MAGISTRATES COURT *of* TASMANIA

CORONIAL DIVISION

Record of Investigation into Death (Without Inquest)

Coroners Act 1995
Coroners Rules 2006
Rule 11

I, Robert Webster, Coroner, having investigated the death of Daniel Thomas Knight

Find, pursuant to Section 28(1) of the *Coroners Act* 1995, that

a) The identity of the deceased is Daniel Thomas Knight ("Mr Knight");
b) Mr Knight died as a result of injuries he sustained in an accident at his workplace;
c) Mr Knight's cause of death was crush injuries which included chest and abdominal injuries and chest compression; and
d) Mr Knight died on 12 November 2014 at 25 Boral Road, Western Junction in Tasmania.

Introduction

In making the above findings I have had regard to the evidence gained in the investigation into Mr Knight's death. The evidence includes:

- The Police Report of Death for the Coroner;
- Affidavits establishing identity and life extinct;
- Affidavit of Dr Christopher Lawrence forensic pathologist;
- Affidavit of Ms Miriam O'Connor, forensic scientist of Forensic Science Service Tasmania;
- Records obtained from Ambulance Tasmania (AT);
- Report of Mr Anthony Arcuri of Trim Removal Systems (TRS);
- Affidavit of Mr Andrew Scott;
- Affidavit of Mrs Rachel Knight;
- Affidavit of Mr Keith McMullen;
- Affidavit of Sergeant Philip Summers;
- Affidavit of Mr Nathanael King;
- Affidavit of Senior Sergeant Christopher Parr;

- Affidavit of Senior Constable Rodney Walker;
- Medical records obtained from the Launceston General Hospital (LGH);
- TRS compaction unit (CU) user and maintenance manual which includes operation instructions, weekly maintenance checklist and troubleshooting document;
- Worksafe Tasmania (WST) file which includes:
  (i) records of interview of Mr James Woolston, Mr Joshua Green, Mr Bruce Woolston, Mr Rodney Glenn, Mr Dean Briers, Mr Lazlo Szabo and Mr Thomas Knight;
  (ii) affidavit of Mr Terence Hurley, Senior WST Inspector ;
  (iii) Sage Automation Safety and Operational Inspection Report with respect to the CU;
  (iv) documents supplied by Woolston Printing Pty Ltd (WP);
  (v) incident report;
  (vi) email from Integrated Air Systems Ltd;
  (vii) WST Helpline report;
  (viii) photographs and other miscellaneous documents; and
- Photographs, demonstration and investigation videos and forensic evidence.

This investigation concerns a workplace accident which occurred at the premises of WP 25 Boral Road, Western Junction on 12 November 2014. WP provides printing and book binding services. Mr Knight was fatally injured when he received crush injuries while working inside the CU (model no. TCU 660). The accident was investigated by WST and the Office of the Director of Public Prosecutions (ODPP) laid charges against WP alleging a breach of s19 of the *Work Health and Safety Act* 2012 which amounted to a category 2 offence contrary to s32 of the *Work Health and Safety Act* 2012. The complaint was filed in the Magistrates Court at Launceston on 9 November 2016. On the 1 May 2023 the ODPP tendered no evidence on the complaint and accordingly the presiding Magistrate dismissed it.

The *Coroners Act* 1995 (the Act) provides that because Mr Knight's death occurred at, or as a result of an accident or injury that occurred at his place of work and the coroner is not satisfied the death was due to natural causes then an inquest must be held[1]. An inquest is a public hearing. The senior next of kin, Mrs Knight, was contacted about this on 15 May 2023 by the Coronial Liaison Officer, Ms Jodie Richardson, at which time Mrs Knight indicated there was probably no benefit in proceeding to an inquest. She however asked if she could wait until my office received the file from the ODPP and then provide her with an explanation as to why the charge did not proceed before she formed a final view. Enquiries were then made with both the investigating officer and the ODPP as to the whereabouts of the latter's file. A redacted version of that file

