

SHERIFFDOM OF TAYSIDE, CENTRAL AND FIFE AT STIRLING

[2023] FAI 30

STI-B128-22

DETERMINATION

BY

SHERIFF DEREK J HAMILTON

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

into the death of

KENNETH HERON

STIRLING, 13 July 2023

The Sheriff having considered the evidence, the written and oral submissions presented at the inquiry, the productions and the terms of the joint minute, finds and determines in terms of section 26 of the Inquiries into Fatal Accidents and Sudden Deaths etc.

(Scotland) Act 2016 (“the 2016 Act”);

- (i) In terms of section 26(2)(a) of the 2016 Act, Kenneth Heron, born 27 August 1968, was pronounced dead at 15.01 hours on 17 October 2019, at Ninewells Hospital Dundee.
- (ii) In terms of section 26(2)(b) of the 2016 Act, the accident resulting in Kenneth Heron’s death took place at approximately 07.19 hours on 11 October 2019, at the Co-op store, 38 Main Street, Perth. It occurred at the lower level of

the storeroom, where Mr Heron had attended to undertake planned maintenance of the scissor lift installed in the storeroom.

(iii) In terms of section 26(2)(c) of the 2016 Act, the cause of Kenneth Heron's death was multiple injuries, specifically;

- a. Hypoxic brain injury;
- b. Traumatic asphyxia;
- c. Entrapment Beneath Hydraulic Lifting Equipment;

These injuries were sustained whilst Mr Heron was carrying out a service of a "scissor lift" during the course of his employment as a mechanical handling services engineer with Wanzl UK Limited.

(iv) In terms of section 26(2)(d) of the 2016 Act, the accident was caused by,

- a) Mr Heron opening the hydraulic port (by unscrewing a hydraulic plug) on the lift while the lift platform, which was above his head and shoulders, was being supported by the hydraulic system. This resulted in an escape of hydraulic oil which allowed the platform to fall due to gravity.
- b) the safety locking devices, which would have prevented the lift platform from lowering, not being deployed whilst the platform was raised, and work being carried out by Mr Heron beneath it.

(v) In terms of sections 26(2)(e) of the 2016 Act, precautions which (i) could reasonably have been taken, and (ii) had they been taken, might realistically have resulted in the death, or any accident resulting in the death, being avoided are;

a) deployment by Mr Heron, prior to him going underneath the lift platform, of the lift's inbuilt safety locking devices, which would have prevented the lift platform from lowering whilst the platform was raised.

b) use by Mr Heron, prior to him going underneath the lift platform, of wooden blocks or other external prop or device to prevent the descent of the lift platform whilst the lift was raised.

(vi) Makes no findings in terms of section 26(2)(f) of the 2016 Act,

(vii) In terms of section 26(2) (g) of the 2016 Act there are no other facts which are relevant to the circumstances of the death.

Recommendations

In terms of section 26(1) (b) of the 2016 Act there are no recommendations as to any of the matters mentioned in sub-section (4) which might realistically prevent other deaths in similar circumstances.

NOTE

Introduction

[1] A fatal accident inquiry was held under the Inquiries into Fatal Accidents and Sudden Deaths etc. (Scotland) Act 2016 into the death of Kenneth Heron, who died on 17 October 2019. He was at the time of his death employed by Wanzl UK Limited as a mobile engineer, and his death was the result of an accident which occurred in the

course of that employment. In terms of section 2(3) of the 2016 Act, an inquiry was required to be held into the circumstances of his death.

[2] The Procurator Fiscal first received notice of Mr Heron's death on 18 October 2019, and issued notice of the inquiry on 1 September 2022. The first order was granted on 2 September 2022. A preliminary hearing was held at Stirling Sheriff Court on 31 October 2022. That hearing was continued to 28 November 2022, then to 30 October 2022, 17 January 2022 and finally to 31 March 2023. The inquiry, where evidence was led, was held at Stirling on 21, 24, 26 and 27 April 2023. I then continued matters until 20 June 2023, for written submissions to be lodged and expanded upon at the hearing. I wish to thank parties for their detailed and thoughtful submissions, which focused on the main issues for the inquiry.

[3] At the inquiry, representation was as follows;

Procurator Fiscal:	Ms Sun, Procurator Fiscal Depute
Wanzl UK Limited:	Mr Nicolson, Advocate
Co-Operative Group Limited:	Mr Donaldson, Solicitor
Family:	Ms Smith, Advocate

All preliminary hearings were conducted via the medium of WebEx facility. The inquiry was held in person, with some of the witnesses giving their evidence remotely via the WebEx facility. The hearing on submissions was held remotely via the WebEx facility.

[4] Much of the evidence for this inquiry was not in dispute and was capable of agreement. Two Joint Minutes of Agreement between the Crown and the participants in

the inquiry were tendered to the inquiry. That greatly assisted the inquiry and reduced the oral evidence that required to be heard. A number of productions were lodged (Appendix A). A number of witness accounts were lodged and agreed, and they formed Crown productions 50 - 80. At the inquiry the following witnesses were led:

(i) Crown

Peter Dodd, HM Inspector of Health and Safety

Karen Spalding, Environmental Health Officer, Perth and Kinross Council

(ii) Wanzl UK Ltd

Kevin Lewis, Group Operations Manager, Wanzl UK Ltd

Mitchell Russell, Service Support Manager, Wanzl UK Ltd

Nick Burrett, Senior Service Engineer, Wanzl UK Ltd

(iii) Family

Colin Craney, Consultant Engineer

The legal framework

[5] This inquiry was held under section 1 of the 2016 Act and governed by the Act of Sederunt (Fatal Accident Inquiry Rules) 2017 (SSI 2017/103). The inquiry was initiated by the Procurator Fiscal, who represents the public interest, in accordance with her statutory duty to do so. The purpose of an inquiry under section 1(3) of the Act is (a) to establish the circumstances of the death and (b) consider what steps, if any, might be taken to prevent other deaths in similar circumstances. The inquiry is an inquisitorial

process and, under section 1(4) of the Act, it is not its purpose to establish civil or criminal liability.

