SHERIFFDOM OF GRAMPIAN, HIGHLAND AND ISLANDS AT KIRKWALL

[2022] FAI 27

KIR-B31-22

DETERMINATION

BY

SHERIFF GERARD W SINCLAIR

UNDER THE INQUIRIES INTO FATAL ACCIDENTS AND SUDDEN DEATHS ETC (SCOTLAND) ACT 2016

into the death of

KEITH SPENCE JOHNSTON

Kirkwall, 20 July 2022

DETERMINATION

The Sheriff having considered the information presented at the inquiry determines in terms of section 26 (2) of the Fatal Accidents and Sudden Deaths etc (Scotland) Act 2016 ("the Act") that:

(a) When and where the death occurred (s26(2)(a))

The death of Keith Spence Johnston, born 17th April 1965, of Dunchauvin, Dounby, Orkney occurred at approximately 10.00 hours on Wednesday 28th June 2017 at a point on the A967 Public Road between Twatt and Bruna Fae, about 600 metres south of its junction with the A986 Finstown to Birsay Road at Twatt, Orkney ("the Twatt junction").

(b) When and where any accident resulting in death occurred (s26(2)(b))

An accident resulting in the death of Keith Johnston occurred at approximately 10.00 hours on Wednesday 28th June 2017 on the A967 Public Road between Twatt and Bruna Fae, about 600 metres south of the Twatt junction.

(c) The cause or causes of death (s26(2)(c))

The cause of Keith Johnston`s death was multiple injuries sustained when he was run over by a DAF CF 75-310 3 axle rigid tipper lorry, registration number SV13 AHZ, driven by Nicholas Stephen Darby, an employee of Orkney Islands Council, owners of the said vehicle.

(d) The cause or causes of any accident resulting in death (s26(2)(d))

The cause of the accident resulting in the death was Keith Johnston being struck by said lorry when he was engaged at the side of the A967 roadway operating a stihl leaf blower and blowing the loose stone chips on to the resurfaced carriageway.
Keith Johnston was wearing ear protectors at the time and did not hear the lorry approaching him. The lorry was reversing on the road and the driver of the vehicle did not see Keith Johnston before the lorry struck him.

(e) Any precaution which could reasonably have been taken and which might realistically have resulted in the death, or any accident resulting in the death,

being avoided (s 26(2)(e))

There are a number of precautions which might reasonably have been taken and which might realistically have resulted in the accident being avoided:-

(i) Prior to the commencement of work that day an appropriate "toolbox" talk, involving all members of the squad of road workers, could have discussed and agreed a clear works traffic management plan including, for example, instructing the tipper lorry drivers on the agreed route to enter the site (via Swartland Road) to minimise the need for reversing.

(ii) At the time of the accident there was no competent site supervision or communication to direct the drivers to the point of work by the safest route, avoiding the need to reverse down the A967. The A967 roadway had been closed to the public between the Twatt junction and the Swartland Road junction. Had Keith Johnston continued to supervise the closed entranceway at the Twatt junction and communicated with his drivers instead of operating the leaf blower further down the A967 road the accident may have been avoided.

(iii) Keith Johnston had previously been advised not to operate the stihl leaf blower at the rear of the resurfacing "train" and whilst the surface dressing process was active. He was wearing ear defenders to protect his ears from the noise made by the stihl leaf blower. The combination of the noise of the blower and the noise reducing effect of the ear defenders meant that he could not hear any approaching vehicles. Had he refrained from operating

the blower the accident could have been avoided.

(iv) Once the decision having been taken to allow the supply tipper trucks to reverse some distance down the A967 Public Road to meet up with the resurfacing "train", at the point of work, someone could have been tasked with the responsibility to supervise and guide the vehicles reversing along the road to the point of work when it was safe to do so and alternatively signal when it was not and the accident might have been avoided. Although there was a banksman allocated to the site, he was supervising the train of vehicles conducting the resurfacing work further down the road.

(f) Any defects in any system of working which contributed to the death or accident resulting in death (s 26(2)(f))

There were defects in the system of working which contributed to the death or accident resulting in death:-

(i) The absence of a "toolbox" talk prior to work commencing in the morning. between the acting foreman (Keith Johnston) and the squad of workers, led to a failure of planning and communication in relation to the safe route of access onto the site via the Swartland Road. This resulted in the drivers not being aware of, and following, the intended route but instead reversing some length down the A967 Road from the Twatt Junction.

(ii) The decision to close the road between the Twatt junction and the Swartland Road was a sensible precaution, but the Twatt junction was then left

unmanned which resulted in the barrier cones being moved at some point in the morning. Inadequate signage was provided at the Twatt junction to direct the traffic (including the lorry drivers who were unfamiliar with the locality) along the diversion through Dounby and the Swartland Road, which was a safer route and would have avoided the need for drivers to reverse down the A967 road.

(g) Any other facts which are relevant to the circumstances of death (s 26(2)(g))

There are no other facts or circumstances which are relevant to the death.

RECOMMENDATIONS

In terms of section 26(1)(b) and (4) of the Act it is necessary to make recommendations (if any) as to (a) the taking of reasonable precautions; (b) the making of improvements to any system of working; (c) the introduction of a system of working and, (d) the taking of any steps which might have realistically prevented other deaths in similar circumstances.

In all the circumstances of the case, and having noted that Orkney Islands Council ("OIC") has responded appropriately to both the accident on 28 June 2017 and the subsequent Notice of Contravention issued by the Health and Safety Executive on 9 October 2017, by investigating and addressing the defects in the system of working in place at the time of the accident, there are no formal recommendations to make.

The changes that have already been made to the system of working by the Council are

narrated later in this determination.

NOTE

Introduction

[1] A fatal accident inquiry was held at Kirkwall Sheriff Court on 7, 8, 9 and 10 June 2022 into the death of Keith Johnston which occurred on Wednesday 28 June 2017 as a result of a vehicular accident on the A967 Public Road between Twatt and Bruna Fae Road, Orkney. At the time Mr Johnston was employed by Orkney Islands Council as a Road Worker Supervisor in the capacity of a chargehand, although at the time of the accident he was acting foreman.

[2] Mr Johnston's death was reported to Crown Office and the Procurator Fiscal Service on 29 June 2017. The First Notice in relation to the inquiry was issued by the Procurator Fiscal on 21 February 2022. Three preliminary hearings in respect of the inquiry were conducted remotely by the WebEx platform on 26 April, 10 May and 20 May 2022.

[3] At the inquiry the Crown were represented by Roderick Urquhart, Procurator Fiscal Depute; the driver (Nicholas Darby) by Emma Toner, Advocate and Orkney Islands Council ("OIC") by Mark Donaldson, Solicitor Advocate. Mr Melvin Johnston, the elder brother of the deceased, Keith Johnston, also sought and was granted permission to be represented at the inquiry.

