were required periodically in terms of the industry regulations. The Lifting Operations and Lifting Equipment Regulations 1998 (“LOLER”) ordained that a thorough examination of tail lift equipment be carried out every six months. Formerly these thorough examinations were conducted by Ryder in terms of the maintenance contract, but Allied Bakeries had decided to have this done independently, even before the trailers were taken out of the contract with Ryder in 2004. The thorough examinations of the lifting equipment required under the regulations were carried out at the material period by Zurich Risk Services (“Zurich”). Defects noted during a thorough examination were categorised as either category (a), which required immediate repair before further use, or category (b), which were to be remedied as soon as reasonably practical. Matters with a significant safety aspect would be in the former category. In relation to tail lift 05739, Zurich’s examiner, Mr John McGuckien, noted in November 2003 that the lever for deploying the cam followers in order to fold the lift unit away was only operating to move the follower on one side. The same defect was noted again on examination in May 2004, at which time it was also noted that the platform extension did not align correctly with the anti-luce pins. In each case these problems were listed as category (b) defects which meant that they were to be remedied as soon as reasonably practical; they were not classified as defects requiring immediate repair. The cam followers lever was again inoperative at the time of the thorough examination of November 2004., but not when it was looked at once more in May 2005.

In addition to the thorough examinations required under the LOLER procedures, at the time of the accident each trailer and tail lift in the fleet was given a maintenance inspection every six weeks in the workshop at the Allied Bakeries depot in Stockport. During the currency of the pre-October 2004 contract the trailers and their associated lift equipment had been inspected every six weeks by Ryder who had also continued to conduct a thorough examination of the lifting equipment every six months in terms of the contract even after the involvement of the independent inspecting agent. Inspections were also carried out from time to time by the FTA and the Vehicle & Operator Services Agency (“VOSA”) who could call without warning.

Trailer 05739 before the Accident

Trailer 05739 and its associated cantilever tail lift had been manufactured and supplied in 1996. It followed the general maintenance programme as outlined above over the following years. The last LOLER thorough examination of trailer 05739 before the accident had taken place on 16 May 2005. It had been carried out by Mr McGuckien. No reference was made to any defect in either the anti-luce fasteners or the semi-automatic cam closure system in his report of that examination which formed part of Crown production number 23.

The trailer had been used on the day before the accident, 11 July 2005, by John Kane, who was an Allied Bakeries driver. He had made several supermarket deliveries on that day. On the last two delivery runs of the day he found that the tail lift was sticking. On each occasion he managed to free it by moving the lift up and down. On his return to the depot that evening he submitted a DVCR which recorded a number of defects including three faults with the tail lift: there was no internal “up” button; the tail lift was sticking on the near side; and there were no locking pin brackets attached to the tail lift. The last of these was a reference to the brackets used to secure the tail lift in its stowed position against the rear of the trailer and not to the anti-luce fasteners. Each defect reported by Mr Kane on the DVCR was repaired by Jim Rennie from Ryder or by David Harvey from Huttons, whom he had called in to assist, with the exception of the reported sticking of the lift on its nearside. The lift was moved up and down on a number of occasions and no sticking was noted. There

was considerable questioning about this during the inquiry. I am satisfied that a reasonable number of checks were made and that no sticking was observed. However, the copy of Mr Kane's DVCR which was before the court clearly shows a tick beside his entry, "tail lift sticking at nearside". It was not at all clear when or by whom that tick had been made, but it was accepted that the form did not bear any note that the sticking problem had been looked into and that none had been detected, which is what would be regarded as best practice. In the event I do not attach any great significance to that because Mr Kane said in evidence that the sticking was intermittent and that he had been able to clear it when using the lift himself and, as indicated below, I cannot hold that any sticking or jamming of the tail lift played a significant part in the fatal accident.

The Events of 12 July 2005

On 12 July 2005 Dr Meldrum was placed as an agency driver with TNT for the day, operating out of the Glentamar Road site of Allied Bakeries. In the morning of that day he carried out a routine delivery run using an articulated tractor and trailer unit other than the one which featured in the accident. This passed without incident.

Thereafter he was despatched to carry out a second delivery run, this time using tractor unit registration number S860 WUK attached to trailer 05739 which had the cantilever tail lift attached to it. His employment history record provided by TNT (Crown production number 5) shows that he had used the tractor unit on two previous occasions and that he had towed the trailer once before. It gives his departure time from the Glentamar Road depot at the start of this run as 11 am. His destinations were a depot in Cumbernauld and Allied Bakeries' facility in Dundee, which was somewhere to which he had delivered product on eight previous occasions. It is known that at some time before midday he called at the premises of Lenzie Mullen in Cumbernauld. Between 11 am and 12 noon he was met at the gatehouse there on his departure by a Gist security officer named Edward Corson. Mr Corson's duties required him to check on the contents of any lorry leaving the premises. Accordingly he needed to see inside the trailer being driven off by Dr Meldrum. Dr Meldrum had to lower the tail lift in its stowed configuration to allow the rear shutter door of the trailer to be opened for inspection. Mr Corson told the inquiry that it was "a real