Discussion and Conclusion

Discussion

Introduction

[6] Kenneth Heron was aged 51 years, having been born on 27 August 1968.

He kept good health and had no significant medical history.

[7] At the time of his death, Mr Heron was acting in the course of his employment as an engineer employed by Wanzl UK Limited (“Wanzl”). Wanzl is a company providing maintenance and repair services for certain types of machinery and equipment in use across various UK retail outlets, primarily supermarkets and convenience stores. Symonds is part of the Wanzl Group. Wanzl acquired Symonds in around 2006. In March 2018, Mr Kenneth Heron joined Wanzl as a Mechanical Handling Services (“MHS”) engineer, a job which involved the maintenance, service and repair of equipment such as scissor lifts, balers (cardboard compactors), and (customer) mobile scooters in use at supermarkets and store premises across Scotland. Mr Heron was based from home and utilised a company van to attend jobs, which were assigned to him in advance, via Wanzl Verisae software system, accessed by him via his work issue mobile phone.

[8] Following the completion of training and on-site shadowing process with Wanzl, Mr Heron began attending jobs on his own. As part of his duties throughout the

course of 2018 and 2019, he regularly completed maintenance and repair of various scissor lifts in use within various Co-op stores across Scotland, including the same type of lift involved in this incident. Between April 2019 and June 2019, Mr Heron successfully completed further training, some of it refresher training, on health and safety awareness and site safety standards. Prior to this incident, Mr Heron's most recent repair of a scissor lift took place in late September 2019.

[9] In early October 2019, Mr Heron was assigned work which involved the planned service of the incident lift. This was to be Mr Heron's first visit to this particular Co-op store in Main Street, Bridgend, Perth. The lifting table at the locus, also known as a scissor lift was a single-scissor type TM1500, manufactured by Translyft in 2014. The lift comprised a rectangular platform fixed to a moving hydraulic scissor and a base frame. The base frame was fitted into a shallow pit, sunk into the floor of the lower level of the storeroom. Two steel safety locking arms were fitted to the lower ends of both front scissors. Each locking arm pivots and, when deployed from its correct stored position safely holds the lift in a raised position when access beneath the platform is required.

[10] On 16 September 2019, the scissor lift at the locus had been inspected by Bureau Vertias UK Limited, a world leader in testing, inspection and certification service (TIC), no defects were identified and the lift was found to be safe to operate.

[11] On Friday 11 October 2019, Mr Heron was tasked to attend at the locus for a scheduled call, described as a preventative maintenance service ("PMS"), whereby Mr Heron would check the condition of the lift to ascertain if any issues were present

that required to be rectified. There were no reports of oil leaks or any other faults before the incident and the lift was operating as expected. Mr Heron was the first Wanzl employee or representative to visit the store.

[12] At approximately 06.30 hours on 11 October 2019, Mr Heron arrived at the locus to carry out a service of the lift. He was admitted and directed to the lower level of the storeroom, where he commenced work on the lift, alone. Members of store staff continued with their usual duties.

[13] CCTV footage of the storeroom, which was later obtained from the store, shows Mr Heron entering the storeroom at 06.31.05. The CCTV continues. It does not capture all of what Mr Heron was doing but at around 07.15 it shows Mr Heron at work upon the lift platform, which is in an elevated position.

[14] Several minutes prior to the incident, Mr Heron stepped down from the raised platform, onto the storeroom floor. Whilst appearing to hold a small tool of some kind, Mr Heron then got onto his knees on the floor, to look beneath the raised platform. After a short time, Mr Heron lay upon his left side and reached into the area beneath the platform. Mr Heron remained in this position for 3 - 4 minutes. At all times, Mr Heron's actions beneath the lift are obscured by the platform itself. The CCTV appears to freeze at various points and this was believed to be due to it being a motion sensor camera.

[15] The CCTV froze at 07.18.01 and between then and 07.19.44 when the CCTV restarted, the platform appears to have dropped a small distance. Mr Heron, who was

lying between his left side and front, appeared to react to that momentarily by moving his legs, but he remained in position, working beneath the platform.

[16] At 07.19.55 the lift platform suddenly dropped and struck Mr Heron in the area of his upper back and right shoulder, trapping him.

[17] A store assistant happened to enter the storeroom at the same time, and she ran to get help from colleagues, one of whom called for an ambulance. Mr Heron, who remained trapped beneath the platform, was breathing, but unconscious and unresponsive. He was comforted by store staff.

[18] Police and ambulance units arrived at the scene shortly before 07.34 hours. Mr Heron remained unconscious and unresponsive. He was attended to by paramedics, who could not detect a pulse.

[19] Fire service personnel attended at 07.39.53, and used hydraulic equipment to raise the lift platform off Mr Heron at 07.43.49 hours.

[20] Mr Heron was given CPR by attending paramedics and fire service personnel and administered with adrenalin and other drugs over the course of the following 15 -20 minutes. At 08.05 hours, a pulse was detected.