[1] Section 24(1)(ea).

was received by my office in early December 2023. My office then wrote to the prosecutor in the ODPP on 14 December 2023 seeking advice as to why the prosecution did not proceed so an answer could be provided to Mrs Knight. A follow-up email was forwarded to the prosecutor on 22 December 2023. On 5 January 2024 my office received a response from the prosecutor which is in the following terms:

"The advice and reasons provided to the Director and the Regulator are privileged. I can indicate that on preparing for hearing I undertook a full review of the file and briefed a number of witnesses. On the basis of the review and briefings it was determined that there was no longer a reasonable prospect of conviction regarding the complaint in consequence of which no evidence was tendered. Ultimately the decision not to prosecute was determined by the Director, Mr Coates SC.

Before advising either defence counsel or the Court that we did not intend to proceed, the family were contacted and asked their views on the complaint not proceeding. The family indicated to the Witness Assistance Officer that they supported the complaint not proceeding.

This is the extent of the information I am able to provide. ".

On 12 January 2024 an associate of my office spoke to Mrs Knight and forwarded her a letter which advised her what information I had gleaned from the Court's prosecution file, what evidence was contained in the ODPP's file and what transpired at the hearing when the complaint was dismissed on 1 May 2023. In addition the contents of the prosecutor's email of 5 January 2024 was provided to Mrs Knight.

My office wrote to the prosecutor again pointing out that although it was accepted her advice was privileged, that privilege belongs to the client; that is WST not the lawyer. It is therefore up to the client as to whether privilege is maintained or waived. My office therefore asked whether WST was prepared to waive privilege in this case especially given the lapse of time between Mr Knight's death in 2014 and the finalisation of the complaint on 1 May 2023. The prosecutor was advised the only reason this information was sought was so that Mrs Knight could make an informed decision as to whether she asked me not to hold an inquest under s26A of the Act. No response has been received from the ODPP. When proceedings were instituted the ODPP would have determined, at that point, there was a reasonable prospect of conviction. It was determined by that office in May 2023 that was no longer the case. I can only infer that the long delay in this matter is the reason, or one of the reasons, for that change in view.

In response to the letter to Mrs Knight of 12 January 2024 an email was received from her requesting me not to hold an inquest. Despite the mandatory requirement to hold an inquest the Act permits me to decline to hold an inquest if I am satisfied that it would not be contrary to the public interest or the interests of justice if the inquest were not held[2]. After considering the file I was satisfied it would not be contrary to the public interest or the interests of justice if the inquest was not held because the cause of Mr Knight's death is clear as are the circumstances in which it occurred. There are no suspicious circumstances and there are no issues associated with general public safety that require investigation. In addition I would likely encounter, due to the significant lapse of time since Mr Knight's death, witnesses who had failing, poor or no independent recollection of relevant events. I encountered such a situation in relation to another WST prosecution which was discontinued in excess of 7 years after the death which was subject to a coronial investigation[3]. Accordingly I decided not to hold an inquest in this case.

A draft of this decision was forwarded to the ODPP on 27 February 2024 inviting any comments from the particular prosecutor and/or the DPP Mr Coates SC with particular reference to pages 2 and 3. No response has been received.

Background

Mr Knight was born on the 27 April 1971 and he was 43 years of age, married and he resided with his wife, Rachel, at Youngtown at the date of his death. Mrs Knight says they had been married for just over 7 years; that is since 28 August 2007.

