

SHERIFFDOM OF TAYSIDE CENTRAL AND FIFE AT KIRKCALDY
UNDER THE FATAL ACCIDENTS AND SUDDEN DEATHS INQUIRY
(SCOTLAND) ACT 1976
DETERMINATION
BY
SHERIFF A G McCULLOCH
IN RESPECT OF
FATAL ACCIDENT INQUIRY
INTO THE DEATH
OF
MARCEL JASON ALEXANDER DAISLEY

Kirkcaldy, 30 December 2014

The Sheriff having considered the evidence presented, Determines in terms of section 6(1) of the Act as follows:

- I. That in respect of subsection (a) Marcel Jason Alexander Daisley died at about 1305 on 26 August 2010 at an excavation on the construction site of Bottling Hall 3, Diageo, off A915 Kirkcaldy to St Andrews road, between Windygates and Leven, whilst acting within the course of his employment with Ground Developments Ltd;
- II. That in respect of subsection (b) the cause of death was 1a Crushing Chest Injuries; 1b Blunt Force Trauma; and 1c Entrapment beneath Dumper Truck (at work); and the cause of the accident was the deceased at about 1245 reversing the 9 tonne dumper truck he was driving over the edge of

an excavated area which was approximately 1.8 metres in height, whereby he was thrown from his seat onto the ground, thereafter being crushed by the Roll Over Protection System attached to the vehicle, and his failure to wear the seatbelt provided;

III. That in respect of subsection (c) the reasonable precautions whereby the death and the accident might have been avoided are:-

- (1) The wearing of the seatbelt fitted to the dumper truck, which might have prevented death;
- (2) The keeping of a proper lookout by the deceased whilst reversing his dumper truck;
- (3) The restriction to a minimum of any distance travelled in reverse by a dumper truck.
- (4) The placing of barriers in a continuous line along a line about 2 metres parallel to the edges of the excavation, whereby the deceased may have realised sooner that he was close to the edge, and taken action to prevent the fall into the excavated area; and

IV. That in respect of subsection (d) there were no defects in any system of working which contributed to the death or the accident resulting in the death;

V. That in respect of subsection (e) there are no other factors relevant to the death.

REPRESENTATION

[1] The Crown was represented at the Inquiry by Ms Stewart, Procurator Fiscal Depute from the Health and Safety Division of COPFS. The family of the deceased were represented by Ms Toner, Advocate; the employers of the deceased, Ground

Developments Ltd were represented by Mr Morrison, and Mr Dickson appeared on the instructions of the Health and Safety Executive. I heard evidence over a number of days, from the following witnesses:-

1. Aaron Edward Carver, machine operator, Ground Developments Ltd
2. Stuart Dobrinski, site manager Ground Development Ltd
3. Scott McArthur, ground worker, Ground Developments Ltd
4. Edward Carver, site manager, Ground Developments Ltd
5. John Donnelly, Technical Manager, Ground Developments Ltd
6. John Blackburn, recently retired Principal Inspector, Health & Safety Executive.

Additional parties had agreed a substantial amount of evidence in a Joint Minute of Agreement, for which I was grateful, as it narrowed considerably the evidence and the issues for consideration.

BACKGROUND

[2] Diageo operate a substantial facility in Leven, Fife. The company decided to expand the bottling operation there, and appointed ROK as main contractors. In due course, Ground Developments Ltd (GDL) were appointed as sub-contractors. Their job was to prepare the ground for the subsequent building of a new bottling hall, and car park. This entailed the excavation of earth and other materials from the site, to a depth of up to 2 metres, the grading (or screening) of the excavated material, and then the mixing of fine and intermediate material with lime for backfilling into the excavated area. Once rolled, this replaced surface became a hard, level base for construction. GDL had been on site from about March 2010, and the excavation was approaching its western end. The deceased had been a supply worker, through Platinum Recruitment, but was employed by GDL from early August 2010.