[4] At the commencement of the inquiry parties presented a signed joint minute of agreement which was read out by Mr Urquhart, along with two separate witness

statements from Mr Iain Seatter, who had acted as the banksman on the day of the fatal accident, but who had subsequently died on 28 October 2021. The signed joint minute ran to a total of 20 pages and 54 paragraphs, and helpfully set out both the factual circumstances of the accident as well as the relevant facts and circumstances arising before and after. The joint minute of agreement also included agreed details relating to the subsequent Police investigation as well as an investigation by, and a contravention notice from, the Health and Safety Executive. In addition, some of the documentary evidence submitted by the Crown in its Inventory of Productions was agreed as true and accurate. This included:

Production no 2 – Police photographs - photographs of the accident scene

Production no 12 – Training Record of K. Johnston

Production no 13 – Training Record of I. Seatter

Production no 15 – HSE Photographs of Locus 28.6.2017 - photographs of the accident scene

Production no 31 – NQA Surveillance Process H&S Audit Report 2.12.2016

Production no 39 – Collision Investigation Report by police investigators

Production no 53 - Certificate of Professional Competence & SVQ Highway Maintenance for K. Johnston

Production no 64 – Report on Audibility of Lorry and Walkie-Talkie

Production no 67 - Autopsy Report – establishing cause of the deceased's death

Production no 69 – The Notice of Contravention – issued to OIC by the HSE which sets out failings the HSE concluded had contributed to the accident

Production no 71 – DVSA collision report VOSA/C1/2 – report by a Vehicle Examiner detailing that no fault in the lorry contributed to the accident.

A further short joint of agreement was received on the last day of the inquiry and was also read out by Mr Urquhart. This agreed, as true and accurate, the document headed "Neighbourhood Services and Infrastructure" which included details of further changes and procedures implemented by OIC in response to the accident.

[5] Over the first three days of the inquiry the following witnesses gave evidence:

- Kay Morgan, Farmer
- Kevin Robertson, Roller Driver
- Steven Inkster, Tipper Lorry Driver
- Alistair Linklater, Tanker Driver
- Nicholas Darby, Tipper Lorry Driver
- Kevin Watters, Tar Spraying Bar Operator
- Stuart Heddle, Tipper Lorry Driver
- Lorne Marwick – Charge hand
- Kenneth Nicol, Chipper Operator
- Alistair Holmes, Roads and Environmental Services Team Leader, OIC
- William Johnston, Roads and Environmental Services Manager, OIC
- Elizabeth Hunter, HM Inspector of Health and Safety.

On the fourth and final day submissions were made by the participants.

The Legal Framework

[6] This inquiry was held in terms of section 1 of the Act and governed by the Act of Sederunt (Fatal Accident Inquiry Rules) 2017 ("the Rules").

[7] This was a mandatory inquiry in terms of section 2 of the Act as Mr Johnston died as a result of an accident whilst in the course of his employment.

[8] The purpose of the inquiry is set out in section 1(3) of the Act as being to establish the circumstances of the death and to consider what steps (if any) might be taken so as to prevent other deaths in similar circumstances.

[9] In terms of section 26 of the Act the inquiry must determine certain matters, namely, when and where the death occurred; the cause or causes of death; the cause or causes of any accident resulting in the death; any precautions which could have reasonably been taken and might realistically have avoided the death or any accident resulting in the death; any defects in any system of working which contributed to the death; and any other factors relevant to the circumstances of the death. It is also open to the Sheriff to make recommendations in relation to matters set out section 1(4) of the Act

[10] The Procurator Fiscal represents the public interest. The inquiry is not intended to establish liability, either criminal or civil. The inquiry is an exercise in fact finding, not fault finding. It is an inquisitorial process and it is not open to the Sheriff to engage in speculation of any sort. The determination is limited to the matters defined in section 26 of the Act and is based solely on the information presented at the inquiry, whether by way of agreed evidence in the form of a Minute of Agreement,

documentary evidence in the form of productions or by way of oral evidence from witnesses led at the inquiry. Section 26(6) of the Act provides that the determination shall not be admissible in evidence or be founded on in any judicial proceedings, of any nature. This prohibition is intended to encourage a full and open exploration of the circumstances of a death, while also reflecting the position that it is not the purpose of a Fatal Accident Inquiry to establish civil or criminal liability (section 1(4) of the Act).

Summary

[11] On 15 May 2017 the surface dressing programme on roads in Orkney started for the summer. Surface dressing is done every year; the amount done being dependent on the requirement and budget. Surface dressing is carried out by applying a coat of bitumen emulsion (tar) after the road has been swept. To that is applied a coat of stone chips which is rolled in so that the chips stick to the liquid tar. The vehicles required for surface dressing to be completed form a 'train' and are: -

- a surface dressing spray tanker full of emulsion i.e. liquid tar, which it dispenses onto the roadway. The tanker is at the front of the train.
- a chipper, which is a machine filled with stone chips which it deposits onto the newly tarred road surface by means of a conveyor belt that runs from the rear of the machine to the front.
- a tipper lorry that connects in reverse to the rear of the chipper by means of a fixed bar and a hook. The fixed bar is on the rear of the lorry and the hook is

on the rear of the chipper. Once connected, the tipper is then dragged by the chipper along the road and at the same time is unloading its chips into a hopper at the rear of the chipper. The driver of the tipper lorry controls the steering of the lorry as the driver/operator of the chipper drives forward.

- a road roller is then behind the tipper lorry and rolls the newly laid chips into the road. This is the only other reversing vehicle, and its driver operates at a distance to the rear of the train. There is normally only one driver in the road roller.

[12] Usually, a squad of the same 10 workers would be involved in the operations, but this could vary depending on holidays and sickness etc. On occasion, additional workers would be allocated if required for traffic management. There are normally between two and four tipper lorries involved in a surface dressing operation with one driver per lorry. The lorries go to the Council's Cursiter Quarry, Grimbister on the Old Finstown Road where they fill the tipper with chips and then travel to the road that is being worked on. The tipper lorry drivers would then normally be instructed by the tanker driver or the person who is on the spray box on the tanker where to park and wait and the process for getting onto the site to reach the chipper.

[13] There is a worker who acts as a banksman for every surface dressing operation. The role for a banksman is to guide the reversing tipper lorries into the chipper, making sure the connection to the chipper works. He also opens the back door of the tipper to empty the load so that the driver does not need to exit the lorry. He communicates with the tipper driver by line of sight through the driver's mirrors to tell him when and how

much to tip the load. The banksman also watches out for potential dangers to the operation such as overhead power lines, vehicles coming into the site, pedestrians and any other hazards. The banksman normally positions himself at the rear of the tipper lorry and chipper and walks along beside this until the job is finished. In surface dressing operations the banksman's responsibility is to ensure a tipper lorry reverses to the chipper safely and connects safely. Once the load has been dispensed the lorry would drive away from the rear of the train and another lorry of chippings would come onto the site.

[14] There is also normally a worker who organises and arranges the placement of road work signs at every surface dressing job. This person is responsible for putting out the road signs in the correct places so that the site is safely secured. There is a generic checklist form for this person supplied by the Hatston depot which instructs the worker of how and where to place the road signs and at what times they need to be put up and taken down.

[15] The speed limit signs which are put out on job sites are 10mph when the work is being carried out and 20mph when the work is finished. A local traffic order is put in place for every surface dressing job carried out by the Council.

[16] All workers on the site should have a talk group radio within each vehicle. These are radios issued by the Council and are Icom brand “walkie-talkie” handsets which work on a line-of-sight basis. There might also be one or two hand-held devices which are available for the chargehand and banksman on the ground at the site. As resurfacing is a very noisy job there are times when the radio communications passed

can be difficult.

[17] All personnel carrying out this work are supposed to be provided with a "toolbox" talk each day, normally carried out by the foreman or chargehand. After that, a site specific (point of work) risk assessment is to be completed by the chargehand with all workers on site on a daily basis. The risk assessment form should be read over by all workers and then signed by them confirming they understand any risks identified. When these forms are completed the chargehand returns the forms to the Roads and Environmental Services main office at Hatston to be checked by the foreman before being filed.