struggle” for Dr Meldrum to get it down. He said that the tail lift “was really kind of sticking and not coming down at all” (*transcript of the evidence, Day 3 pages 6-7*). Dr Meldrum made attempts to free it by doing something with the pins at the top of the unit and eventually he got it down. Mr Corson was able to inspect the trailer’s contents and the vehicle left. Mr Corson recalls talking to Dr Meldrum about the lift and having a laugh with him about it. He did specifically recall Dr Meldrum saying that it was the first time he had been out with that one. He formed the view that the tail lift was “knackered” and that Dr Meldrum “had either never really worked it before or hadn’t a clue how to do it because it was really pretty bad” (*transcript, Day 3 page 8*). He realised that Dr Meldrum was not the regular driver who brought the Allied Bakeries vehicle to the premises because he had never met him before.

Thereafter Dr Meldrum went to Dundee and back without incident. Inter bakery deliveries to the depot at Dundee did not require the use of the tail lift for loading or unloading. A full load of empty product baskets was placed in the trailer for despatch to Glasgow. On his return to the depot at Glentanar Road he drove the vehicle round to the basket wash area at approximately 5 pm. It appears clear that at the time of the accident Dr Meldrum was preparing to unload the empty baskets from the rear of the trailer in order to place them in the basket wash area at the end of his shift. Given the arrangements at Glentanar Road that operation was commonly carried out by drivers themselves at the end of the day and it required the use of the tail lift. At the time of the accident there was no-one else in the vicinity and no-one observed what happened. Subsequent examination by the police of video footage recorded by the depot’s CCTV system showed Dr Meldrum moving in the vicinity of the vehicle until about 5.17 pm at which time he moved towards the rear of the trailer on the passenger side and passed out of sight of the CCTV system. At approximately 6.15 pm his body was discovered trapped against the rear of the trailer as described above by Henry Dillon, a senior despatch manager with Allied Bakeries. Accordingly I have determined the time of death as occurring between those times. A hook of the type used by drivers to pull piles of baskets to the rear of the trailer was found on the ground close to Dr Meldrum’s feet and his left hand was near to the external operating buttons of the tail lift mechanism. The trailer itself contained the full load of empty baskets and its rear shutter door had been opened. The tail lift had been deployed to the extent that the extension flap and its loading ramps had been extended by Dr Meldrum. This

indicates that he had been able to lower the lift platform to the point where it had become approximately horizontal; otherwise he would have been unable to deploy the extension and flaps. The fatal flip-over motion of the platform extension can only have occurred while he was seeking to raise the platform again. I therefore conclude that he was engaged in the task of preparing to unload the empty baskets when the accident occurred.

It is not possible to say with any degree of certainty why he was raising the unit with the platform extended but with the cam followers engaged.

The Movement of the Platform Extension

This was described to the inquiry in detail by Russell Breen, B.Sc., MIME, a Specialist Inspector for the Health and Safety Executive (“HSE”) of 17 years experience and a qualified mechanical engineer. He had been shown the accident scene by the police on the evening of 12 July 2005 and had carried out an examination at that time. On the following day he had been present when a series of tests were made on the tail lift. Mr Harvey of Huttons had further demonstrated the operation of the tail lift to him on 14 July 2005. Thereafter the trailer unit had been removed to the HSE laboratories at Buxton in Derbyshire on 21 July 2005. Further examination was carried out there, including an examination and function test in the presence of representatives from Ratcliff on 25 August 2005. The operation of the lift was recorded by means of a video recording and aspects of it were timed. The video recording formed Crown label number 1 and was shown to a number of witnesses at the inquiry. Mr Breen’s report for the HSE formed Crown production number 17.

Each set of tests had yielded the same results: if the platform was raised with the cam strikers engaged and with the extension deployed but unsecured to the platform arms, the extension would suddenly and violently fold forward towards its stowage position and would strike the floor of the trailer or any baskets within the rear of the trailer once the platform had reached an angle of approximately 55 degrees from horizontal. Assisted by the effect of the torsion springs within the hinge, this movement took 1.2 seconds from the attainment of the necessary angle to the point when the platform extension struck the back of the trailer. Mr Breen described this action of the

platform extension as “counter-intuitive”. In evidence he explained what was meant by this: one would expect the platform to reach an angle “considerably greater” (*transcript, Day 23, page 21*) or “significantly more” (*transcript, Day 23, page 23*) than 55 degrees from horizontal before the extension wanted to flip forward. Once it did so, the action was very rapid as well as unexpected with the result that Mr Breen thought “you would struggle to get out of the way of it” (*transcript, Day 21, page 145*).