It is a general requirement of contractors such as ROK and GDL that employees have a proven proficiency in the areas and fields in which they are to work. With regard to the deceased, he had attended and passed courses in the use of forward tipping dumper trucks. Production 11 is his Experienced Worker Assessment, from Central Training Services dated September 2008. This resulted in the issue of a CPCS Trained Operator card to the deceased. All witnesses who knew the deceased confirmed that he appeared to be a proficient driver, if occasionally a little unsure. He had attended a site induction, and been provided with the Risk Assessments and Method Statements that had been prepared by senior staff of GDL (productions 13 & 14). Safety talks were held each day, when instructions were given out for the work to be done that day. There were a number of site rules, including an overall speed limit of 10mph, and no smoking other than in a designated area.

THE ACCIDENT

[3] On 25 August 2010, the day before the accident, work had been on-going in the excavation area. Dumpers had been removing excavated material, which had been deposited direct into the dumper's skip by the excavator. It was taken to a screener, where it was divided into three, then sent along conveyor belts and deposited into dumpers. Dumpers then took the graded material to the mixing area, at the western end of the site. At some point on 25 August, the excavation work was stopped, so that the boundary line could be ascertained. The work stopped in such a way as to leave a long excavated edge, then an angled short edge at almost right angles to the main edge, then a further edge which ran in the same direction as the main edge, to the end of the excavation. This created a "dogleg". The short edge was battered down by the excavator to leave a slope of approximately 45 degrees. This irregular short edge was approximately 7 metres long.

[4] On the morning of 26 August, the site manager Mr Dobrinski required plastic barriers to be placed along the north-south edge of the excavation. These barriers

were irregularly spaced, and as they were lifted up from the bottom of the excavated area, could only be placed close to the edge. Apart from an excavator bucket, which was placed at the corner of the dogleg, there was no barrier across that angled, battered edge. Dobrinski instructed the dumper drivers, three in number including the deceased, to take material from the screener to the mixing area. This was done for some time, until Dobrinski decided to change the way in which the work was to be done. He had decided that as the larger 30 tonne dumpers were also using the haul road used by the smaller dumpers, it was safer for the small dumpers to stay out of the way. He therefore instructed the drivers to create a temporary spoil heap at a position about 6 meters from the edge of the excavation, near to the screener. Thus they had much shorter journeys, without the hazard of other vehicles in the area. He watched them for a while until satisfied that his instructions were being carried out. He returned to his bulldozer which was working in the excavated area. Another dumper driver (A Carver) arrived, and joined in the manoeuvres, which entailed placing the skip of the dumper under the end of a conveyor coming from the screener, waiting until it was full, reversing out, then turning towards the spoil pile, and once there dumping the load onto the growing pile, then reversing out to turn then head forwards back to the screener. Thus there were 4 dumpers performing this manoeuvre, with the deceased making about 8 runs in about 45 minutes.

[5] The deceased, one of the four drivers, was seen to drive away from the spoil pile in reverse, continue in reverse whilst looking forward, then after travelling approximately 25 metres in reverse, he is seen to look round, notice the rapidly approaching battered edge, and attempt to take avoiding action. This he failed successfully to do, resulting in the dumper travelling at speed over the edge, at an angle to the edge. The back of the dumper hit the bottom of the excavated area and started to turn sideways. The deceased was thrown from his seat and landed on the

ground. Almost immediately the Roll Over Protection System frame landed on top of him, crushing him to the ground. Dobrinski was first on the scene and attempted unsuccessfully to lift the ROPS frame off the deceased. The excavator and chains were called for and the dumper was quickly lifted off the deceased. An ambulance arrived within 15 minutes, but the deceased was pronounced dead at the scene.

WHY DID IT HAPPEN?

[6] Although some witnesses had their own theories, the reason for the deceased driving as he did will remain unknown. The dumper truck was examined in detail shortly after the accident, and no defects were found. Dr Arnold's report (Production 5) confirms this. Two witnesses (McArthur and Dobrinski) saw the dumper as it went over the edge. It was travelling more or less directly towards Dobrinski, who spoke of it seeming to veer to its right as it came over the edge and down. McArthur, who was in a dumper stationary at the screener had seen the reversing dumper, noticed the deceased to be facing forward until a point some 6 -7 metres short of the dogleg edge, at which point he looked over his shoulder. McArthur thought the dumper jerked, and increase speed, still in reverse until it went backwards over the edge. He saw the wheels of the dumper in the air. All eye witnesses confirmed that they had not seen the deceased drive in this manner before, and that there was no need for him to do so. Dumper truck training confirmed that reversing was to be kept to a minimum, just sufficiently far so as to be able to move forwards. It also confirmed the importance of staying away from the edges of excavations, and of keeping a good lookout. There was sufficient room between the screener and the spoil pile for dumpers to work, without having to encroach within 6 metres of the edge. The edge was clearly visible, and obvious, even without barriers.