[18] On the week commencing 26 June 2017 the surface dressing workforce had been working on the A967 Twatt to Bruna Fea Road. Michael Herdman, the usual foreman who had been working with that workforce, was on holiday that week so Keith Johnston was acting up as foreman, a role he was being trained up for as Michael Herdman was considering retirement. Keith Johnston was normally the chargehand on site and accordingly was combining both the roles of chargehand and foreman.

[19] Keith Johnston had been with the Council for 24 years. He was regarded by his employers as a very reliable employee, conscientious about his work, very experienced and knowledgeable about the job and with a good work record. Normally as the chargehand on site Keith Johnston would instruct his workforce on what actions had to be carried out. He would also work on the site alongside his colleagues, helping out with whatever needed done to help the team complete the job.

[20] On Wednesday, 28 June 2017, the day of the accident, Keith Johnston was also

the acting foreman. He was responsible for the organisation and operation of the team of workers who were tasked with carrying out the surface dressing on the A967 Twatt to Bruna Fae Road. The squad that morning consisted of Keith Johnston, chargehand and acting foreman; Kevin Robertson, roller driver; Iain Seatter, banksman; Kevin Watters, tanker worker (sprayer); Steven Inkster, 6 wheeler tipper lorry driver; Nicholas Darby, 6 wheeler tipper lorry driver; Alistair Linklater, tanker driver; Stuart Heddle, 8 wheeler tipper lorry driver; James Johnston, sweeper lorry; Kenny Nicol, chipper driver; and Lorne Marwick, road signage. With the exception of the driver, Nicholas Darby, the same team would often work together in carrying out this task and the members of the team were highly experienced in the work and well known to each other. Given their level of experience the workers involved in operating the vehicles that made up the resurfacing "train" were essentially self-sufficient and did not need a lot of directing. However it remained the responsibility of the foreman to organise the team and provide them with instructions.

[21] On the morning of 28 June 2017, Keith Johnston and some of the other workers set off from the Hatston depot to meet up at the Twatt Kirk beside the Twatt junction. There had been no "toolbox" talk at the depot or at the location of Twatt Junction.

[22] About 9am the workers involved in the vehicles that made up the resurfacing train began working from just south of the Twatt Junction. The first lorry driver to connect to the chipper was Stuart Heddle who was carrying a 20 ton load of chips. Once he had unloaded his chips into a hopper at the rear of the chipper the tanker driver called on Steven Inkster to bring down his vehicle with a 15 ton load of chips. There was

a general discussion about what route to take to meet up with the resurfacing train at the end of which Steven Inkster set off by reversing down the A967 from Twatt junction. Prior to arriving at the train he passed Keith Johnston who was at the side of the carriageway on the A967 using a stihl leaf blower and blowing the loose stone chips on to the resurfaced carriageway. He had not expected to see Keith Johnston there. During any resurfacing operation loose chips can often fall onto the side of the carriageway that has not yet been treated. The chips are usually blown back onto the resurfaced carriageway by a member of the squad to facilitate the next run of the spray tanker. This is normally done with the operative working in front of the train when all other work has stopped. The squad member walks on the roadway after the chips have been laid and blows loose chips from the side of the road that has not been resurfaced. The squad members using the blower are supplied with ear defenders and safety goggles by OIC to carry out this work.

[23] Once Steven Inkster had unloaded his chips into the hopper at the rear of the chipper, the driver, Nicholas Darby, was contacted over the radio by the tanker driver. There was a general discussion about him getting to the site of the train via the diversion by Dounby and along Swartland Road but, due to both the noise interference over the radio and Mr Linklater`s pronounced Orcadian accent, he couldn't understand the directions to the alternative route. Eventually he was instructed just to reverse down the A967 road. There was no one manning the Twatt Junction but there were cones across one half of the roadway. The road wasn't wide enough for turning so he started to reverse down the roadway. He reversed down the centre of the road. He wasn't

expecting to encounter anyone on the road as it was closed. He used his mirrors to keep the vehicle straight at the centre of the road and watched his speed. He also used the reversing camera. As he was reversing down the road he felt a bump, like going over a brick. He stopped the lorry and looked in his mirrors. He could see the reflective clothing in his offside mirrors. He jumped out of his lorry and saw Keith Johnston on the ground. He got back in his lorry and pressed his horn. He could not explain why he had not seen Keith Johnston or heard the sound of the leaf blower he was using before the lorry hit him.

[24] The injuries Keith Johnston suffered as a result of being run over by Mr Darby`s lorry were fatal. The emergency services were summoned and, with no vital signs evident on their arrival, at 10.30 hours on 28 June 2017 Keith Johnston was pronounced dead by Dr Huw Thomas, a medical practitioner. It was a matter of agreement between parties that death was almost certainly instantaneous.

[25] The cause of his death, established at an autopsy conducted by consultant pathologists Dr Mark Ashton FRCPath and Dr Natasha Inglis FRCPath at Raigmore Hospital, Inverness on 3 July 2017, was multiple injuries as a consequence of his being run over by a lorry.

[26] Following the accident OIC introduced and issued to staff a "Driving at Work Handbook." Page 8 contained the following instructions regarding reversing: -

> **"Reversing**
>
> Nearly a quarter of deaths involving vehicles at work occur during reversing. Many other reversing accidents do not result in injury but can cause costly damage to vehicles, equipment and premises.

Most of these accidents can be avoided by taking simple precautions.

The best was to avoid reversing accidents is to **remove the need for reversing altogether.** Where reversing is unavoidable, routes should be organised to minimise the need for reversing.

In locations where reversing cannot be avoided:

Reversing areas should be planned out and clearly marked.

People who do not need to be in reversing areas should be kept well clear.

Consider using a trained signaller (a banksman) both to keep the reversing area free of pedestrians and to guide you as the driver. A banksman will be mandatory for certain reversing tasks which will be identified in the job risk assessment and method statement.

You should ensure your banksman is visible to you and is wearing highly visible clothing such as an appropriate reflective vest.

If you lose sight of your banksman you should stop your vehicle immediately."

[27] The driver of the tipper lorry involved in the incident, Nicholas Darby, had been employed with the council for 2 years. As at 28 June 2017 his role was driver/road worker. The OIC had put Nicholas Darby through his heavy goods vehicle licence which he passed without issue. His employers regarded him as a good worker who had fitted in well with the workforce during his employment. He was described as a very careful, cautious driver. He had previous experience in roadworks prior to his employment with OIC and while working with OIC drove a variety of different vehicles. He was known to speak out if he was unsure about using a particular vehicle. As he was employed primarily as a lorry driver he had not been trained in surface dressing by

OIC. He had no issues at work and the Roads and Environmental Services team leader had no concerns about his driving ability.

[28] OIC put the roads team members through basic core courses depending on their role - driver, chargehand or road worker. Courses for a chargehand would include street works training and the high-speed traffic management course. A supervisor's course for street works did not include managing reversing vehicles. OIC did provide reversing training for persons guiding waste vehicles prior to the accident. Neither Nicholas Darby nor Keith Johnstone was recorded as having attended this course.

[29] All Roads and Environmental Services lorry drivers have an HGV licence, including Nicholas Darby who also obtained the driver CPC (Certificate of Professional Competence) as part of his original driver training. This training included reversing lorries.