Mr Knight had, according to the records of the LGH, cerebral palsy. This caused a right sided weakness, and he had a right upper limb birth defect. Despite this he was a high functioning individual, and he had no other significant medical issues. His father, Thomas, says because of the cerebral palsy he could not use his right arm but that was his only disability. He could move his right arm but in order to hold something he had to tuck it under his arm. In addition he had a number of operations on his right leg and foot as a child which helped him significantly with respect to his walking. He did however walk with a limp. He was not mentally impaired. Thomas Knight says his son accepted his condition and got on with his life. Although in receipt of a

[2] Section 26A(3).
[3] Investigation into the death of Joshua John Dingjan [2024] TASCD 81.

disability support pension he liked to work and the income he earned from his employment supplemented the pension.[4]

Thomas Knight says approximately 15 years prior to the accident he purchased a business by the name of *Chockfull Snacks*[5]. His express purpose for doing this was to provide an income for his son and to provide him with something meaningful to do as his employment prospects were limited by his disability. That business supplied and serviced confectionery self-serve honesty outlets which were installed in business premises across Launceston. Mr Knight's role was to install and service the confectionery snack facilities which were located in lunchrooms and in reception areas in those businesses. This included gaining permission from each business to install the outlet and then reconciling the stock and money received which was collected from the honesty box and replenishing the confectionery supplies as required.

Mr Knight commenced performing work for WP on 3 September 2013[6] as a contractor through his father's business[7]. His duties were to clean, sweep, manage the wastepaper from the outside hopper and place it into bins, make boxes and place some documents through a shredding machine and any other similar tasks. Chockfull Snacks would invoice WP weekly for the labour supplied by Mr Knight and it was Chockfull Snacks which paid Mr Knight's wages[8]. The invoices suggest Mr Knight commenced working for WP one day per week however he was working approximately two days a week in the months prior to the accident.

The Circumstances Surrounding Mr Knight's Death

Mrs Knight says her husband left home at about 6:50am on 12 November 2014 to start work at 7:00am. Mr Knight advised her he would be home at midday for lunch. Mrs Knight says he seemed his normal self and she did not notice that he was ill or otherwise unwell.

[4] Interview of Mr Thomas Knight: WST file volume 1, tab 21 at pages 5 to 7.
[5] A business names search indicates Thomas Knight had been the registered proprietor of that business since 9 October 1998-WST file volume 1 tab 5.
[6] The invoices supplied by WP which it had received from Chockfull Snacks suggest labour was at first provided by Mr Knight on or about 20 August 2013. Nothing turns on this discrepancy. The invoices appear in the WST file at volume 2 tab 1.
[7] According to Mr James Woolston his family, which operated WP, were long-standing friends with the Knight family. See the interview of Mr James Woolston: WST file volume 1, tab 22 at page 5.
[8] Interview of Mr James Woolston: WST file volume 1, tab 22 at pages 4 to 5.

Mr Knight commenced work at 7:06am[9]. It was a clear, cool morning with very light winds[10]. He was not present at the morning meeting, chaired by Mr James Woolston, which was held at 7:54am where the tasks of the day were discussed and any and all issues relating to work could be raised by WP's employees. It was apparently not uncommon for staff members to be absent from the morning meeting and in fact the print production manager, Mr Green, was absent from the meeting as he was busy changing the glue drums on the binding line[11]. Mr Knight had been outside WP's building attending to the wastepaper at the CU.

At approximately 8:25am Mr Green realised he had not seen Mr Knight for approximately 20 minutes. He says he could usually see Mr Knight when he was working inside so he went outside to check on him. When Mr Green went to the CU, where Mr Knight was usually working when outside, he saw the lower half of a body hanging from inside that unit. He assumed this was Mr Knight and so he yelled out to him and touched his leg but found that he was cold. He screamed, raced inside for help at which time Mr Briers and Mr James Woolston responded. They returned to the CU and in an attempt to drive one of the CU's legs or rams back down, in order to release Mr Knight from between the two legs, Mr Green went to turn the air on to the CU however found it was already turned on. Mr James Woolston recognised the screen of the CU was on and he immediately pushed the button to let the leg come down which resulted in Mr Knight being released and falling to the ground. Mr Briers then checked Mr Knight for a pulse however could not find one and noted he was not breathing. CPR was commenced by Mr Briers and Mr James Woolston while Mr Green ran back inside to call 000. Another employee, Mr Szabo, then took over and continued CPR until an ambulance arrived[12].