[21] Mr Heron was placed into the care of ambulance helicopter personnel and airlifted to Ninewells Hospital, Dundee. On arrival at Accident and Emergency at Ninewells, Mr Heron was taken to resus and intubated in a medically induced coma before being transferred to an Intensive Care Unit, where further treatment was provided. Initial medical opinion following a CT scan indicated that Mr Heron had sustained significant chest trauma with bruising on both lungs and multiple rib fractures

on both sides, that he had already suffered neurological damage at that point and that the injuries were nonsurvivable. Subsequent EEG and MRI scan and assessment were carried out which confirmed severe neurological damage that he was not going to recover from. Despite ventilatory and medical support in hospital over the course of the following days, Mr Heron succumbed to his injuries, and his life was pronounced extinct at 15.01 hours on 17 October 2019 at Ninewells Hospital, Dundee.

[22] Mr Heron's body was conveyed to the Dundee Mortuary and, on 22 October 2019, his body was examined by Dr Helen Brownlow and Dr David William Sadler.

Taking into account the history and circumstances surrounding Mr Heron's death, the findings of the post mortem examination and laboratory investigations, they attributed death to hypoxic brain injury resulting from a prolonged period of cardiac arrest.

[23] Cardiac arrest in this case was precipitated by traumatic asphyxia, caused by entrapment beneath the lifting equipment. Impairment of movement of the chest wall prevents adequate respiration, and severe compression of the chest impairs blood flow in and out of the heart, rapidly resulting in the loss of consciousness and cardiac arrest. The brain is particularly sensitive to oxygen deprivation and can sustain damage within minutes of the heart stopping which may be irreversible, even if the heart is subsequently restarted.

Principal Issues addressed by the Inquiry

[24] There was no dispute as to the circumstances of Mr Heron's accident or the cause of his death. This inquiry, in considering what steps, if any, might be taken to prevent other deaths in similar circumstances, looked at a number of issues.

- (i) The type of the lifting table being worked upon and the safety features present or available.
- (ii) What caused the lift to drop suddenly?
- (iii) Mr Heron's qualification for the role of mechanical handling services engineer.
- (iv) Mr Heron's training for the role of mechanical handling services engineer.

The type of the lifting table being worked upon and the safety features present or available

[25] The lifting table was manufactured by Translyft ERGO ES of Denmark in 2014. It was a type TM 1500 with serial number 14074721. The lifting table was a single scissor type and comprised of a rectangular platform which could be raised and lowered between two floor levels within the warehouse of the store, and was provided for moving goods between them. The base frame was fitted into a shallow pit, sunk into the floor of the lower level of the storeroom.

[26] The scissor lift allowed stock to be moved from the storeroom to the shop floor. The platform had a maximum vertical travel distance of 1100mm. The lifting height could be restricted by an upper travel limit switch that stopped the lifting table at a

pre-determined position. The platform had a lifting height of 390mm when it was being used to move goods between the two floor levels in the storeroom. This lifting height had been set by adjusting the limit switch fitted beneath the lifting table. The limit switch could be overridden using a key switch to allow the platform to be raised to its full height. Access to the override switch could be gained through a removable hatch situated on the floor of the lifting table. The limiter mechanism itself could be accessed via the inspection hatch.

[27] The lifting mechanism comprised two, two-member scissor frames, one on either side of the platform, which were cross-braced against each other. The far-end of the scissor frames were connected to fixed hinges, two on the floor and two on the under-side of the platform, and the near-end of the frames were fitted with rollers and could move backwards and forwards along the tracks as the platform was raised and lowered.

[28] There were two single-acting hydraulic cylinders connected in parallel across the scissor mechanism, such that extending the cylinders (pumping oil into them) raised the lift, and contracting the cylinders (allowing oil to flow from them) lowered the lift.

[29] The hydraulic ports on the cylinders were connected via an equal-tee hydraulic fitting. This was connected to a steel four-way valve manifold block. The four-way manifold had hydraulic connections to only two of its ports through which hydraulic fluid was able to flow:

- Hydraulic fluid connection to and from the tank.
- Hydraulic fluid connection to and from the two hydraulic cylinders.

[30] A solenoid actuated valve was screwed into the third port and a threaded blanking plug was screwed into the fourth port, mechanically blocking them and preventing any hydraulic flow through those.

[31] The direction the hydraulic fluid was able to flow through the working ports of the manifold was dependant on the position of the spool fitted inside the solenoid. The position of the spool dictates the pathways in the valve body through which hydraulic fluid is able to flow. The solenoid actuated valve was functioning as a non-return valve when de-energised and would only permit the flow of hydraulic fluid from the tank to the cylinders, and not in the opposite direction. In this de-energised condition the piston rods would be able to extend, and the platform rise, but were not able to subsequently retract to lower the platform without changing the position of the spool inside the valve. Simply put, when operated via a control panel, the lift platform is raised when hydraulic fluid is pumped from an internal tank to two hydraulic cylinders which house piston rods, which extend to raise the lift. Reversing the flow of the fluid back into the tank allows the piston rods to retract and causes the lift to lower, under gravity.

[32] In accordance with the requirements of the relevant British and European Standard (BS EN 1570-1:2011+A1:2014 which is titled "Safety Requirements for lifting tables. Lifting tables serving up to 2 fixed landings", the lift was equipped with two mechanical blocking devices, one on either side. Blocking devices are commonplace on scissor lifts.

[33] The blocking devices, (two steel safety locking arms), are fitted to the lower ends of both front scissors. Each locking arm pivots and, when deployed from its correct stored position, safely holds the lift in a raised position when access beneath the platform is required. The blocking devices were intended to be deployed by lowering one end of each and engaging them with steel receivers provided for the purpose on the baseplate of the lift. In order to engage the blocking devices, it was necessary to raise the lift so that the platform was approximately 1025mm above the lower landing.

[34] Warning labels are affixed to each locking arm, stipulating that they must be used when working beneath or near the lift platform. The warning labels are yellow and state: "Before repairs and control under or close to elevated lifting table, the lifting table must be in blocked position".