None of the drivers who gave evidence could provide any operational reason for raising the lift with the extension portion deployed and the cam strikers set so as to fold into the stowage position. Mr Barsby, a semi-retired consultant and former chief engineer from Ratcliff, testified that one of his colleagues had told him that during discussions with Allied Bakeries over the design specifications of the cantilever tail lifts it had been specified that the units were to be capable of being stowed vertically against the rear of the trailer with the platform extension folded out into its deployed position. It followed that one of the functions of the anti-luce fasteners was to secure the platform extension at such a time. In his view the other functions of the anti-luce fasteners were to prevent the flipping over of the platform extension in the event of the lift being raised inadvertently with the cam strikers deployed in the position which would cause the platform to fold into the rear of the trailer; and to seat the extension correctly on deployment against the effect of the torsion bars within its hinge which would tend to cause the extension to bob up slightly from the horizontal on deployment. Insofar as it was suggested on behalf of Allied Bakeries that I should disregard Mr Barsby’s evidence of the design specification, since he himself had not been a party to the negotiations, I see no reason to reject that aspect of his evidence; in any event, it is a matter equally within Allied Bakeries provenance and no evidence was led in rebuttal. The safety aspect of the anti-luce fasteners in preventing inadvertent flipping over of the extension seems obvious although it is perhaps less so to an operator who has no intention of raising the platform towards the stowage position with the extension deployed.

In the event, two witnesses had seen a platform extension flip over on earlier occasions. James Thorpe, a commercial vehicle body repairer at Allied Bakeries’ workshop in Stockport, told the inquiry that he had seen it happen “a couple of times”

when an operator had forgotten to fold the extension away and had sought to raise the lift into its stowage position. He said that he had seen both drivers and mechanics do this (*transcript, Day 5, pages 46-7*). Mr Kane said that it could be done “very, very easily” and that he had done it once by mistake (*transcript, Day 1, page 116*). It was a frightening experience which had happened about the time that he had started using it and he had not been warned about the danger of it (*transcript, Day 1 page 187*). It follows that the possibility of such an occurrence was within the knowledge of Allied Bakeries.

The Defective Anti-Luce Fasteners

The defective condition of each of the two anti-luce fasteners on the tail lift was clearly to be seen in several of the photographs within Crown production number 18. On being shown these, Mr Barsby indicated that the plates visible in the photographs were not the original ones supplied by Ratcliff but were later replacements. That serves to indicate, however, that the plates had been replaced as part of the maintenance regime at some time before the accident.

The evidence indicated that the cantilever column type of tail lift was particularly susceptible to accident damage. Since it stowed away against the rear of the trailer impact damage was commonly caused by trailer units being reversed against loading bays. The columns at either side had to reach to a low level to allow the platform to deploy down to ground level; consequently they commonly sustained damage by striking on to the ground when a trailer was being driven over uneven ground or up or down an incline. The depot at Glentanar Road was said to include areas of uneven ground. It also featured a significant slope which vehicles had to pass over when entering and leaving. It was not uncommon for the lift to be struck by a fork-lift truck when unloading was taking place at a bay. Impact damage commonly caused several problems one of which was that the anti-luce plates or pins could break off. Mr Thorpe said that he would replace defective pins and plates if he came across them; it was a common repair.

The extension portion of the platform formed one third of the total when extended. The process of folding it out was assisted by the spring element of one of the torsion

bars within the hinge which joined it to the main section of the platform. As it was extended the holes in the plates attached to either side of the extension passed over the fastening pins on the side arms of the main unit which were then fastened to secure the extension in position. If the fasteners and plates were fitted but not used, the plates would rest on the pins so that the extension could not sit correctly in position. Most drivers seem to have regarded the function of the anti-luce fasteners to be to retain the extension in position against the bounce effect caused by a lively torsion bar; but once the bar had lost its strength with age, the extension section would sit in the correct position under its own weight. Accordingly the anti-luce fasteners were not regarded as a safety-related item by many users.

Mr Breen estimated that the anti-luce fasteners on the tail lift had been defective for a period of “weeks, probably months, rather than days” (Crown production 17, page 9). This was based on the degree of corrosion he observed when he saw the unit just after the accident. While accepting that he was not a corrosion engineer or a metallurgist, he had seen a great number of broken and corroded items over his seventeen years as an inspector. He estimated that the pins and plates were showing signs of medium-term, or second stage, corrosion, that is older than a week or two but not yet very old corrosion. This middle band was particularly difficult to date accurately.

As indicated above, Mr McGuckien did not note any defect with the anti-luce fasteners at the LOLER thorough examination of the tail lift on 16 May 2005, but he had noted a misalignment of the plates in May of the previous year. It follows that he paid attention to the anti-luce fasteners at the thorough examinations. Mr McGuckien presented as a careful and conscientious examiner. Accordingly I conclude on a balance of probabilities that the defect to the nearside pin and that to the offside plate occurred after the thorough examination on 16 May but in each case at least a week or two before the accident.

Mr Barsby and Mr Breen were each of the view that the extension could not flip over if the anti-luce fasteners were engaged; Mr Breen considered that the deployment of only one of the two fasteners would have been sufficient. It follows that the defect to each of the fasteners was a critical element in causing the accident.