Once the ambulance officers arrived Mr Knight was treated and transported to the LGH where he received further treatment. Despite that treatment Mr Knight required maximum inotropic support[13] and he had severe persistent hypoxaemia[14]. After a discussion with a family member, it was agreed Mr Knight was not for CPR or defibrillation. Despite further treatment his condition continued to deteriorate in that the hypoxaemia worsened as did his low blood

[9] Interview of Mr James Woolston: WST file volume 1, tab 14 at page 6.
[10] The temperature was 11°C, relative humidity was 68% and the wind speed was 2 km/h from the south-east: WST file volume 1, tab 8.
[11] See minutes of the meeting: WST file volume 2, Tab 4 at appendix K.
[12] Interviews of Mr Green and Mr James Woolston: WST file volume 1 tab 15, pages 2 to 5 and volume 1 tab 14, pages 6 to 7.
[13] Drugs which assist the heart muscle to beat and contract.
[14] Abnormally low oxygen in the blood.

pressure. He then became bradycardic[15] and then asystolic[16]. Dr Nathanial Jackson, who was the then on duty ICU registrar, declared Mr Knight's life to be extinct at 2:45pm.

Investigation

(i) *AT*

The records of AT disclose the call to attend WP's premises was received 8:49am. An ambulance was dispatched one minute later, and it arrived at the Boral Road address of WP at 9:04am. Mr Knight was provided with treatment by ambulance officers for 55 minutes in order to stabilise his condition so that he could be transported to hospital. The ambulance arrived at the LGH at 10:07am. His Glasgow coma score[17] was 3 for the entire time he was in the care of the ambulance officers.

(ii) Police

Sergeant Summers was tasked to attend WP's premises at Western Junction at approximately 10:00am on 12 November 2014. On arrival he was shown the CU and he spoke to a number of employees of WP and two WST inspectors. The accident scene was cordoned off. Staff of WP were sent home. He obtained details of WP's staff who were present that morning and liaised with the WST inspectors.

Constable Walker was tasked to attend the scene at the same time as Sergeant Summers. He is a crime scene examiner attached to Launceston Forensic Services of Tasmania police. On his arrival he was briefed by attending police and noted Mr Knight had already been removed from the scene by paramedics and all staff had been sent home. He therefore could obtain very little information about the accident at that time. He examined the scene and took photographs. His examination suggested that shredded wastepaper from inside the factory is sucked or blown from the factory, via tubing, outside to a cabinet containing a large fan. That fan then blows the waste material, again via tubing, into a compactor for large material and a dust collection area for fine

[15] A slower than normal heartbeat.
[16] His heart stopped beating.
[17] The Glasgow coma scale (GCS) is a tool used to assess and calculate a patient's level of consciousness. It uses a criteria scoring system: best eye opening (maximum 4 points), best verbal response (maximum 5 points), and best motor response (maximum 6 points). These scores are added together to provide a total score between 3 and 15. The GCS was initially used to assess the level of consciousness in patients after a head injury, but the scale is now used in many acutely unwell patients. In hospitals it is also used to monitor patients in intensive care units. Mr Knight's score was the lowest score which could be returned on the scale.

material. He says it appeared to him Mr Knight entered the compactor with a rake without disabling the machine. It was unclear if he had entered the machine to clear a blockage or just to clean the internal area of the compactor.

The next day Sergeant Summers returned to the accident scene at which time he briefed Senior Sergeant Parr. Senior Sergeant Parr liaised and conducted a site inspection with WST's inspectors namely Mr Hurley and Mr Buchanan. He obtained some affidavits from witnesses who worked nearby and some reports, but he did not obtain any statements from WP's employees because he was advised by that company's solicitor that they would only be supplying statements to WST. As a result of his enquiries Senior Sergeant Parr formed the opinion Mr Knight's death was not suspicious. I agree.