[30] On 9th October 2017 the Health & Safety Executive issued a notice of contravention to OIC which included the following: -

> "MATERIAL BREACHES – NOTIFICATION OF CONTRAVENTION
> 1) The Construction (Design and Management) Regulations 2015, Regulations 13(1) and 27(1)
>
> "You are required to ensure that a construction site, such as an area of the Public Highway that is being used for road re-surfacing, is organised in such a way that, so far as is reasonably practicable, pedestrians are safe to move around in said area. The term 'persons' can include members of your workforce, members of the public or contractors. As a principal contractor you should demonstrate how you plan, implement, supervise and monitor road maintenance and surfacing works.
>
> "Reversing a vehicle is a high risk activity. HSE statistics show that the main cause of fatal accidents during construction work in 2016-17 was being struck by a vehicle or other moving object. Reasonable steps should be taken to minimise

> the risk of pedestrians being struck by vehicles where reversing cannot be avoided. A combination of control measures may be required, such as the use of rear view cameras/mirrors, audible reversing alarms, speed limits and suitable warning signs, road closures to reduce the number of persons entering the construction site, effective means of communication between drivers and site personnel, competent site supervision, adequate driver training and the use of a trained guide or banksman to direct the driver to the point of work.
>
> "During road re-surfacing work on A967 on 28th June 2017 your employee Keith Johnstone, site chargehand and temporary Foreman, was struck and run over by a DAF tipper lorry, registration SV13AHZ. The road had been closed to the public apart from access to two properties along the route. The driver had reversed from the partially open junction with the A986 at Twatt towards the re-surfacing 'train' for approximately 0.4 miles. It appears that Mr Johnstone was walking along the untreated side of the road whilst operating a Stihl leaf blower shortly before the accident. Earlier that morning another of your drivers had reversed a tipper lorry past Mr Johnstone along the same route to meet the 'train'
>
> "You did not take sufficient steps to reduce the risk of persons being struck by reversing vehicles. You provided a banksman to guide the tipper lorries into position when connecting to the chip delivery equipment (known as 'the chipper'). No one had been allocated to guide reversing vehicles onto site and up to the point where the lorry was attached to the chipper. It was foreseeable that persons could have been working at any point along the closed road and that members of the public could have been walking the route. The road closure was not effective because cones across the junction between the A967 and the A986 had been moved to allow access by lorries delivering chippings."

[31] On 28 November 2017 Gavin Barr, OIC's Development and Infrastructure Executive Director sent a letter to the Health & Safety Executive responding to the notice of contravention and containing the following: -

> "As you are already aware, since the accident all surface dressing activities have been stopped and are unlikely to recommence before summer 2018.
>
> "As you are also aware, I chaired an emergency Incident Management Team (IMT) meeting at noon on the 28 June. We have since that date held regular (weekly in the early stages) IMT meetings relating to the Council's overall team response. On the 28 June, I also commissioned our Health and Safety team to undertake a separate independent Health and Safety Investigation and a draft report was presented to the IMT on 23 August 2017. Alongside this, and

reporting to the IMT, my Head of Service Darren Richardson has led a comprehensive team response within the Roads and Environmental Services operational team to review “our procedures, systems of work and risk assessments for all road maintenance and repair activities that we undertake. The purpose is to both ensure there is optimal progress in implementing the changes, but also to ensure that any issues arising are brought to my attention.

“Currently, the planning of road maintenance and surfacing works commences once the Roads and Environmental Operations Service receive an instruction to carry out works and associated detail. The Service then implements the health and safety plan, which includes risk assessment and method statement. This incorporates a site inspection which identifies any issues or problems associated with the area, whether it is access/egress, overhead or underground services, proximity of general public (schools, community centres, shops, houses etc.).

“At this stage it is agreed how best to manage traffic on the road during the works. This includes options to put in place road closures, traffic signals, contraflow, give/take, lane closure etc. The number of staff allocated for the job is based on the task, equipment requirements as well as traffic management. At least a week before the works are due to start on site, a meeting is held with the Operatives, Chargehands, Technicians and Foremen to discuss the works. This meeting includes talking through the method statement for the works, the order the tasks should be undertaken in, the health and safety hazards, controls and instructions etc. At this meeting roles on site are identified, whether it is Chargehand or specific plant related roles, all of which is dependent upon the scale and complexity of the works.

“Extra recorded checks have been put in place to ensure that, prior to daily work beginning, the Foreman has spoken through the job with Operatives and Chargehands to ensure that they are aware of the task as well as the hazards and controls associated with the task and site in question.

“We have clarified that the Chargehand remains on site for the duration of the works, and is in overall control of site activities, fulfilling a clear coordination role across all operations and therefore all personnel on the site or any others seeking access or egress.

“The daily monitoring of site works by Technicians, Foremen and the Team Supervisor has also been revised, with increased frequency of visits. Records have been put in place to evidence these visits.

“Road closures continue to be signed and operated in line with Department for Transport's "Traffic Signs Manual - Chapter 8 - Traffic Safety Measures and Signs

for Road Works and Temporary Situations". All surface dressing road closures are now manned and all other sites, where a road closure may be required, are risk assessed to determine "manning" requirements, to ensure there is no unauthorised access to the site. Only in very exceptional "emergency" circumstances would staff leave this posting and only after instruction from the Chargehand or senior manager.

"With regards to reversing of vehicles, in addition to the controls in place at the time of the accident which included the use of rear view cameras/mirrors, audible reversing alarms, road closures to reduce the number of persons entering the construction site, radio communication between drivers and site personnel and adequate driver training, the following has been undertaken:

- A refresh of daily tool box talks from 29 June 2017 to remind, reiterate and encompass any new information all team members need to act on;

- The Roads and Environmental Operations Service has put 60 roads and waste operatives through a reversing assistant course;

- The Safety and Contingencies Manager e-mailed all Council staff reminding them of the reversing advice produced by HSE and the hierarchy of controls starting with don't reverse;

- Development and Infrastructure Health and Safety Management team engagement including meeting on 14 September 2017 and is an ongoing requirement;

- Where there no is other option but to reverse vehicles, a reversing assistant or appropriate escort vehicle must be used;

- The Council has issued a Drivers Handbook in addition to the Driving at Work Policy that was issued earlier in the year. The handbook reiterates the advice on reversing detailed above;

- The Roads and Waste Operations Service has identified proximity warning systems and adaptions which may be retrofitted to site equipment to improve visibility and reversing manoeuvres; and

- The Roads and Waste Operations Service has reviewed and evaluated site communications and costs have been received for additional vehicle radio sets, onsite repeater to remove blackspots, improved 'Active' headset technology with built in amplifier and

radio.

> "In order to disseminate the details of your letter of 12 October to staff members, a meeting was held on 3 November 2017 between Senior Management, Employee Works Representatives and Trade Union Representatives. A further meeting was held later in the same day with staff members in the service involved. Again the contents of the letter were read out. An attendance was taken at this meeting and those staff members who were not present attended a further meeting held on the 22 November 2017.
>
> "In summary, we have refined and developed our existing procedures following the fatal accident on 28 June 2017 with particular emphasis on reversing controls, road closures, supervisory roles, and the planning, implementing and monitoring of road maintenance and surfacing works."