[35] Whilst it was clear that the designers of the platform lift intended the blocking devices to be used by engaging them with the steel receivers provided for that purpose on the baseplate, it was also possible to rotate the blocking devices forwards so that they would bear against the front wall of the lift pit. In doing so, the lift platform did not require to be raised as high as 1025mm above the landing.

[36] The lift is operated by two control panels, one on each level of the storeroom, which comprise "up" and "down" buttons, and an emergency stop button. The "up" and "down" buttons are "dead man" style switches which require the operator to hold them down whilst in use. A main electrical isolator was connected to the lift.

[37] Both the fixed nature of the installation and the configuration/setting of the lift to serve two fixed platforms are within its available range of movement, are covered in

the British and European Standard, and are in accordance with the manufacturer's design intent.

[38] There was initially some dispute in the evidence as to how complex or otherwise the scissor lift at the locus was. Mr Peter Dodd of the Health and Safety Executive when asked if the scissor lift in question was a fairly common or a complicated hydraulic system stated, "It is as simple as you can get."

[39] Ron Knak said, "I think in this case the lift is simple, not complicated."

[40] In his report, and initially in evidence, Mr Craney sought to persuade the court that the lift was not a simple mechanism. In evidence he described it as "unusual". He pointed to two factors that made it so: (1) the platform could be raised almost three times its operating height; and (2) the bypass switch is below the platform.

[41] When it was put to him that there must be a market for "off the production line type lifts which have a limiter switch in built which can be adjusted to suit the premises". Mr Craney accepted this proposition saying, "Yes, that is the case here." He confirmed that in Co-op stores he would expect to see something standard like the one in this situation.

[42] I am satisfied on the evidence that this particular scissor lift could be described as a simple lift which could be adjusted to suit the premises into which it was installed.

Post Incident Investigation of the scissor lift.

[43] On the instruction of the Co-op group, witness Michael Bottomley, an independent engineering consultant and lift specialist, attended at the locus on 11

and 12 October 2019 and examined the lift. The details of the inspection carried out by Mr Bottomley are contained in Crown production number 6, "Report by Michael Bottomley, Consultant Engineer (undated)."

[44] Mr Bottomley noted some damage caused to the lift as a result of the Fire Services raising the platform to release Mr Heron. It was noted, the machinery access trap on the lifting table had been removed and the pump tank and motor were visible, as was the control panel. A machine isolator switch was fixed to a wall in the upper stockroom area. It was found to be in the "on" position, and Mr Bottomley concluded the lift had not been electrically isolated in accordance with safe practice.

[45] The motor and pump were operational, but the table did not move. This was due to insufficient oil within the hydraulic system. On looking through the inspection hatch, oil could be seen moving in the pit. Further investigation of the pit area disclosed an allen key and valve screw on the floor. The valve screw was able to be screwed into the solenoid valve using the allen key.

What caused the lift to drop suddenly?

[46] In normal operation, in order to raise the platform, the hold to run raise button (on either of the two lift controls) is pressed (and held), energising the hydraulic power pack, which pumps oil into the cylinders to extend them. When the raise button is released, the solenoid valve on the manifold block closes, holding the cylinders in position, and the hydraulic power pack shuts off. When the pump stops, pressurised oil remains in the cylinders (owing to the non-return valve in the manifold) and this

prevents the cylinders from retracting under the weight of the platform. To lower the platform, pressing and holding the hold-to-run lower button opens the solenoid valve allowing oil to flow from the cylinders back to the hydraulic tank, under the force of the self-weight of the platform (and any load that might be on it). The hydraulic power pack does not run when the platform is lowering.

[47] Investigations found that the incident occurred because Mr Heron opened a hydraulic port on the lift while the lift platform, which was above his head and shoulders, was being supported by the hydraulic system. This resulted in an escape of hydraulic oil which allowed the platform to collapse onto him. The two safety locking devices (props) which were intended to mechanically lock and support the platform when it was in a raised position and access beneath it was required, had not been deployed.

[48] No defects were found on the lift after the incident which could have caused or contributed to the incident.

Mr Heron's qualification for the role of mechanical handling services engineer.

[49] Mr Heron's CV showed that he had been an electrical engineer in the Royal Electrical and Mechanical Engineers division of the British Army for a period of twelve years, ending in 2000. In that role he gained experience in the repair and maintenance of complex electronic and electro/mechanical equipment. He was with BAE from 2001 to 2011 as a test engineer and then as a weapons technician. During his six years as a weapons technician he worked with electronics, electrics, hydraulics and mechanical

systems. During a very brief period in 2015 he was involved in assisting in the testing and repair of hydraulic components. That was described in evidence as nothing more than work experience. During his career, Mr Heron had been a site maintenance manager, was involved with risk assessments and writing safe working practices and was the COSHH representative for several of his army postings.

[50] In itself a CV cannot answer the question of whether or not someone is qualified for a particular position. Interview and assessment, and after a period of training further assessment, will provide a clearer answer.

[51] It is clear from the limited evidence that prior to his employment with Wanzl, Mr Heron's main experience was working with electrical systems. Undoubtedly some of those systems would have had hydraulic elements, and Mr Heron would have had experience working around hydraulic systems. It is not clear from his CV however that he had any experience of working with hydraulic systems, in the sense that he was ever involved in the inspection, maintenance and repair of the hydraulic elements of machinery.

[52] The Job Person Specification for the role of MHS Engineer with Wanzl forms Crown production 17. There is nothing immediately obvious that might suggest a great deal of knowledge of hydraulic systems was required. The work to be undertaken was described in fairly general terms. The specification contained a brief list of "must haves" and a shorter list of which individuals the job might be suited to.