Mr King was an employee of Ag – Line which operated out of WP's premises. That business is owned by the Woolston family. On 12 November 2014 Mr King was at work from approximately 6:15am. He wondered whether somebody had been injured in nearby premises operated by Hayward Construction that morning and he had a conversation with one of that firm's employees to that effect because he had heard a yell during the morning which sounded to him like it was coming from that firm's building. He later became aware of this accident when he went to collect a broom at approximately 10:00am.

Mr McMullen worked for Hayward Construction as a crane driver and says WP's building is on the western side of Hayward's premises. He commenced work at approximately 7:00am that morning and 10 minutes later he went up to the top yard to pick up a crane which had been left there the night before. This yard is directly opposite WP. While there he was spoken to by an employee from WP and asked whether or not he heard a scream. He replied in the negative. He later became aware of this accident. I infer it was Mr McMullen who Mr King spoke to.

Mr Scott is the owner and operator of Tasmanian Engineering which provides general engineering and fabrication of products throughout Tasmania. On 27 June 2014 he was contracted by WP to fabricate a duct support frame for a wastepaper compacting system. He says that system consisted of a pneumatic transfer of waste through a duct to a hopper which separated the paper from the air flow. The paper was then sent directly to a chute and then into a compacting machine. His business was contracted to design and construct a frame to support the duct work. On 4 July 2014 the frame was delivered to WP however his business was not engaged by WP to install it. His business was not engaged to return to the site to inspect or otherwise carry out

any maintenance on the frame. On 13 November 2014 Mr Scott attended WP, at that firm's request, where he spoke to Mr Geoff Woolston. He was asked to try and operate the compactor for the purpose of determining whether the machine was operational. He understood the purpose of his visit was to attempt to determine the cause of the fatality the day before. He asked for the operating manual which was provided and then he stepped through the start-up procedure in the presence of representatives from WST. He was unable to operate the compacting rams which he believed was due to insufficient air pressure. He could not open the side doors of the compactor as the support frame restricted access. Apart from the inability to operate the compacting rams he considered the machine to be in good order.

In a report Senior Sergeant Parr obtained from Mr Arcuri of TRS he says his business is an engineering company providing wastepaper handling and compacting equipment to the printing and woodworking industry. This business also services and maintains general machinery in the printing industry that is manufactured by others. He designed the CU with his brother and father. He has, by way of qualifications, a certificate 3 in mechanical engineering together with 19 years' experience designing, building and servicing machinery for the printing industry. His brother is a qualified fitter and turner with 30 years printing machinery industry experience in installation, commissioning, demonstrating, repairing, design and construction and he was an Occupational Health & Safety representative and Australian Metal Workers Union safety officer. In addition, he had qualifications in hydraulics and pneumatics. His father was a qualified fitter and turner with over 45 years' experience including 23 years as lead maintenance engineer in an international printing company.

Mr Arcuri advised the CU was designed to compress waste trimmings from bookbinding equipment. Those trimmings are extracted from the bookbinding line by a vacuum fan that feeds the wastepaper to the compacting machine. Although they built and supplied extraction systems they did not do so in this case. He says by a combined vacuum and blowing process the wastepaper is delivered to the compacting machine. It enters the compacting machine via a round duct spigot which is approximately 180 mm in diameter. The wastepaper then blows down to the bottom of the 660 L bins and the level of waste is detected by a photo eye. When a certain level is reached, one of the 2 compacting rams vertically lowers itself to compact the paper beneath it. The bin has 2 compacting rams each covering half of the bin. When one ram lowers the other is raised to allow paper to fall underneath it. This process can only take place if a bin is loaded within the machine and the front guard is closed. The machine only needs an attendant to load a fresh bin once the bin being used is full. Bins are loaded into the CU by lifting the front

guard and inserting the bin. The guard is closed and the "load bin" button is pressed. The rest of the cycle is automatic until the bin is full. The bin is then manually removed, and a fresh bin loaded into the CU. The CU runs on 6 bar air pressure and 240 V mains supply to power the 24 DC volt control circuit.