[32] In addition. OIC implemented further changes and updates to the system and process of surface dressing in response to the Health and Safety Executive letter dated 28 November 2017, as detailed in the document headed "Neighbourhood Services and Infrastructure" on behalf of OIC and signed by Hayley Green, Corporate Director of Neighbourhood Services and Infrastructure, which included the creation of Risk assessments and Method Statements (Rams) for every project; staff briefings on a daily basis; the provision of escort vehicles where reversing of lorries is unavoidable; the manning of junctions at road closures and the explicit banning of the use of leaf blowers during surface dressing operations.

Witness evidence

[33] In addition to the joint minutes of agreement and the documentary productions provided, a number of witnesses were called to give oral evidence. It was clear that the passage of time since the accident had had a deleterious effect on the

memories of certain witnesses in relation to parts of their evidence and their ability to accurately recall certain events but I was satisfied that all of the witnesses did their best to assist the inquiry. In terms of the evidence given I considered the following pieces to be of relevance.

[34] Mrs Kay Morgan gave evidence that she and her husband owned a farm which bordered the A967 Road between the Twatt Junction and the Swartland Road Junction. On the morning of the accident she and her husband left the farm in a pickup truck and headed north towards the Twatt Junction. They noticed the roadworks and saw the vehicles which made up the road surfacing train. The vehicles were on the opposite side of the road and her husband was able to pass them in his pickup truck. When they continued north on the road they saw Keith Johnston, whom they knew, on the treated side of the road operating the leaf blower to blow the loose chips. It was making a lot of noise. He acknowledged them as they passed but didn't stop working. As they approached the Twatt junction they saw the tipper lorry reversing around the Twatt corner. It was reversing slowly and carefully. By the time they arrived at the junction the lorry had straightened up. It continued to reverse slowly down the road.

[35] Kevin Robertson was the roller driver on the morning of the accident. He had worked for the council for 41 years and had been part of the surface dressing squad for 20 years. Invariably the same crew were used each year and had a huge amount of experience, with many of them have various qualifications which allowed them to operate the different pieces of plant and equipment. He was part of the squad carrying out the surface dressing on the A967 road that day. After the tar had been

sprayed and the chips put down his job was to drive the roller backwards and forwards over the chips to create a smooth surface. His was the last vehicle and would be facing the other vehicles in the train. He had spoken to Keith Johnston earlier in the morning but had not been aware that he was using the leaf blower to blow the chips behind him. He could not immediately see him because of a brae in the hill. He was aware that Keith had a habit of "blowing the joint" (the term for clearing the loose chips) behind the train of vehicles. After the horn sounded and he reversed his vehicle he saw Keith behind him on the ground. He was some distance away but he could see he was under the wheels of the tipper lorry which had stopped. He didn't think he had been aware that the tipper lorries were reversing down the road to join the train that day. Mr Robertson blasted his horn to alert the other workers of the accident. Ian Seatter, who was the banksman on the job, came alongside him. He told Ian that he couldn't go to look and Ian went to see. Mr Robertson was aware of the Site Specific (Point of Work) Risk Assessment form (Crown Production No.8) and noted his name on the form dated 28 June 2017, but without an accompanying signature. The document was to remind you of the dangers and the safety measures in place. They would usually see and sign this form before starting work in the morning, but not always. He accepted that the form was mainly a series of boxes to be ticked. He indicated that the squad might also receive instructions from the foreman by way of a "toolbox" talk. He noted that all of the other squad members working that day were named on the form apart from Nicholas Darby.

[36] Steven Inkster was one of the tipper lorry drivers on the morning of the

accident. He had worked for the council for 42 years but was now retired. He had worked on road surfacing work for about 15 years prior to the accident. It was a very experienced and highly qualified team. Most of the team had gathered at the Hatston Depot that morning before travelling to the Twatt Junction but he had driven directly to the site as he was travelling over from his home on Rousay and had picked up his chips the night before. He had not signed the risk assessment form, but this was not unusual as it was fairly typical for someone to come round during the course of the day to get all those working on the squad to sign the form. The team were to gather at the Twatt kirk beside the junction. The car park there was not big enough for all of the vehicles but there was some hard standing ground beside where he parked. When he arrived the road surfacing had begun. He was the second lorry to join the train of vehicles. He waited to be called down over the radio by the tanker driver. This would happen when the first tipper lorry had unloaded his chips into the chipper machine. When he was called down he recalled some discussion about avoiding reversing down the A967 road by using the A968 Finstown to Birsay road and taking the Swartland Road to approach the train by the south. This would have meant passing the tanker vehicle before connecting to the chipper vehicle which would have been tight, but could have been done. However that didn't happen and he reversed a few hundred yards down the A967 road. The lorry had 6 mirrors and a reversing camera and he used these to guide the vehicle down the road. He used a scanning motion and was constantly checking his mirrors. He saw Keith Johnston in his mirrors as he reversed down the road. Keith was using the leaf blower to blow the loose chips. This would

ideally be done when everything else had stopped. Before he saw him he hadn't been aware that he would be on the road with his leaf blower. He slowed to a crawl as he passed him. After he connected with the chipper and used up his load of chips Nick Darby was called down by the tanker driver. Mr Darby was also told about the Swartland Road route. He didn't think that Nick Darby knew the Swartland Road route. By that time the train was about 850 yards from the Twatt Junction and Mr Darby would have to reverse his vehicle that distance. They were both driving similar lorries.

[37] Alistair Linklater was the tanker driver on the morning of the accident. Some of them had driven up from the Haptson Depot to the collection point at the Twatt Kirk. He thought he had signed the risk assessment form at the Twatt Kirk before they started work. As the tanker driver his vehicles was at the start of the train. It was dangerous work but it was a very experienced team who know how the train worked. Once the tar was heated up the Spraying bar operator sprayed the tar onto the road. Kevin Watters was operating the spray and he could see him using his reversing camera. Ian Seatter was the banksman and would have been directing the tipper trucks to connect to the chipper. Stuart Heddle drove the first tipper truck and had a 20 ton load of chips. Steven Inkster drove the second truck and had a 15 ton load of chips. The banksman would tell him when the lorries were empty and he would call down the next lorry. He had called down Steven Inkster using the walkie talkie radio and had thought he had entered the site via the Swartland Road junction. When Steven Inskster was finished he called down Nick Darby. He had not seen Nick Darby

previously that morning. He tried to get him to come down via the Swartland Road but he didn't know the route. Others were on the walkie talkie conversation and were trying to explain the route to him but he didn't understand. Eventually Ian Seatter said that he would just have to reverse down the A967 road. Keith Johnston had not been part of this conversation. He had not been aware that Keith was using the leaf blower behind the train. Had he known that he would have told Mr Darby to watch out for Keith. The blowing of the loose chips normally took place in front of the train not behind it. Only Keith operated behind the train. He would have expected the Twatt junction to be closed and manned but he wasn't aware who was manning that junction. He heard a horn blaring. He waited for Kevin Watters to stop operating the spray bar and then he switched off the tanker. He didn't leave the tanker. He couldn't see Nick`s lorry as there was a slight brae in the hill.