[53] Mr Heron's interview process should have determined if he was suitably qualified for the role or at least whether, with appropriate training, he would be so.

Mr Heron was interviewed by Mitchell Russell who had been employed by Wanzl UK Ltd for 11 years, 6 years as a service support manager. He interviewed Mr Heron for the position of a maintenance and service engineer. He found Mr Heron to be a person of good discipline and with good technical knowledge. He never had any cause for concern as to Mr Heron's ability, and no concerns had been raised by others. During the inquiry criticism was made of the application and interview process, in that it did not properly assess the suitability of Mr Heron for the role. Mr Russell was not an engineer. Many industries however will employ human resources personnel or others with relevant skills not necessarily directly related to the specific skill set required for the position being filled. There was nothing unusual in Mr Heron being interviewed initially by Mr Russell, someone who had been with the company in a hands on role for some considerable time.

[54] Although Mr Heron's experience was predominantly on electrical systems he did on the face of it, according to his CV, have some experience of hydraulics. There was nothing to suggest Mr Heron was not an appropriate candidate for the position.

Mr Heron's training for the role of mechanical handling services engineer.

[55] The inquiry heard evidence about training from Mitchell Russell, Kevin Lewis and Nick Burrett, all employees of Wanzl.

[56] Mr Heron's employers, Wanzl, said that training and education were provided in a number of ways. Employees underwent formal documented training; they

received regular updates on their in house software system and in published documentation; and they had peer to peer training.

[57] Kevin Lewis had been the Group Operations Manager of Wanzl since 2016. He was responsible for ensuring that servicing of customers' machinery was carried out in line with company contracts. Wanzl deal with a wide variety of equipment and machinery, substantially for supermarket clients. Mr Lewis, in 2018 and 2019, was responsible for ensuring that appropriate documentation for *inter alia*, the service and maintenance department was in place. Mr Lewis was involved in conducting annual reviews of such documentation, ensuring that engineers had access to appropriate risk assessments and method statements and implementing training of service support managers and senior engineers. Mr Lewis was able to explain the software systems used by the company and its workforce. Service engineers would access their systems, including a service management system ("Connect") and a facilities management tool ("Verisae") by using smart phones. Through these applications the service engineers could access a wide range of documents.

[58] Mr Heron's formal training was noted in Crown productions 21 to 36. Much of the documentation is fairly general in its terms, and relates to general health and safety likely to be found in an industrial environment. It is of note that Crown production 21 shows Mr Heron "received information, awareness and understanding" of thirty six topics in one day. There was no documentation showing Mr Heron having received any formal training on hydraulic systems. There was no documentation showing Mr Heron having received any formal training specific to lift tables or lift engineering in general.

[59] Mr Heron would have had access to his employer's on-line systems and procedures. There was little evidence as to how relevant that would have been to the maintenance of this particular lift. He also had access to health and safety documentation, which had been found in his van. That documentation does contain basic instructions such as "Do not work under equipment/apparatus that is supported only by hydraulics. Stops safety pins, etc. must be in place prior to beginning repairs." The documentation is voluminous, and extends to 417 pages.

[60] Mr Heron's peer to peer training was provided via the "buddy up" scheme, described by Mr Russell, whereby Mr Heron would have shadowed a competent engineer for a number of weeks. He explained that new employees would undergo training in areas such as company policies and manual handling. He would where required, organise more in depth training on certain systems and pieces of equipment. He confirmed that every engineer would be trained on a piece of equipment (although not necessarily the exact model) before being asked to work on such a piece of equipment. He would organise additional training where that was identified as required by the employee or otherwise.

[61] Nick Burrett was responsible for Mr Heron's peer to peer training. He had been employed by Wanzl since around 2005, first as a service engineer and then as a senior service engineer. He "buddied" with Mr Heron on his trial day, and then for a number of weeks (6/7) during Mr Heron's induction. This was on the job training over several weeks. Mr Heron's training log is shown at Wanzl Production 5 "KH Onboarding Log Summary 19/02/2018 -26/04/2018". This showed a number of jobs Mr Heron had

observed/assisted with over that period under the supervision of Mr Burrett. The disciplines for the various jobs are, in the main, noted to be “familiarisation” and at least five entries are noted as “scissor lift familiarisation”. During that period, Mr Heron observed Mr Burrett working on a variety of machines, with Mr Heron progressing to assisting on service/maintenance of machines. Mr Burrett was principally responsible for Mr Heron’s training.

[62] Mr Burrett found that Mr Heron developed very quickly during his training. Mr Burrett accepted that the company do not necessarily have risk assessments and method statements for every site or piece of equipment. Different types of machines worked on the same basic principles, and an assessment or statement for one type of machine could be applied to another. Where information on a machine was lacking, an employee could seek assistance/information from a more senior colleague. Much of this was by word of mouth. The principles in a general type of risk assessment could be used for specific jobs. All of the documentation would be on the company portal.

[63] Wanzl therefore have a system in place whereby a new employee will shadow a relevant more experienced engineer. It is that experienced engineer who will effectively sign off the new employee as suitably qualified and experienced to work on his own.

[64] I found the evidence of Mr Heron’s senior, Mr Burrett to be somewhat concerning when discussing deployment of props or blocks. He did say that no one should go under a platform to work without it being properly supported. His approach to the appropriate safety measures to deploy before undertaking work beneath a scissor lift appeared strange and rather ad hoc. Mr Burrett explained that some machines have

in-built props. He confirmed how scissor frames were fitted with rollers and could move backwards and forwards along the tracks as the platform was raised and lowered. Props were deployed to engage with steel receivers provided for the purpose on the base plate of the lift. He understood that the platform had to be raised in order to allow the props to be lowered and engaged properly. He had a practice of not raising the platform in order to do so, but of allowing the props to lower on to and slide along the frame, resulting in them pushing up against the end wall of the pit. This would stop the platform from falling any further, but it would be at a height lower than that which it would be had it been raised to allow the props to engage in their correct position.