The CU was ordered by WP on or about 24 April 2014 and it was shipped to WP from Victoria to Tasmania on or about 13 June 2014. TRS offered to install it however WP did not accept that offer. No advice was sought by WP on the installation of the CU. No training was requested by the purchaser. Mr Arcuri says no manuals were requested or provided and his firm was only contracted to provide the machine. It was only after the accident WP sought a written instruction manual.

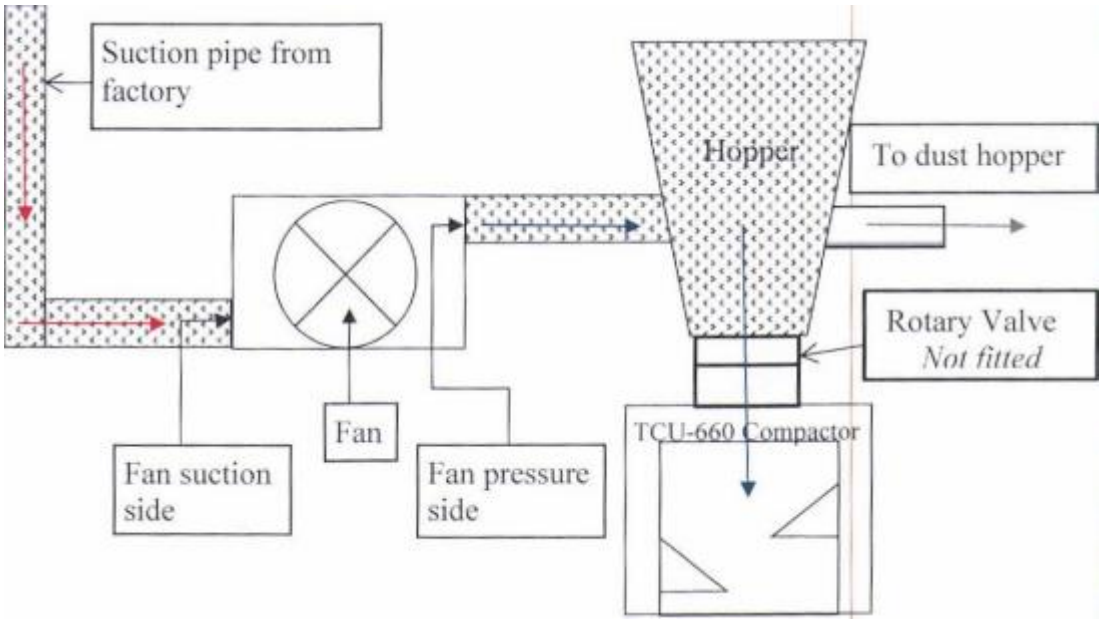
Nobody from TRS examined WP's site at any stage to assess the working environment or the appropriateness of the machine for its intended use subsequent to its purchase. Mr Arcuri visited WP on two occasions the first being on 24 January 2014 in order to provide advice about the second-hand extraction system which WP had purchased from the United Kingdom. At that time, he advised WP on the availability of a second-hand compacting machine, and he offered to supply and install the extraction system and supply and install the CU should they purchase it; an offer WP initially accepted. Subsequently WP rejected the offer to install the extraction system and the CU. His second visit occurred on 21 August 2014 when he was asked by WP to investigate an issue with the wastepaper extraction system; not the CU. He determined the extraction system was blowing too much air into the compactor due to a missing rotary valve. This had nothing to do with the CU.