I was somewhat surprised that the safety aspect of the anti-luce fasteners was lost on the drivers who gave evidence, even if they had no operational need to fold the lift with the extension deployed. Even Mr Kane, who was described as “pernickety” by his controller, did not report the damaged fasteners as defective on the day before the accident. He did not know why he did not do so, but added that the pins were never used by drivers to secure the extension, which he referred to as the “half-flap” (*transcript, Day 1, page 66*). There was at least a suggestion made on behalf of Allied Bakeries in submissions that these defective fasteners might have been noticed by Mr Rennie or Mr Harvey when they were working on the tail lift on 11 July and that the former might have brought them to the attention of an Allied Bakeries controller. However, the primary method of identifying faults between formal periodic inspections or examinations lay with the drivers in the regime operated by Allied Bakeries and it was the view of the drivers towards these defects which was the critical element. Their position was shared by others who might have been expected to think otherwise: Mr Colin Manson, the former managing director of Johnston Engineering, who was a tail-lift specialist and someone who carried out LOLER thorough examinations, and Mr McGuckien both considered that faulty anti-luce fasteners were to be classified as category (b) defects, that is not requiring immediate repair and therefore not to be regarded a safety critical. Mr Rennie and Mr Harvey had carried out the specific repairs which they had been detailed to do in terms of the DVCR.

The anti-luce fasteners had been designed into the unit for a reason. The final word with regard to this aspect of the inquiry lies with Mr Thorpe, who had this to say (*transcript, Day 4, pages 114-5*): “If somebody has put a pin there and a hole to fasten it down then they want it fastened down”. It is difficult to escape the logic of that comment. Unfortunately their significant safety aspect was not appreciated by the drivers for the reason stated above.

The Defective Semi-Automatic Cam System

Mr Thorpe testified that in 1997 he had been instructed by his supervisor not to replace the springs which caused the cam followers to deploy automatically into the vertical position once they were broken. No explanation had been given to him at the

time but he thought it was because it took some time for the parts to be obtained when the springs required to be replaced. Mr Barsby, of Ratcliff, described this apparent policy of not maintaining the lift in the way in which the manufacturer intended as “irresponsible” (*transcript, Day 19, page 135*). Once he had been briefed on the nature of the system as it had been designed to be used, Mr Breen described the failure to maintain the equipment to design standards as “unacceptable” (*transcript, Day 23, pages 6-7*).

Despite this there was evidence to indicate that some of the semi-automatic cam closure systems were still being repaired after that date. Specifically, the lift in question had its springs replaced by Ryder in July 2004, while it was still within their maintenance contract, to restore its semi-automatic functioning. Alexander Tippell had conducted the FTA examination of trailer 05739 in October 2004, when it was about to come out of the Ryder contract. He testified that the semi-automatic cam closure mechanism had been working at that time (*transcript, Day 18, page 54*).

However, the drivers’ evidence suggested that most of the semi-automatic cam closure mechanisms were not operating normally for a period of years before the accident. Despite conducting a number of thorough examinations, Mr McGuckien had only learned about the semi-automatic nature of the system a short time before the accident. It follows that the fact that he did not report any defects in this aspect of the operation was because he did not know to check it. He was aware that the lever which lowered the cam followers was meant to operate upon them both simultaneously and he had reported a failure in that respect as a category (b) defect at thorough examination as indicated above.

The cantilever tail lift could be operated safely if the cam followers were manually deployed, provided that the operator knew how to do so correctly. This was the way in which the unit was demonstrated in the video footage forming Crown label number 1, and several witnesses had never seen them operate automatically.

The critical factor here is that the operator had to know how the system was to be operated in order to use it safely. As described above, the semi-automatic system was designed to make the lift deploy into the operating position automatically, but to

require manual input for storage, so that the lift could not be folded up accidentally with the platform extension still deployed. However, for the cam followers to rise automatically, the operator would have to know that he had to lower the lift almost to ground level so that the cam followers would clear the cam when pushed up by the springs. He could deploy the extension section of the platform before that point had been reached, which could cause the lift to fold if he then were to raise the unit without first lowering it to free the cams. Furthermore, although the tail lift could be safely operated despite failure of the semi-automatic system if the cam followers were manually deployed, an operator would need to know that that required to be done and how to do it. In each of these respects the issue of training is of first importance. There was no evidence to indicate that Dr Meldrum had received any training at all in the use of this type of tail lift.

Mr Kane, who had been driving for Allied Bakeries for about five years by the time of the accident, said that he had never seen the cam followers operate automatically. He indicated that he had deployed them manually in the manner to be seen in Crown label number 1 when he had used the trailer 05739 on the day before the accident, and he did not know at that time that they were supposed to work automatically. It follows that the semi-automatic system was not functioning on the day of the accident and that it had probably not been working for some time beforehand.

In these circumstances the failure to maintain the lift mechanism was a critical element in the accident because the semi-automatic system was not functioning on the day in question. As a result of this, the cam followers did not spring into the vertical but remained engaged with the cams so that the unit began to fold in as it was raised. It was this action, in conjunction with the defective anti-luce fasteners, which caused the fatal flip-over of the extension section of the platform to occur.