Mr Burrett said his sometime practice was to deploy wooden blocks before he went underneath. Those blocks were not supplied by Wanzl and he picked them up from building sites and the like. The blocks were then placed against the wheels of the scissors and the scissors would push the wooden blocks against the pit wall, stopping the platform from fully lowering.

[65] Mr Burrett evidence as to why he might deploy such blocks rather than the props supplied with the lift was confusing. He said he did not like overriding the pre-set height limit to raise the platform as that meant he would have to reset the lift to that original pre-set height when finished. He did not appear to realise the override switch to raise the lift above its pre-set height could be accessed from the inspection panel on top of the platform floor. Mr Burrett gave evidence of having to go underneath the platform to access the limiter switch. It was clear that that practice was inherently dangerous as that would require the individual to go under the platform without

appropriate support being in place. I heard evidence that the use of wooden blocks could be dangerous as they might be liable to split. It is of concern that Mr Heron's training on the deployment of props was in the hands of someone who had a rather limited knowledge of the workings of height limiters and who had a rather cavalier attitude to safety, preferring to collect his safety devices from building sites rather than adopt safely prescribed methods of deploying props.

Conclusion

[66] Mr Heron had a long career in industry. For much of his career he was with the British Army, in particular with the Royal Electrical and Mechanical Engineers. He worked in the repair and maintenance of complex electronic and electro/mechanical equipment. After leaving the Army in 2000, he continued his career in repair, testing and maintenance of electronic systems. As part of his work he worked around hydraulic systems. During his career, Mr Heron had a number of positions where he had health and safety responsibilities. The extent of his experience of working with hydraulic systems, prior to commencing employment with Wanzl is however unclear. Mr Heron appeared to be an appropriate candidate for the position of Mechanical Handling Services (MHS) Engineer with Wanzl.

[67] In March 2018, Mr Heron joined Wanzl as a Mechanical Handling Services (MHS) Engineer. He was expected to work across a variety of machines and equipment. There was no required level of academic qualification required. Mr Heron's employers arranged formal training on a range of practices and procedures, and machinery.

Mr Heron also received training documentation, health and safety manuals, and access to online resources. He had received "Lockout" training and he had in his van several documents relating to working on hydraulic systems. The Health and Safety Manual which contained basic instructions about working under apparatus supported solely by hydraulics is mentioned in a document extending to 417 pages. Although the various documents produced demonstrated that Mr Heron was in possession of and had access to the safety instructions relevant to work on and underneath scissor lifts at the time of the accident, it was not made clear how information contained in various policies and documents had been disseminated to Mr Heron. Although it would have been preferable for the operating manual for the platform lift to have been available, the absence of a manual had no bearing on the occurrence of this accident.

[68] Mr Heron was also provided with peer to peer training in the form of a buddy system whereby he shadowed a more experienced senior engineer. The records show that Mr Heron was again exposed to hydraulic systems, and it was part of his duties to inspect, maintain and repair machinery which had hydraulic systems.

[69] Whilst Mr Heron had experience of watching Mr Burrett working on scissor lifts, and indeed had progressed to working on scissor lifts himself, it cannot be said with any certainty, what the extent of any training in hydraulic systems received by Mr Heron was.

[70] The Wanzl employees who gave evidence all spoke highly of Mr Heron. He was described as someone who had good discipline and a good understanding of a technical role. He was a good fit for the company and showed a wealth of knowledge.

He developed very well during his peer to peer training. It seems Mr Heron was a man who had been around such systems for many years, was someone who had a wealth of knowledge of repair and maintenance of industrial systems and machinery and was someone who developed and learned in his role.

[71] It was said during the Inquiry that the dangers of opening a hydraulic system under pressure are obvious and that anyone with a basic knowledge of hydraulics would understand that releasing pressure from the hydraulic system by opening the system would cause the hydraulics to fail rapidly. The documents recovered from Mr Heron's van is evidence that he should have been alert to the risks of operating a scissor lift and the risks associated with hydraulic failure. I do not believe the risks of hydraulic failure are so obvious however that an employer does not need to address them. Wanzl did address them in a limited fashion (Wanzl production 12 - Health and Safety Folders – page 112). Interestingly the document states; "Only work on a hydraulic system after you are fully trained to do so". Notwithstanding the lack of documentation showing formal training on hydraulic systems it is reasonable, based on Mr Heron's career before joining Wanzl and his hands on training as documented, to find that Mr Heron would have at the least, a basic understanding of how hydraulic systems worked.

[72] When Mr Heron was working under the platform lift, the platform was being supported in an elevated position by extended cylinders which had been filled with hydraulic fluid being pumped into them. The hydraulic fluid at that stage was under pressure, supporting the platform. Mr Heron opened one of the hydraulic ports by

removing the blanking plug. That meant the hydraulic fluid was able to be released from the hydraulic system and the platform was able to drop. The hydraulic fluid, being under high pressure by the weight of the platform, the hydraulic fluid was pushed out of the system with some force and speed, due to the weight of the platform descending under gravity. That in itself would not have caused a danger for Mr Heron, if he had deployed the blocking devices (props). Any lack of understanding of hydraulic systems was not the primary reason for this accident.