[38] Nicholas Darby was a tipper lorry driver on the day of the accident. He stopped working for the council immediately after the accident and returned to work in England. He had started working with the council in April 2015. The council put him through various qualifications including his HGV licence, a CPC certificate of Professional Competence and various levels of a City and Guilds qualifications in Streetwork. Prior to 2017 he had worked during the summer months with the squad of resurfacing workers. The day of the accident had been his first day of surface dressing that year. When he turned up for work at the Hatston depot that morning he had not been aware that he would be with the surface dressing squad. His line manager, Hamish Miller, told him this and he was allocated a tipper lorry. He had

been living on one of the south Orkney Islands and did not know the roads on mainland Orkney that well. Keith Johnston told him where to go to get to the site and he went to the quarry to collect his load of chips. When he arrived at the Twatt junction he parked beside Steven Inkster. He didn't report to anyone and he did not see Keith Johnston when he arrived at Twatt junction. He had not signed the risk assessment form and his name was not on the form recording him as being a worker there that morning. When he arrived the work had started. Steven Inkster was called down to join the train. Shortly after the tanker driver called him to bring his load down. The tanker driver (Alistair Linklater) tried to explain that there was another route to get to the site of the train which avoided reversing down the A967 road, but due to both the noise interference over the radio and Mr Linklater`s pronounced Orcadian accent he couldn't understand the directions to the alternative route. Eventually he was instructed just to reverse down the A967 road. He drove his lorry from the kirk to the Twatt junction. There was no one manning the junction but there were cones across one half of the roadway. The road wasn't wide enough for turning so he started to reverse down the roadway. He didn't recall a pickup truck passing him. He reversed down the centre of the road as the road was closed and this helped to avoid ditches at the side. He wasn't expecting to encounter anyone on the road. He used his mirrors to keep the vehicle straight at the centre of the road and watched his speed. He also used the reversing camera. As he was reversing down the road he felt a bump, like going over a brick. He stopped the lorry and looked in his mirrors. He could see reflective clothing in his offside mirrors. He jumped out of his lorry and saw

Keith Johnston. He got back in his lorry and pressed his horn. He could not explain why he had not seen Keith Johnston or heard the sound of the leaf blower he was using before the lorry hit him. He had thought a lot about the day of the accident since then and simply could not explain why he never saw him. It was a difficult thing to have to live with. He had such sympathy for the Johnston family and had resigned from roadwork immediately after the accident and gone back to his home in the west midlands. He was currently a construction worker. It had been his first time in that particular type of lorry and he was unfamiliar with the switches for things like the reversing alarm. He had travelled on the route he had been told to take. He wouldn't have chosen to reverse that distance. The tanker driver had tried to describe another route but he couldn't understand him. Had a banksman been provided to accompany him down the route he would have used him. He reversed carefully but every lorry has a blind spot. He could not have reversed carefully so far down the road without using his reversing mirrors and camera. If he had seen anyone he would have stopped. He simply didn't see anyone.

[39] Kevin Watters was the tar spraying bar operator on the day of the accident. He had been employed by the council for 20 years. When the accident happened he had operated the spray bar for 3 years and always worked with the same team. He had been at the Hatston depot earlier that morning and Alistair Linklater had given him a lift to the Twatt Junction. He acknowledged that he had been named on, and had signed, the risk assessment form but couldn't recall if he had done this at the Hatston depot or the Twatt Junction before work commenced. He had seen Keith Johnston at

Hatston and could have seen him at Twatt. Not everyone was on site first thing in the morning and it was not unusual to go round and get the signatures for the risk assessment form during the morning. When he began work he was operating the spray bar on the back of the tanker driven by Alistair. There had already been two loads of chips used when Alistair called on Mr Darby to come down over the walkie talkie radio. There was general talk about using the Swartland Road but Nick Darby didn't know that way and it was agreed he would reverse down the A967.
Keith Johnston had not been involved in this discussion. When he heard the horn blare he stopped operating the spray bar. He headed up to Nick Darby`s lorry. He saw Keith. He hadn't been aware that he had been blowing the chips off the road. He was aware that Keith liked to use the blower as he was trying to lose some weight and the operation was heavy work and involved a lot of walking. He shouldn't have been operating the blower behind the train but Keith was the chargehand and no one would have been brave enough to report Keith for working behind the train.

[40] Stuart Heddle was a tipper lorry driver on the morning of the accident. He had been involved in surface dressing ever since he started with the council in 2008. He was usually part of the same team. They didn't really have to discuss what they were doing in the morning as they were all experienced and all knew what to do. He had travelled over from the Isle of Hoy to Houton that morning and Keith had picked him up and taken him to Hatston. They would have discussed the day's work when he picked him up. He had then collected his lorry and driven to Twatt. He hadn't seen the risk assessment form that day. He was the first tipper lorry used that morning and

they had started work about 9am a short distance south of the Twatt Junction as they would leave the bellmouth area at the junction till the end. He emptied his 20 ton load and left to pick up another load from the quarry about 9.30am. He was called on the radio and asked to come back via the Swartland Road. He didn't know what Keith was doing that morning. He had been at the Twatt Junction when they started work but when he came back to the site with his lorry the accident had already happened.

[41] Lorne Marwick was another chargehand on site on the morning of the accident. He had worked for the council for 31 years and had been involved in surface dressing for almost all of that time. He was manning the junction at the Swartland Road end of the closed site that morning. Part of his responsibility was to put out the signage closing the road and to manage the closure. He was probably the first to arrive at the Twatt Junction about 8am. He put up the "closed road" signs and the 20mph signs and the warning cones. Roads were only closed for as little time as was necessary so the road would be closed that morning before work commenced. Closing roads caused friction with the drivers and there had been a lot of effort put into getting roads closed from about 2015/16. Prior to that they had worked when roads were open. It was dangerous work and was easier to do when the road were closed. He had probably put other signs out at Dounby too but it was so long ago he couldn't be sure. Once he got the call to say that work was beginning he closed the Swartland Road junction and then just "manned" the junction. That would involve directing people towards the diversions. As it was early in the morning it was mainly local people, before the tourists were on the road. He had expected the other junction at Twatt to

also be manned. He had assumed that it would have been manned by Keith Johnston. He hadn't been asked to sign the risk assessment form that morning but that was not unusual as it was not uncommon simply to get on with the job as everyone wasn't in the one place. The job was very similar each day and everyone know what they were doing. It was a highly experienced team with three different chargehands on site (Mr Johnston, Mr Linklater and Mr Watters). Keith was acting foreman that day. He thought Keith was manning the Twatt Junction. Had he done so this would have made the closed road more secure. There had been no "toolbox" talk that morning but after the accident "toolbox" talks became compulsory.

[42] Kenneth Nicol was the chipper operator on the day of the accident. He had worked as part of the surface dressing team for 15 years. He was part of a very experienced team. He had arrived at the Hatston Depot and been taken to the Twatt Junction in a council van. The chipper was a slow moving vehicle so had been "parked up" at the junction the night before. There had been no discussion that morning about the work to take place as everyone knew what they were doing. When he arrived he did his usual checks and waited for the call to join the train. Keith did speak to him in his cab about not working the following Saturday and that was the last time he saw him. When the work began the tipper trucks connected to his chipper with the banksman overseeing the operation as usual. He was in his cab facing the back of the tanker and used his mirrors to check the load going into the ground and also to check the tipper truck. The machine he used was very loud so it was sometimes difficult to hear the conversations on the hand held radios.