The Defective Maintenance Regime

Defects in the maintenance regime operated by Allied Bakeries contributed to the causes of the accident because the defects described above had not been identified and repaired at the time of the accident. While the date of occurrence of each defect cannot be identified with certainty, I am satisfied that in each case the defect had

existed for some time prior to the date of the accident. No attempt was made on behalf of Allied Bakeries to suggest otherwise.

In his report (Crown production number 17), Mr Breen stated (at page8):

“6.1 The tail lift was in poor condition with a number of broken, defective or missing parts.”

He concluded that the maintenance regime was failing to keep pace with the deterioration to the tail lift as it approached the end of its useful working life. It is difficult to disagree with that opinion. According to Allied Bakeries own records (the relevant report forms Crown production number 9) it had been inspected in Stockport on 20 June 2005, approximately three weeks before the accident. A number of repairs had been carried out, yet the defects noted by Mr Breen were all present on the day of the accident.

On the day before the accident the tail lift in question had been the subject of Mr Kane’s DVCR and the defects noted thereon had apparently all been repaired. The lift had been seen by Mr Rennie and Mr Harvey who had repaired the various parts of the vehicle, trailer and lift which they had been asked to repair. Mr Harvey had gone further. He had replaced a bolt which secured one of the cam followers to the shaft which ran between the two which he had noticed was missing, despite that defect not appearing on the DVCR. He expected that repair to have made the followers operate in tandem once more. In fact they did not, because unknown to him there was also a fracture in the shaft which linked them. All of this simply underlines the central point about the difficulties in the maintenance regime. The contracted repairers and their sub-contractors concentrated on repairing items recorded on the DVCRs, which is exactly what they were required to do. The DVCRs were completed by the drivers who noticed obvious problems with the equipment they were using each day. It was a matter of chance if any driver happened to have any degree of mechanical or engineering knowledge. The critical factor in this system was the attitude of the driver to anything he observed in the equipment. If a driver failed to appreciate the significance of any item, he might not report it as a defect. Thus it was that Mr Kane – despite having accidentally experienced a flip-over of the extension portion of the lift

platform himself on one occasion – failed to appreciate that there was a safety consideration attached to the use of the anti-luce fasteners so that he did not report them as a defect on 11 July when they must obviously have been defective. This situation is even more acute in the case of agency drivers such as Dr Meldrum who are reasonably to be expected to have less familiarity with vehicles and equipment than the regular drivers who use them more often. Any regime which depends upon the driver to recognise and report defects can only operate properly where all drivers who use the machinery are familiar with its functions and, most importantly of all, are able to recognise the parts of their equipment which fulfil a safety function. This was obviously not the case with the tail lift in question because drivers had lost sight of the safety aspect of deploying the anti-luce fasteners so that they had not been repaired.

With regard to the semi-automatic cam closure mechanism, Mr Barsby said it had been designed to require a conscious effort to be made to deploy the cam followers in the configuration required to fold the tail lift away so that it could not be done inadvertently. The decision which had apparently been taken not to renew the springs which operated the semi-automatic system was a failure at a different level in the maintenance regime, because it reflected a systemic failure at the level of management of the maintenance unit to appreciate the proper and safe functioning of the equipment in the light of the explanation of its true function and design intention.

A system of this sort requires not only that all drivers are properly trained to recognise defects – and particularly defects with a bearing on safety – but also that the message is constantly reinforced at the level of operational management, to ensure that all drivers continue to recognise the true nature of what they are facing so that the kind of acceptance of the situation before them which had arisen in the case of the two critical equipment defects in this case becomes unacceptable.

It was suggested at several points in the evidence by Mr Caskie in cross-examination that aspects of the maintenance regime were trimmed in an attempt to reduce costs. In rebuttal of that suggestion in his closing submissions, Mr Wade suggested that problems had arisen because the safety element of some components was not appreciated rather than because there had been attempts to cut costs on the part of Allied Bakeries. I accept Mr Wade's position here. Alexander Tippell, an inspector

with the FTA of 26 years' experience, was satisfied with the standard of the Stockport maintenance regime as reflected in the records he was shown. Mr Wade pointed out that both he and Mr McGuckien regarded Allied Bakeries as considerably better than average in their experience of vehicle operators. The percentage of MOT failures was monitored by the company, they were subject to unscheduled inspections by VOSA and fleet vehicles were also checked over by the FTA at Allied Bakeries' request. No significant causes for concern were raised by any of these agencies. In all the circumstances I consider that this aspect of Mr Wade's submissions was well founded. The residual problem was that the failure to appreciate the safety aspects of some of the equipment did lead to significant failures of maintenance, as Allied Bakeries accepted by the terms of the plea of guilty to the complaint raised against the company.

These failures of the maintenance regime as it was actually operated by Allied Bakeries led directly to the specific failures of the equipment detailed immediately above. These issues are tied up closely with certain failures of training and supervision in their bearing upon the causes of the accident.