MIGHT THE ACCIDENT HAVE BEEN PREVENTED?

[7] I deal with this chapter in the light of subsection (c) of the Act which requires a Sheriff to determine "*the reasonable precautions, if any, whereby the death and any*

accident resulting in the death might have been avoided". It is important to note the use of the word "might". It is significantly less than "would". Thus a court must be satisfied that any precaution might, in the sense of a lively possibility, have prevented the death or the accident, and that any such precaution was a reasonable one, in all the prevailing circumstances.

[8] The most obvious precaution which could have avoided death was the wearing of the fitted seatbelt by the deceased. All witnesses who worked on the site confirmed that it was company policy to do so, and that training confirmed the importance of wearing a seat belt. The dumper carried a notice reminding drivers to use one. All witnesses working on site spoke of wearing their seatbelts without exception. No witness could explain why the deceased was not wearing his at the time of the accident. Had he been wearing it, the probability is that he would have remained in his seat, thus avoiding death. Clearly this precaution would not have avoided the accident, but any injury sustained would have been significantly reduced.

[9] The evidence of Mr McArthur was that the deceased was looking forwards for most of the journey that he made in reverse. This is not good practice, and was contrary to training. Had the deceased looked towards the direction of travel and kept a proper lookout around the dumper for hazards and obstructions it is likely that he would have seen that he was approaching the battered edge, and thus taken appropriate action, which would have avoided the accident.

[10] Reversing a dumper truck is not recommended, other than for the minimum distance necessary to negotiate manoeuvres, and to be able to regain forward motion. CPCS training provided in respect of forward tipping dumper trucks makes this clear. Reversing should be avoided where possible because it carries more risks than proceeding in a forward gear. In this case, the dumper was reversed for over 32 metres. All those witnesses experienced in driving dumpers spoke of the route they

were taking, or would have taken, from screener to spoil tip, and back. All said they would only have reversed a metre or two, to back away from either the screener belt, or the spoil tip itself, a sufficient distance to turn, then proceed forwards. Had the deceased followed such a pattern the accident would not have occurred. It was a reasonable precaution for him to have taken, not to travel such a long distance in reverse, on a site where an excavated edge was nearby, and he knew it was nearby.

[11] Much evidence was given about the barriers that had been placed sporadically beside the main edges of the excavation. There was no fencing or barrier across the dogleg, although a large excavator bucket had been left at the first angle from the main edge to the dogleg. After the accident, a continuous line of interlinking barriers were set up some three metres from the edge, which barrier was acceptable to H&SE personnel. The issues for me are whether the presence of such a barrier might have prevented the accident, and whether the main and sub-contractors had in place appropriate design, method and safety plans in relation to the fencing of excavations.

[12] At the time of the accident, there existed risk assessments and method statements prepared by GDL and approved by ROK. Those relevant were B05 (Dumper Trucks) and A11 (Excavations). B05 identified a number of potential hazards including "Falls into excavations" which had been assessed as an occasional likelihood with a critical level of severity. Under cross examination, Mr Donnelly reduced "occasional" to "remote", thus reducing the overall assessment of risk. However no control measures were identified in the risk assessment to prevent dumper trucks falling into excavations. A11 dealt with excavations, and identified a number of hazards, including "persons/plant/materials falling into the excavation". A number of control measures were identified, including "Do not stockpile excavated or other materials adjacent to the excavation." All the evidence suggested that the stockpile created on Dobrinski's instructions on the morning of the accident