[73] Mr Heron failed to engage the lift's inbuilt blocking devices (props) and failed to put in place any other blocking device. Had an appropriate blocking device been deployed, that would have prevented the platform falling on to Mr Heron. The evidence before the Inquiry was quite clear; if such a platform cannot be suitably supported, no one should place any part of their body under it. Was Mr Heron sufficiently informed in the need to deploy blocking devices before going under the platform? It was said the risks are obvious, and further the lift was fitted with props. There were warning labels on the props advising that they must be used. Mr Heron had worked on a number of lifts of this type. He had observed Mr Burrett doing so. Wanzl had provided Mr Heron with a health and safety folder and that was found in his van. It does contain a warning about not working under equipment that is supported only by hydraulics, unless suitable supports are be put in place. (Wanzl production 12 - Health and Safety Folders under the heading "Safe Repair and maintenance of Hydraulic Systems").

[74] A number of criticisms were made of Wanzl, particularly with regard to Mr Heron's training and information provided to him. It might be said that working under a platform supported only by hydraulics without putting in place suitable supports is such an obvious hazard that it requires no training or instruction. Employees do on occasions have to be protected from themselves, and an employer has a duty to ensure that employees are provided with the relevant information, and has put in place adequate systems of working, in order to safeguard their employees. Mr Heron did shadow Mr Burrett for a number of weeks while they worked together on a number of similar lifts. Whatever Mr Burrett's methods were, he said he would not have gone under a platform such as this without it being supported in some way. He said that message was made quite clear to Mr Heron. Mr Heron was also warned of the dangers by the message on the props attached to the lift. Even if Mr Burrett's methods were unorthodox, it would have been obvious to Mr Heron that the platform should have been supported before he went under it (for any reason). Although Mr Burrett may have been confused about, or simply reluctant to use, the delimiter switch, it seems Mr Heron was familiar with it. The lift appeared to have been raised by Mr Heron beyond its pre-set limit and the access panel was found during inspection to have been removed, thereby exposing the limiter switch. I am satisfied Mr Heron should have been aware of the danger he was exposing himself to when he went under the platform when it was supported only by the hydraulic system.

[75] Where the need for an external prop or support has been identified by an employer that equipment ought to be provided. Wanzl must have been aware that its

senior engineers, like Mr Burrett, were working on an ad hoc basis in relation to deploying blocking devices, and were using their own makeshift devices. That is a practice which should stop. Instructions to use blocking devices fitted to equipment, or available on site to be used with specific equipment, must be re-enforced. If there is a need to use external blocking devices which are not provided on site, that need should be identified and suitable blocking devices should be provided by Wanzl to its engineers. I cannot say that is a precaution that if taken, might realistically have resulted in Mr Heron's death being avoided. Blocking devices (props) were available on this occasion, but Mr Heron did not use them. The same can be said of the failure to provide an operating manual for the lift, or the absence Risk Assessment Method Statements or site specific risk assessments. Realistically that would not have changed the outcome for Mr Heron. Mr Heron knew of the dangers of working under such a lift without the lift being supported by blocking devices, and he would have been no better informed had these measures been taken.

[76] Did Mr Heron know of the danger he was bringing on himself by removing the blanking plug on the hydraulic system? The Inquiry heard from a number of experts. The prevailing view was that anyone who had worked with hydraulics in any sense would be aware of the consequences of releasing hydraulic fluid. The evidence would suggest that Mr Heron would have had that knowledge. Even if it was possible that the Deceased had been unaware of the risk he was creating by removing the blanking plug that was not the principal cause of this tragedy. Deploying a blocking device would not have prevented the sudden loss of hydraulic fluid and hydraulic pressure. It would

however have stopped the platform from lowering under gravity. The principal cause of this accident was the failure of Mr Heron to deploy supports. That was a clear and obvious danger which Mr Heron would have been aware of. Mr Heron had been trained on the need to lock off the power supply before commencing certain work on machines. Although any failure to lock off would not have contributed to this accident, it appears that Mr Heron did not follow that safety procedure before commencing his work on the lift. Sadly, this is a tragedy that could easily have been avoided.

[77] Wanzl's peer to peer training relies heavily on the assessment made by the individual trainer without apparent further checks or assessments being made on the skill set of the trainee. There was no competency-based assessment of Mr Heron nor was there any structure to the peer-to-peer training. As I have noted, Mr Burrett's knowledge of the workings of this particular type of lift (particularly how to gain access to the limiter switch) appeared somewhat confusing. His approach to safety, particularly the use of appropriate blocking devices was ad hoc and perhaps cavalier. Although Mr Burrett's methods had no direct bearing on this accident, the method of assessment of the trainers, and of the outcome of the peer to peer training for the trainee, is something that should be addressed.

[78] I offer my condolences to Mr Heron's wife and to his family. I trust they will be able to look back with some pride on the medals and awards bestowed upon Mr Heron during his service to this country. I thank the various witnesses and participants in this Inquiry. I also thank the participants' representatives who all dealt with the preparation for and the conduct of the Inquiry with great sensitivity, diligence and skill.

Appendix A

Productions:

Crown

1. Post Mortem Report
2. Toxicological Report
3. Medical Records
4. SPA book of photographs (locus)
5. SPA book of photographs (lift)
6. Report by Michael Bottomley, Consultant Engineer (undated)
7. Report by Peter Dodd, Health and Safety Executive, dated 20.12.2019
8. Examination Report by Bureau Veritas UK Limited, dated 17.09.2019
9. Email containing photographic evidence of power supply
10. Kenneth Heron Job lists from 26.03.18 to 10.1.19
11. Kenneth Heron Co-op job lists 28.02.19 to 26.09.19
12. Kenneth Heron Daily Records 07.10.19 to 11.10.19
13. Kenneth Heron Events Week commencing 07.10.19
14. Coop Perth Bridge End Connect Job times
15. Kenneth Heron Daily Vehicle Tracker
16. Induction process
17. Job Description Field Service Operative MHS
18. Wanzl Health and Safety Policy
19. Wanzl Risk Assessment Scissor Lift