The Defective Training Regime

Dr Meldrum was clearly not familiar with the tail lift equipment which he was required to use at the time of the accident and had not been properly trained to use it safely. His work record with TNT (Crown production number 5) showed that he had previously used a trailer fitted with a folding cantilever tail lift of the same type on one occasion. This was on 28 June 2005, when he had also gone to BOC and to the Dundee depot. However, there was no evidence about the condition of that tail lift, or about whether any assistance in its use had been available to him on that day.

There was a clear body of evidence about his difficulties which indicate his lack of training. Asked about what he had said about the cantilever lifts, his partner, Ms Karen Thomson, told the Inquiry that he had indicated to her that there were things he was struggling with because he had had to learn everything very quickly when he first started to use them, that he had never used or even seen this type of tail lift before, and that they were very old (*transcript, Day 23, page 126*). Mr Corson described his

obvious difficulty in operating the lift earlier on the day of the accident and indicated that he had formed the impression that Dr Meldrum had not known how to use it, as indicated in detail above. Finally, the evidence of the accident itself clearly suggests that he cannot have been aware of the way in which the tail lift was about to move. This body of evidence indicates that Dr Meldrum had not been properly trained to use the type of lift he was expected to use on 12 July 2005.

Anthony Donnachie was the TNT traffic controller on the day when Dr Meldrum first arrived as an agency driver with TNT at Glentaner Road, 27 April 2005. He had taken Dr Meldrum through the company's induction course for new drivers and had completed the related paperwork. He testified that he would normally spend 10 to 15 minutes with a new driver after which the driver would be taken out for a driving assessment by William Moore, who was TNT's driving assessor at the site. Thereafter Mr Donnachie would spend a further 30 to 45 minutes with the driver to complete the induction procedures, in the course of which he would carry out a check of the driver's licence and would conduct a briefing on the product and on general safety procedures such as the use of high-visibility clothing and the regulations relating to driver's hours. In his part of the process Mr Donnachie made no enquiries about the driver's previous experience; nor did he deal with the equipment to be used. While the forms completed at that part of the induction were available to the inquiry and showed what Mr Donnachie had gone through with Dr Meldrum, the driving assessment form which should have been completed by Mr Moore was not produced as apparently it could not be found. Mr Moore gave evidence. He did not recall Dr Meldrum's assessment, but he explained what had normally been done in an assessment at the relevant time. He would spend about one hour with the driver, mostly on the road but also including a short 5 or 10 minute session regarding the use of an underslung tail lift. All such assessments were carried out on the large "double deck" type of trailer because these were a new addition to the fleet and were the type of vehicle which the agency drivers were expected to be using. All double deck trailers were fitted with an underslung-type tail lift. It was suggested in the course of submissions that Dr Meldrum had not in fact received a driving assessment at the hands of Mr Moore because Mr Moore did not remember it specifically and there was no paperwork to support the contention that it had happened. I am satisfied on a balance of probabilities that he did receive a driving assessment. Mr Moore thought

that he had; the usual portions of the induction which preceded and succeeded the driving assessment had been completed in the usual way and the written record supported that; Mr Donnachie thought that he had some memory of Dr Meldrum leaving the office with Mr Moore; Mr Donnachie had signed off Dr Meldrum's personnel sheet (Crown production number 10) on its first page, dated 27 April 2005, which had been completed in such a way as to indicate that a driving assessment had been carried out by Mr Moore; and Dr Meldrum's own approach (remembering that he had undertaken refresher lessons in HGV driving after experiencing problems with another agency placement) was such that he would have been likely to have raised the issue himself if he had failed to receive the expected induction on a vehicle type with which he had little or no experience and which he would be expecting to drive for TNT.

The evidence further indicated that greater induction and training time was given to TNT's own drivers than was the case with agency drivers.

The evidence from Mr Barsby and others indicated that the tail lift which featured in the accident was a model which was specially built to a specification produced by Allied Bakeries and that no other operative in Britain used that type although examples of something similar appear to have been provided to the Post Office. It follows that agency drivers such as Dr Meldrum were being assessed in relation to a common type of modern tail lift but subsequently were being asked to use older trailers which featured a unique type of lift with specialist features without any additional input from TNT.

Mr Moore stated that if an agency driver was required to use another type of vehicle with a different type of tail lift he would either have to work out how to use it by himself or to ask someone else to show him how to use it. Mr Kane said that in his time as a driver with Allied Bakeries there had always been someone he could ask if he came across something which he did not know how to use (*transcript, Day 1, page 53*). Mr Donnachie said that it would be up to the driver to tell someone and to seek assistance if he did not know how to operate a particular type of tail lift. Mike Norris, who was at the material time the manager at TNT responsible for the Allied Bakeries contract, indicated that where any TNT driver or agency driver encountered a piece of

equipment with which he was not familiar he would expect the driver to ask either the controller or a competent TNT driver to show him how to use it. In his evidence Mr Norris placed the onus on the agency driver to raise such concerns (*transcript, Day 6 page 13*). I do not regard this as a satisfactory state of affairs, in particular having regard to the type of equipment which featured in this accident. There are a number of very obvious reasons why an agency driver might fail to raise a concern. He might not appreciate that the equipment was different from that which he had previously experienced, or he might be apprehensive about displaying a lack of familiarity with it; he might be under pressure of time; he might be reluctant to appear ill-informed or lacking in experience; there might not be anyone to hand who could answer his needs in a satisfactory way; and he might not even recognise the true nature of any difficulty before him. The tail lift in question was something which drivers could not have experienced beforehand because it was effectively unique to the Allied Bakeries' fleet. The type of equipment fitted to each vehicle was within the knowledge of the controller, as was the previous experience of each agency driver. In these circumstances it would be a far safer approach for the controller or supervisor to satisfy himself properly that any driver, but particularly an agency driver, knew how to use the equipment which was being allocated to him. The onus has been put in the wrong place in Mr Norris's approach.