[43] Alistair Holmes is the Roads and Environmental Services team leader at OIC, and is based at the Hatston Depot. He had been with OIC since 1991. He reported to his manager, William Johnston, who reported to the executive director, Gavin Barr. At the time of the accident he was responsible for the surface dressing work in Orkney, including the allocation of the work on the A967 road. Prior to the work commencing he had discussed various jobs with Keith Johnston who was acting up as foreman whilst the normal foreman was on leave. One of the issues for the job on the A967 was the entry route for lorries and this had been discussed. He had expected lorries to collect at a holding area to the south end of the road just north of the Swartland junction. He was aware that the original plan had been to start at the northern end of the road at the Twatt Junction. He had also been on leave on the week that the work was being done. He was aware that Nicholas Darby was drafted in to help at the last minute. He was phoned on the morning of the accident and asked to come back into work from leave. He was aware that there were only three signatures collected on the risk assessment sheet for that day. It was a sheet that should have been filled in every day. He would have expected the junctions at the closed ends of the road to have been manned at all times. Use of the blower should only have been done when the train was stationary. They had only started to get blanket road closures for this type of work since 2015/16. Since the accident a number of the processes had been changed. There was now a lot more formal briefing on various aspects of the job. It was not just left to the charge hands to brief the workers, the foreman was also involved. If someone is substituted into the job, or if someone arrives late then they are briefed

separately before they can start work. The practice of using leaf blowers to clear the loose chipping has been stopped. The use of reversing lorries has been minimised and new instructions and procedures are in place. After the accident the Health and Safety Executive became involved. He had personally spent time with the senior inspector, Elizabeth Hunter, going through all of the systems and processes for this type of work. A number of changes had been implemented. Miss Hunter then carried out some spot audits and indicated that she was happy with the changes made. The review is ongoing and further refinements are made every year.

[44] William Johnston was the Roads and Environmental Services manager at OIC at the time of the accident. He is now retired after working there for 41 years. He was Mr Holmes` line manager. He confirmed that the removal of loose chips used to be done by a sweeping broom before the leaf blowers were used. The leaf blowers were very noisy. Safety equipment was provided when using the leaf blowers. This included hi-visibility jackets and gloves, ear defenders and safety goggles. He was not aware that, after the accident, a report into the ear defenders had been instructed which concluded that a person wearing those type of ear defenders would be over protected and would not hear the noise of approaching vehicles. There had been various changes to the procedure since the accident. There was now obligatory "toolbox" talks. They were more formal in procedure with matters recorded. The risk assessment form has been changed and is signed by everyone at the start of the day. After the accident he had also met with the inspector from the H&S Executive, Elizabeth Hunter. He was not sure if he had been shown the Notice of Contravention

which was Crown Production No.69 but was aware of the criticisms made which were not disputed by OIC, who then sought to address them in the changes they had introduced.

[45] Elizabeth Hunter is an inspector with HM Health and Safety Executive and has been there for 31 years. She is currently involved in the construction industry and also trains other people. Five years ago she was responsible for carrying our inspections and also reactively investigating accidents and incidents. At the time of the accident, on 28 June 2017, she happened to be in Orkney so was able to be on site by lunchtime to assist the police in securing the site. She took photographs of the scene. Whilst not an expert on driving she would expect a reversing lorry to make use of the mirrors and reversing camera. The accident had been preventable. The first principle is to avoid any dangerous activity, if possible. It would have been possible to put in place some diversion signs to direct the drivers to the southern end of the site and avoid the need for Mr Darby to reverse down the A967. After she had carried out her own enquiries she served the Health and Safety Executive`s "Notice of Contravention" dated 9 October 2017 on OIC (Crown Production No 69). She agreed that OIC had been keen to take the advice of the Health and Safety Executive and to work with them to address all of the issue and failings that had been identified and which had contributed to the accident. The OIC had responded quickly by letter dated 28 November 2017 outlining the improvements that had made to address the points (Crown Production No 26). When she subsequently carried out an inspection to see that the changes had in fact been implemented she was satisfied that the points had

been addressed.

Submissions

[46] Participants helpfully provided written submissions in advance which fully detailed their individual recommendations in respect of section 26 of the Act as well as their observations on the evidence. In some instances these were supplemented with oral submissions which are briefly summarised below.

[47] Mr Urquhart, for the Crown, read out and thereafter adopted his own written submissions.

[48] Miss Toner, for the driver Nicholas Darby, adopted her written submissions. She simply wished to make two overarching points – that it was not the purpose of the inquiry to find fault or apportion blame and that any formal finding required to be based upon the evidence before the inquiry. She had set out in her written submissions the findings she wished to be made and her reasons for this. Mr Darby had been simply acting under instructions when he had reversed down the A967 road. At that time the positioning of Keith Johnston had not been known. The accident may have been avoided if there had been better planning, better communication and better supervision.

[49] Mr Donaldson, on behalf of OIC, adopted his own written submissions. He reminded the court that a fatal accident inquiry is very much an exercise in applying the wisdom of hindsight. It is for the sheriff to identify the reasonable precautions, if any, whereby the death might have been avoided. The statutory provisions are

concerned with the existence of reasonable precautions at the time of death and are not concerned with whether they could or should have been recognised. They do not relate to the question of foreseeability of risk at the time of death, which would be a concept relevant in the context of a fault-finding exercise, which this is not. His recommendations under sections 26(2)(a-d) were identical to those of the Crown. He had listed three precautions which could reasonably have been taken and had noted that the defect in the system was the failure to communicate properly. He was making no additional recommendations as, on behalf of OIC, he had provided two detailed documents specifying the important changes which had been made since the accident. This was a process that was ongoing and under continual review. He then listed his observations on the evidence contained within his written submissions.

[50] Mr Johnston, adopted his written submissions and indicated that, like his three colleagues, the majority of his submissions related to the lack of communication and planning. He had found the procedure challenging as he had only been provided with full disclosure a few weeks before the inquiry and had prepared his questioning of witnesses based upon their written statements, which made some of his questioning redundant when their oral evidence was given and different information from that contained within the statements was placed before the court. His brother Keith had been very conscientious concerning health and safety. He would have thought that he was working in a safe zone that day. It was unclear how the miscommunication regarding the route to be taken happened in relation to the lorries. When using the leaf blower Keith would have been looking down and couldn`t hear the lorries. In his

evidence Mr Inkster had said that he had passed Keith in his lorry when he reversed down the road. At one stage he had said that he was not even sure that Keith had seen him.

All of the participants individually expressed their condolences to the family for their loss.

Discussion and conclusions

[51] My findings in relation to section 26(2)(a), (b), (c) and (d) of the Act are as set out at the start of this determination. During the course of the inquiry it was clear that these were a matter of general agreement, as reflected in the terms of the joint minute of agreement referred to above. That being the case, I will restrict my further remarks and conclusions on the remaining parts of section 26(2), namely 26(2)(e), (f) and (g).

Section 26(2)(e)

[52] In relation to section 26(2)(e) I will firstly consider any precautions that (i) could have been taken and, (ii) if so taken, whether Mr Johnston's death or the accident itself might, realistically, have been avoided.