was properly sited and the position of the stockpile did not contribute to the accident. I agree. Another control measure was "Provide a handrail/barrier around the edge of the excavation to prevent persons falling into the excavation." Donnelly, who checked this control measure was of the view that it related to pedestrians and other persons rather than plant such as dumpers. Dobrinski also initially took the view that this related to persons, although conceded that it might also relate to plant. It is my assessment that this provision related to persons only. I am of this view for three reasons. The first is that a further control measure was to "provide stop logs at the edge of the excavation to stop plant and machinery falling into the excavation or overloading the edges." Thus GDL considered control measures to prevent persons falling in, then further measures for plant. Secondly. It is clear from the evidence that the presence of a handrail/barrier would not prevent plant from falling into the excavation. All witnesses agreed that a plastic barrier of any sort, whether interlinked and water filled or not, would be incapable of stopping a 9 tonne dumper truck. At best a barrier would only be a visual guide to the position of the edge of the excavated area. Thirdly, there existed a method statement at the time of the accident, which in relation to excavations stated that "At the conclusion of works each day deep excavations will be fully fenced. The public do not have access to the site and are not in close proximity due to the location of the site being Diageo's secure site." This is clearly written with persons, rather than plant in mind. Thus the only measure suggested for preventing plant from falling into an excavation was the use of stoplogs. As was explained by witnesses, stoplogs were used where a dumper was to manoeuvre towards an edge, either to dump or collect material. The stoplog served as a stopping point, or indicator to the driver, which prevented the wheels of the dumper going too near the edge, thus protecting both the dumper and the edge. It is clear that a stoplog would not have stopped a dumper travelling at speed from reversing over it and into the excavation.

[13] As already mentioned, a barrier has a visual effect as well as an actual preventative effect in some cases. A barrier will prevent a person from accidentally falling into a hole, by its very nature. It can also be seen, marking the edge. I do not consider that the presence of a barrier across the dogleg would have made any difference to the way in which the deceased drove his dumper on its final journey. The evidence is that he was looking forward whilst reversing parallel to the edge, and to the sporadic barrier. He turned round to look some 6 or 7 metres short of the edge. He was aware at that point of the dogleg edge behind him. A barrier or fence across the dogleg would have made no difference to the accident. The dumper would have travelled through any barrier, into the excavation. The only way it might have affected the outcome would be if it has been a continuous barrier all around the excavation, which the deceased might have been more aware of than he appeared to be aware of the sporadic barrier. He might then have realised he was approaching the dogleg, although this is speculative. It is however, a possibility, sufficient to be included under paragraph (c). The placing of a continuous barrier was a reasonable precaution. In fact it was done after the accident, to the satisfaction of representatives of the Health and Safety Executive.

[14] In passing Mr Blackburn mentioned another precaution which he suggested might have prevented the accident. That was placing a continuous barrier not parallel to the edge, but on a diagonal, so as to take the dogleg out of the equation altogether. Thus the deceased, when reversing would have noticed that he was getting closer to the barrier and likely have taken avoiding, steering, action. The difficulty with this evidence, is that it appeared that Blackburn had just thought of it for the first time, that it had not been put to other witnesses, and it could not therefore be ascertained if it was in fact a reasonable precaution to be taken. There may well have been good reasons not to implement such a barrier line. I therefore discounted it.

[15] I have found that the dumper travelled over the edge “at speed”. This is in accordance with the evidence, and is intended to show that the dumper did not just topple over the edge, but was still travelling backwards at speed. I do not consider however that the speed of the dumper contributed to the accident. There was no suggestion that the speed it travelled was excessive for the site. Rather it was the direction of travel which was the issue. I do not consider that the fact that the edge was battered to a 45 degree angle had any effect either. Such an angle would likely have been too steep for a dumper to negotiate safely. A maximum of 25 degrees was the manufacturer’s limit, although at least one of the witnesses indicated that he could have driven a dumper carefully and slowly down the battered edge. It would have involved ensuring the correct position of entry, and very slow speed, neither of which was achieved by the deceased.

[16] It was suggested by the Crown that it was a reasonable precaution not to select forward gear, whilst depressing the accelerator pedal, in an attempt to stop the dumper from reversing any further; and that the dumper might have been capable of stopping if the gear lever had been placed in neutral and the brakes applied at a distance 6 metres from the edge. I do not accept this, as it comes from only the observation of McArthur that the dumper jerked and seemed to accelerate just after the deceased turned to look back over his shoulder. McArthur suggested that this might have happened if the deceased had tried to stop reversing by selecting forward gear, the engine jerking, causing the deceased accidentally to re-engage reverse. This calls for some considerable speculation on the part of the witness. No other witness had this theory, and no witness who was experienced in driving dumpers had ever tried to engage forward whilst still travelling at speed in reverse.