No written guidance on the use of this type of tail lift seems to have been issued to the drivers (agency or permanent) before the accident. A detailed version was produced by Allied Bakeries shortly after it, but by that time their cantilever lifts were being put beyond use. The operator's manual issued by Ratcliff was a generic one which was designed to cover a range of cantilever lifts; it did not contain specific information relating to the model supplied to Allied Bakeries' specification. None of the drivers who gave evidence spoke of seeing such a document. In the circumstances of this accident, training would have been of greater value than the provision of written guidance, albeit the latter should have been available.

The training given to agency drivers such as Dr Meldrum was deficient in that it was restricted to the use of the double-deck style of trailer which had an underslung tail lift. It did not include training in the cantilever type of tail lift which agency drivers were expected to use from time to time as directed by a TNT controller. Furthermore,

the training system did not identify that as a defect despite the fact that agency drivers could have had no realistic prospect of having used such a type of lift before since it had been purpose-built for the Allied Bakeries fleet. It is clear that the regular drivers were able to operate the cantilever-style tail lift in such a way as to bypass the problems created by the defective anti-luce fasteners and the defects to the semi-automatic cam closure mechanism. It is also clear that they had been doing so for a period of years before the accident. Regrettably the training offered to Dr Meldrum failed to pass on the knowledge of how to do so. He was not trained in the use of the type of lift which featured in the accident. He was not trained in what to do if it failed in some way to operate correctly. He was not shown how to use it so as to overcome the difficulties created by the defective maintenance of the critical components, as other drivers did. These failures played a significant part in the accident.

Related Issues: the role of the vehicle controller

Two questions became very significant as the evidence to the inquiry progressed: that of identifying inexperience in an agency driver; and that of transmitting information when equipment had been modified or had altered in some way in its pattern of use. On the one hand it is relatively easy to identify in broad terms areas of inexperience and to provide training accordingly. Each of the defects in the tail lift which featured in the accident was something which need not have been dangerous to an operator who knew how to bypass the problem. Indeed the evidence strongly suggested that the faults were well known and that adaptation had taken place so far as Allied Bakeries' and TNT's own drivers were concerned.. The lift was operated safely by drivers who knew how to compensate for the defects (even if they did not appreciate that they were defects). Two major concerns arise: there appears to have been no proper system for such knowledge to be transmitted among the drivers; and there were clear defects in the procedure for assessing the capabilities and experience of an agency driver such as Dr Meldrum. Mr Kane said that there was always someone to ask when he came across a piece of equipment which he had not used before but this is in no way a satisfactory system. Such evidence as there was about the driver assessment and training offered to Dr Meldrum as part of his induction by TNT indicated that he had been assessed using a vehicle with an underslung tail lift. Equally while the evidence clearly indicates that regular drivers such as Mr Kane

knew how to by pass the defects in the unit by operating the cam followers manually there is no evidence to suggest that such knowledge was ever transmitted to an agency driver. It is not a satisfactory answer for an operator such as TNT or Allied Bakeries to expect the driver to ask for help when he comes across equipment with which he is not familiar, for the reasons stated above in relation to where the onus should lie. The only satisfactory response to this problem is a system of working which places responsibility on the supervisor who is detailing the work programme. He allocates drivers to vehicles and to delivery runs; he knows which drivers are in-house and which are agency; he knows which drivers are trained in which areas; he knows which drivers have used each type of vehicle before; he knows the features of each vehicle in the fleet; and if he does not know any of these things he is in a position to find out without difficulty. The only safe system of working is one in which drivers are allocated vehicles and equipment which they have been trained to use and with which they are familiar. The person best placed to ensure that happens is the supervisor, that is the controller. The system must identify to him when a driver (whether agency or employed) is using a particular vehicle or equipment for the first time. The system must then ensure that the driver concerned is seen to be able to use the vehicle or equipment safely, the obvious way being to have his pre-run checks supervised either by the supervisor, by the driving assessor, or by a senior driver familiar with the equipment. Such a system ought to establish that no-one leaves the depot without having demonstrated competence in using safely the actual machinery he is being expected to operate. In the case of Dr Meldrum this did not happen. As an agency driver, he was detailed to use equipment with which he was not familiar on 12 July 2005.