[53] Alistair Holmes, the OIC team leader for resurfacing work had discussed the job with Keith Johnston, as foreman, prior to the day of the accident. He was clear that one of the issues for the job on the A967 was the entry route for lorries and that this had been discussed. Mr Holmes had expected lorries to collect at a holding area to the south end of the road just north of the Swartland junction. This would have

been possible after the road had been closed. Mr Johnston, as the acting foreman, was responsible for the ongoing health and safety of everyone involved. According to Mr Holmes, he had been involved in the discussions about how the work was to be carried out. He was a highly experienced chargehand who was very well respected by everyone. Whilst the squad of workers he was supervising were also highly experienced and would have been well aware of the dangers involved in road surfacing work, it was recognised that there were dangers which were constant and well known, relating mainly to the operation of the machinery, and dangers which changed on a daily basis, relating mainly to the geography and the location of where the work was being carried out. If the lorry drivers had been instructed to either gather at the southern end of the closed section of the A967, to await being called to join the train, or alternatively, gather initially at the Twatt Junction but then instructed to travel down through Dounby and along with Swartland Road, entering the A967 from the southern junction of the closed section of the road then the necessity for the lorries to reverse down the A967 Public Road to meet the train would have been avoided, All of these matters should have been the focus of discussion and agreement with the squad at a "toolbox" talk, prior to the work commencing. Had this been done, then the issue around the lack of knowledge of some of the tipper drivers regarding the roads around the location would have been identified. Proper communication relating to these matters might realistically have resulted in the accident being avoided.

[54] At the time of the accident there was no competent site supervision to direct

the drivers to the point of work by the safest route. The decision having been taken to base all of the vehicles at the Twatt junction, there should have been someone supervising that junction once the road was closed and the work commenced. Lorne Marwick was supervising the closed junction at the Swartland Road end. Earlier he had closed the road at the Twatt junction before travelling to the Swartland Road junction and had placed cones and appropriate road signage. He had expected the Twatt junction to also be manned. Had Keith Johnston carried out this role, rather than operating the stihl leaf blower at the rear of the train, then it seems fair to conclude that the accident resulting in the death would have being avoided.

[55] Keith Johnston had previously been advised not to operate the stihl leaf blower at the rear of the train and whilst the surface dressing process was active. On the morning of the accident no one knew that he was carrying out this operation. The lorry drivers that were reversing down the A967 road had not expected to encounter anyone on the closed road. He was wearing ear defenders to protect his ears from the noise made by the leaf blower. The combination of the noise of the blower and the noise reducing effect of the ear defenders meant that he could not hear any approaching vehicles. It was not safe for Mr Johnston to be operating the leaf blower when vehicles were reversing down the A967 road. Had he recognised the risk he was taking and refrained from doing so then this might realistically have resulted in the accident being avoided.

[56] Although there was a banksman allocated to the site, he was appropriately supervising the train of vehicles conducting resurfacing work further down the A967 road. The decision

having been taken to allow the tipper trucks to reverse some distance down the A967 road to meet up with the train, at the point of work, someone else could have been tasked with the responsibility to guide the vehicles reversing along the road to the point of work when it was safe to do so and alternatively signal when it was not. This might realistically have resulted in the accident being avoided.

Section 26(2)(f)

[57] In relation to section 26(2)(f) it is necessary to consider whether there were any defects in the system of working which could have contributed to the accident or, as a result, Mr Johnston's death.

[58] It was clear that the squad operating on the road surfacing work were highly qualified and extremely experienced. With the exception on Nicholas Darby they had worked together for many years and were able, it appears, to seamlessly substitute for one other in relation to the various and differing vehicles that made up the resurfacing train. It may be that this familiarity with each other led to an expectation that further instructions, by means of a "toolbox" talk prior to work commencing, was unnecessary. Likewise, the practice of having everyone read and sign the Site Specific (Point of Work) Risk Assessment form prior to the work commencing appeared to have changed to a practice of having the form signed as the day progressed. These defects in the system of working suggested an element of casual overfamiliarity with the work which failed to recognise the potential dangers which changed with every new location of work. On the morning of the accident, the failure by the acting

foreman (Keith Johnston) to communicate the safe route of access onto the site via the Swartland Road resulted in the drivers not being aware of, and following, the intended route but instead reversing some length down the A967 Road from the Twatt Junction, which contributed to the accident occurring

[59] The decision to close the road between the Twatt junction and the Swartland Road was a sensible precaution. A number of the witnesses gave evidence of the difficulties that had been experienced before 2015 when road surfacing work was invariably carried out on one side of a road when the other side remained open to the public. There had been a lot of effort put into getting a decision taken to close roads when this work had been carried out. It was not a popular decision with the public and it still caused some friction. For that reason the road was only ever closed for as short a time as possible. Prior to the accident, Lorne Marwick had organised the closure of the road and had then supervised the junction at Swartland Road. He had expected the Twatt junction to be manned by Keith Johnston but, at some point in the morning, the Twatt junction was left unmanned which resulted in the barrier cones being moved. The failure to have the Twatt junction manned was a defect in the system of working. In addition, it appeared that inadequate signage was provided at the Twatt junction to direct the traffic (including the lorry drivers who were unfamiliar with the locality) along the intended diversion through Dounby and the Swartland Road. This would have been a safer route for the drivers to take and would have avoided the need for drivers to reverse down the A967 road, which contributed to the accident occurring.

Section 26(2)(g)

[60] In terms of section 26(2)(g) of the Act I do not consider there are any other facts which have not been considered above which are relevant to the circumstances of Mr Johnston's death. I was not addressed by any of the parties in this regard. Accordingly, I have no findings to make in relation to this part of the section.

Section 26(1)(b) and (4)

[61] In relation to section 26(1) (b) and (4) of the Act participants who made any submissions in relation to these subsections simply acknowledged the significant changes and improvements implemented by OIC, and which I have noted more fully above, as a result of the accident and the subsequent investigations by the H&S Executive. This included the creation of Risk assessments and Method Statements (Rams) for every project; staff briefings on a daily basis; the provision of escort vehicles where reversing of lorries is unavoidable; the manning of junctions at road closures and the explicit banning of the use of leaf blowers during surface dressing operations.

[62] The general note to the annotated version of the Act in relation to the sub-sections make clear that,

> "There must be a real or likely possibility that the matters recommended may prevent other deaths in similar circumstances, rather than a remote chance that a similar death in the future might be prevented."

[63] Having regard to all of the above I am satisfied that appropriate steps have

been taken to ensure that a proper and appropriate safe system of work is now in place on which the workforce has been properly informed. I do not consider that any further recommendations would result in a death in similar circumstances being avoided in future.

[64] Mr Johnston's tragic death occurred because, for whatever reason, he chose to leave the junction at Twatt Kirk and start clearing the loose chips on the road behind where the train was operating without telling anyone of his plans. No one knew that he was working on the road. Because he was wearing ear defenders he would not have heard vehicles approaching him. When Mr Darby was instructed to reverse his lorry down the A967 road he had not expected anyone to be working on the road. He was reversing slowly down the road when he struck Mr Johnston. He had been using his mirrors and reversing camera to carry out the reversing manoeuvre. When collision investigators investigated the accident shortly after, they concluded that *"The DAF LGV driver, for reasons unknown, has failed to register that the deceased was on the road behind him and has run over the deceased."* Some five years later, and after seeing all of the productions and hearing all of the evidence, it remains inexplicable how Mr Darby failed to see Mr Johnston on the road before his lorry struck him.

Other observations and comment

[65] In conclusion, I would like to express my thanks to all the witnesses for the time, co-operation and assistance they gave to the inquiry. I am also very grateful to all the participants, the agents and counsel involved for their assistance in preparing

for and conducting the inquiry and in narrowing down the matters at issue. Finally, I wish to record my appreciation for the way that Mrs Johnston, the wife of the deceased, and other family members who were in attendance throughout the inquiry, dealt with what was obviously some difficult and distressing evidence with such quiet dignity. I would like to finally add my own sincere condolences to the family for their tragic loss.