20. Wanzl MHS Engineer Recruitment Process
21. Kenneth Heron Wanzl training cover sheet dated 18.01.2019
22. Kenneth Heron training certificate 13.04.2018
23. Kenneth Heron Construction Skills Certification Scheme (CSCS) Labourer's Card
24. Kenneth Heron CVIP
25. Kenneth Heron Electrical Competency Certificate June 2019
26. Kenneth Heron FF Certificate 07.08.2019
27. Kenneth Heron FPA HOT Works Passport
28. Kenneth Heron health and safety Awareness certificate 26.04.2019
29. Kenneth Heron Induction 23.03.2018
30. Kenneth Heron PPM certificate 19.04.2018
31. Kenneth Heron Signed Health Safety Responsibilities 07.06.19
32. Kenneth Heron site safety standards refresher 09.05.19
33. Kenneth Heron Manual Handling Training certificate 18.01.19
34. Kenneth Heron PPE Certificate 18.01.19
35. Kenneth Heron signed Stanley Blade safe usage 07.06.19
36. Kenneth Heron Training Abrasive Wheels Certificate 13.04.18
37. Kenneth Heron CV
38. HSE RIDDOR report for Dangerous Occurrence 11.10.19
39. HSE RIDDOR report for fatality 18.10.19
40. British Standards Institution (BSI) Safety Requirement for lifting tables
41. CCTV footage within Co-Op retail premises at 38 Main Street, Perth, dated 11.10.2019

42. Photos taken by Karen Spalding
43. CCTV footage within Co-Op retail premises at 38 Main Street, Perth, dated 11.10.2019
(sign in)
44. CCTV footage within Co-Op retail premises at 38 Main Street, Perth, dated 11.10.2019
(sign in 2)
45. CCTV footage within Co-Op retail premises at 38 Main Street, Perth, dated 11.10.2019
(walk to Warehouse)
46. CCTV footage within Co-Op 0631 to 0701
47. CCTV footage within Co-Op 0703 to 0707
48. CCTV footage within Co-Op 0707 to 0715
49. Photos taken by Peter Dodd Health and Safety Executive, dated 19.11.201
50. Account of the event provided by Chelsea Moore
51. Account of the event provided by Colin McLellan
52. Account of the event provided by Fraser Kay
53. Account of the event provided by Karen Spalding (1)
54. Account of the event provided by Karen Spalding (2)
55. Account of the event provided by Kevin Lewis
56. Account of the event provided by Kevin Stewart
57. Account of the event provided by Louise Jardine
58. Account of the event provided by Mitchell Russell
59. Account of the event provided by Peter Dodd
60. Account of the event provided by Andrew Hull

61. Account of the event provided by Gareth Burton
62. Account of the event provided by Kirsty Smith
63. Account of the event provided by Michael Bottomley (1)
64. Account of the event provided by Michael Bottomley (2)
65. Account of the event provided by Nathan Thomson
66. Account of the event provided by Ruth Sutherland
67. Account of the event provided by Claire James
68. Account of the event provided by Christopher McInnes
69. Account of the event provided by Cara McIntosh
70. Account of the event provided by Christopher McLeod
71. Account of the event provided by David Feeney
72. Account of the event provided by Esther Bigham
73. Account of the event provided by Gavin Smith
74. Account of the event provided by Graeme Bain
75. Account of the event provided by Grieg Millar
76. Account of the event provided by John Smith
77. Account of the event provided by Leah Hutchison
78. Account of the event provided by Matthew Henry
79. Account of the event provided by Ronald Ashton
80. Account of the event provided by Ryan MacDonald

Wanzl UK Ltd

1. Locking off procedure
2. Removal and installation of scissor lifts
3. MHSMS03 – Method Statement Service and Repair Balers 2018
4. MHSMS02 – Method Statement changing ballers 2018
5. KH Onboarding Log Summary 19/02/2018 – 26/04/2018
6. Engineer sign off sheet dated 19/03/2018
7. Engineer sign off sheet dated 06/04/2018
8. Engineer sign of sheet dated 10/04/2018
9. KH Post Onboarding Log Summary 27/05/2018 – 30/09/2019
10. Engineer sign off sheets dated 22/05/2019 – 30/09/2019
11. Report prepared Ron Knak dated 7th March 2023
12. Health and Safety Folders

Co-Operative Group Limited

1. Report by John Holland dated 5 April 2023
2. Work Order Number 65012867
3. Certificate of report of thorough examination of lifting equipment at Coop's

Edinburgh Earl Grey Street Store

4. Certificate of report of thorough examination of lifting equipment at Coop's Banchory
Store

5. Completion comments for Edinburgh Earl Grey Street Store Translyft TM1500 call out by Mr Heron dated 17 September 2019

6. Completion comments for Banchory Store Translyft TM1500 call out by Mr Heron dated 15 April 2019

Family

1. Report prepared by Mr Colin Craney, Consultant Engineer, dated 5 January 2023

2. Translyft Original Operating Instructions (24 pages)

3. British Standard 7255-2012 Code of Practice for Safe Working on Lifts (68 pages)

4. British Standard 9102-2014 Code of Practice for Safe Working on Lifting Platforms (36 pages)

5. Lifting Operations and Lifting Equipment Regulations 1998 incorporating the Approved Code of Practice and Guidance (72 pages)

6. Provision and Use of Work Equipment Regulations 1998 incorporating the Approved Code of Practice and Guidance (84 pages)

7. Management of Health and Safety at Work Regulations 1999 incorporating the Approved Code of Practice and Guidance (54 pages)