Other Matters

On behalf of Allied Bakeries Mr Wade submitted that the sticking noted by Mr Kane on 11 July, the problems observed by Mr Corson on 12 July and the jamming described by Mr Breen when the tail lift was tested on 13 July were all symptoms of the same fault which had occurred on each of those occasions but which was said not to have happened when the vehicle and its lift were being fixed by Mr Rennie and Mr Harvey on 11 July. This submission formed part of his attack on the credibility of Mr Rennie. I was urged to consider that there had been one defect which had occurred

intermittently throughout the days mentioned. I cannot accept that interpretation of the evidence. Mr Kane described a “sticking” on the nearside which had occurred when he used the lift on two occasions. He said that he could clear it by moving the lift up and down a few times. Mr Corson described a problem in lowering the lift while it was in its stowed position. He had seen Dr Meldrum attend to the stowage pins before he eventually did manage to lower the unit. Neither Mr Rennie nor Mr Harvey observed any sticking or jamming of the tail lift while they were working on the vehicle despite raising and lowering it on a number of occasions. Mr Breen found the lift to be deploying to the point where the platform moved out to the horizontal but to be jamming at that point, when it was about 400 mm from the ground. The unit jammed consistently at the same point each time when it was tested. These descriptions are at such variance with each other that I cannot hold on a balance of probabilities that they refer to one recurring difficulty. That being so, the sticking or jamming issue has little weight in relation to Mr Rennie’s credibility.

The occurrence of some form of sticking or jamming at the time of the accident would obviously offer some explanation for Dr Meldrum’s actions in raising the lift with the platform deployed and the cam followers engaged because he could well have been attempting to explore the nature of any difficulty and attempting to cure it. However, since I cannot accept that the evidence points to one fault occurring intermittently between 11 and 13 July the issue becomes impossible to determine. I accept the accounts of Mr Rennie and Mr Harvey that no sticking or jamming was evident to either of them when they were working on the unit after Mr Kane had returned it to the depot on 11 July. The nature of the fault observed by Mr Corson around mid-day on 12 July does not lead to the conclusion that something must have occurred when Dr Meldrum was back at Glentanar Road because that difficulty seems to have been cleared by Dr Meldrum at the time in Cumbernauld. The jamming observed by Mr Breen on 13 July could offer some explanation because that occurred at a point at which the platform extension could have been deployed in the normal way but before the cam followers had disengaged; indeed the fault observed by Mr Breen would have prevented their disengagement from the cams because the lift could not have been lowered sufficiently to allow them to clear the cams. Both Mr Breen and Mr Barsby thought that the jamming could have been related to the damage clearly visible to the foot of the nearside column of the lift unit which was noted in particular in

photographs 15 and 16 appended to the report prepared by Mr Daniel Pointon, of J H Burgoynes, Consulting Scientists and Engineers, which formed production number 1 for Allied Bakeries.. Unfortunately the lift was not tested on the day of the accident itself and it was not tested at the exact location of the accident. This last point is of particular importance because the evidence indicated that a tail lift might stick or jam for a variety of reasons which might be wholly or partly related to whether it was sited on level ground or not. By the time on 13 July that Mr Breen observed the testing of the tail lift and noted that it was jamming the trailer had been moved from the basket washing area to the maintenance area within the depot at Glentanar Road which was a different surface. While it is possible that the lift might have jammed or stuck on the evening of 12 July, and that such an event might explain both Dr Meldrum's actions and his positioning relative to the unit at the time of the accident, I cannot conclude on a balance of probabilities that such a thing did occur at the material time. Dr Meldrum might have been investigating the failure of the semi-automatic cam closure mechanism to deploy correctly at the time of the accident and the available information is equally consistent with such an explanation. In my view it would be speculation for me to conclude that one or other of these explanations is the correct one, because of the uncertain state of the evidence.

In her submissions at the close of the Inquiry, Ms Hay was critical of a perceived failure on the part of Allied Bakeries to share information with TNT, for example about the decision not to replace the springs in the semi-automatic cam closure system. I do not consider that this point is of major significance in the circumstances of this accident. It is clear that on a day-to-day basis there was considerable contact at driver-controller level. It is equally clear that both sets of drivers must have been operating the lifts manually for a period of years and that neither set of drivers had been systematically noting defective anti-luce fasteners on their DVCRs. Vehicles were shared and were used by each operator. The critical failure with regard to the transmission of information was not in my view between Allied Bakeries and TNT but between TNT and the agency driver, Dr Meldrum, who was clearly left with insufficient guidance in the operation of a type of lift which he was not likely ever to have experienced anywhere else and in circumstances where TNT ought to have known that.

Conclusion

This horrible accident cannot be repeated because in the immediate aftermath of Dr Meldrum's death Allied Bakeries had all remaining tail lifts of this type which were still in service welded into the closed position so that they could not be deployed for use as a lift again. The type is now obsolete.

Mr Donnachie informed the Inquiry that since the accident TNT's training procedures had been completely revised so that they were now more detailed than they had been at the time of the accident and more time was allowed for driver training.

However, the identification and maintenance of safety-related items and the identification of training needs and the provision of appropriate training remain live issues for all operators of industrial machinery at all times.