[17] The H&SE suggested that there was an additional precaution whereby the accident might have been avoided, namely “The principal and sub-contractor contractor to have properly planned, managed and monitored the construction

phase of the project in order to have identified, in advance of the accident, that visual barriers were required to be placed along the entirety of the excavated edge at a distance of at least 2 metres from the excavated edge." I was referred to the Construction (Design and Management) Regulations 2007. Section 13(2) states that "Every contractor shall plan manage and monitor construction work carried out by him or under his control in a way which ensures that, so far as is reasonably practicable, it is carried out without risks to health and safety." Section 22 imposes duties on a principal contractor to "(a) plan , manage and monitor the construction phase in a way which ensures that, so far as is reasonably practicable, it is carried out without risks to health and safety, including facilitating – (i) co-operation and co-ordination between persons concerned in the project..... (ii) the application of the general principles of prevention...."

[18] Clearly these regulations impose on both ROK as principal contractors, and GDL as sub-contractors duties to prepare suitable risk assessments and method statements to conduct safely the work undertaken, and to monitor the way it was done, that so far as reasonably practical, it was being done safely. In pursuance of these duties, risk assessments and method statements were prepared. They were brought to the attention of staff, including the deceased. They were updated after the accident, a factor which Mr Dickson sought to highlight as indicating they would have been reasonable practicable before the accident. I have already determined that had barriers been placed at least 2 metres from the edge the accident might have been avoided. I do not consider that the way in which a decision to have such barriers ought also to be a reasonable precaution. It is one and the same. There were risk assessments in place. These ought to have included the requirement for barriers around the excavation. The method statement did require the excavation to be fenced off at the end of the working day, although that too was updated after the accident. I agree that as GDL in particular were able to identify (and indeed go

beyond) suitable and sufficient control measures in the method statement of 1 September 2010, therefore suitable and sufficient control measures ought to have been identified prior to the accident. That is why I have determined barriers in place as a reasonable precaution. I do not accept that there was a separate and distinct reasonable precaution in the way in which the contractors reached the view that barriers were needed. It is part and parcel of the same process.

WERE THERE ANY SYSTEMS FAILURES?

[19] In deciding whether to make any determination under section (d) as to defects in any system of work which contributed to the death or accident, there must clearly be evidence which would allow me to be satisfied that a defect in a work system did in fact cause or contribute to the death. No such evidence was before me. Ms Toner, for the family argued that the failure of GDL to provide proper control measures to address the risk of persons or vehicles falling into the excavation was a system failure and that a determination under section (d) could be made. I do not agree. The failure to have barriers in place was a reasonable precaution, but the evidence led indicated that the barriers themselves were not sufficiently robust to stop a reversing dumper truck, so as to prevent the accident. No reasonably constructed barrier, suitable for the excavation work that was ongoing would have done that. GDL had considered in their method statement, the necessity for barriers. If they had failed to consider barriers at all, that might have been a defect in the system of working which contributed to the death; but they did not. It was accepted that their assessment of how the barrier should be structured was inadequate, but there were control measures in place. Had the deceased been instructed to reverse towards the edge, that might have allowed a finding under section (d), but that was not the case. It must also be understood that the driving by the deceased on his final run was so unexpected and contrary to practice and training that it was not something that could have been reasonable apprehended before it occurred. In light of the evidence

led and in particular the view of all witnesses that even the correct use of appropriate edge protection such as a continuous barrier would have been insufficient to prevent the dumper truck driven by the deceased from over-running the excavated edge, there is no evidence to suggest that there was any defect which in fact caused or contributed to the death.

[20] Finally, I do not consider that there are any other factors relevant to the circumstances of the death which would lead me to make any determination under section (e).

I would here express firstly my condolences to the family and friends of the deceased, and secondly my thanks to agents for their helpful written submissions, and skilful way in leading and testing the evidence.