Mr Arcuri says that if there is a build-up of paper within the CU it is cleared by loading an empty bin. The CU permits the bin to be changed while the extractor is still delivering paper to the CU. He says blockages occur in the ducting before reaching the CU. These blockages should be cleared by unclipping the ductwork and therefore the CU does not need to be unblocked and you do not need to enter the CU to clear any build up. He says the CU was originally built in 2001 for Heidelberg Australia which is a worldwide printing machine manufacturer as a working display for the printing industry trade fair in 2001. It was then sold to NewLitho printing in Victoria where it was in continuous service until shortly before it was sold to WP in April 2014. No incidents have been reported to TRS and nor have there been any adverse reports with respect to its operation or design. A total of 19 units have been built and sold since 2001 and no safety issues have been raised or industrial accidents reported to TRS. He says all other units

have been installed by TRS and have the extraction system built for the CU. He says TRS is of the view that if the CU is operated and used for the purpose for which it was manufactured it is safe. Finally he noted on his visit to WP on 21 August 2014 the quick release spigot which attaches to the extraction system and permits easy access to the ducting which would enable the clearance of any blockage in the ducting had been removed and replaced with a fixed/solid square duct. This would make the clearance of any blockage, in any extraction system, attached to the CU more difficult.

(iii) WST

The paper trim extraction system implemented by WP consists of a large, enclosed fan with a suction pipe and a pressure pipe. The suction pipe collects the trimmed paper from the area on the book assembly line where it is cut and transports it through the metal ducting to a point where it is transferred to the pressurised side which is connected to a large hopper where the paper is collected. The fine paper dust which is associated with the trimming process is then removed and carried into another hopper and the paper waste falls through a shoot from the bottom of the hopper into the compactor where it is compacted into a 660 L portable wheelie bin. The system is depicted in the following diagram:



As a result of its investigation, which included interviewing the witnesses listed on page 2, inspecting and photographing the scene, testing the CU on site, seeking expert advice and seizing documents and equipment, WST determined Mr Knight had manoeuvred himself inside the CU in order to remove a blockage in the chute which delivers paper from the hopper to the CU. It appears he used a steel tine garden rake for this purpose. It is unknown whether Mr Knight attempted to isolate the CU before entering it however the CU was still connected to mains electricity and mains air pressure at that time. The left-hand side compacting ram was in the lower position whereas the right hand side compacting ram was in the upper position. As Mr Knight was positioning himself to clear the blockage, he knocked the left-hand side ram which caused it to retract to the upper position and as a result it began to lift Mr Knight so that he became trapped between the two rams. There is a 5 kilonewton[18] force applied by the pneumatic ram and this force lifted Mr Knight off the ground and compressed him against the right-hand side ram[19]. Having considered all the evidence I am satisfied to the requisite standard that this is what in fact occurred.

Approximately 18 months before this accident WP upgraded its printing capabilities with the purchase of a binding line and trim paper waste extraction unit from England. The binding line consisted of a number of machines coupled together to produce a soft or hardcover book. This involved sorting and sequencing the pages, trimming of the pages to the required size, gluing and fitting the book spine and fitting the covers. The paper trimmings were removed by a paper waste extraction system.[20]

The paper trim extraction unit was examined by Bruce and James Woolston in England and purchased along with the binding line. When set up in England it was coupled with a rotary valve that was positioned just under the collection hopper and above the compactor. The paper would be delivered into the compactor through the rotary valve from the hopper. The purpose of the rotary valve was to ensure air pressure in the compactor was at an atmospheric level and not at the same pressure as inside the hopper which was pressurised from the fan delivery system. Without the rotary valve, air pressure in the compactor would cause the trimmed

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[18] A kilonewton (kN) is a unit of force measurement which is equal to 1000 newtons. One kilonewton, 1 kN, is equivalent to 102.0 kg force, or about 100 kg of load under Earth's gravity.
[19] See the CU testing videos: WST file volume 2 tab 10.
[20] Interviews of Mr James Woolston: WST file volume 1 tab 14, pages 15 to 16 and volume 1 tab 22, pages 7 to 8.

paper, that was dropping into the compactor, to be disbursed everywhere. In those circumstances the compactor could not be used.

The system used by the business in England, Integrated Air Systems Ltd, from whom the paper trim extraction unit was purchased compressed the paper as it was dropped into the compactor and as the compactor became full hydraulic rams would further compress the paper into a steel box to create a bail. Metal straps would then be applied to hold the bale together and it would be ejected ready for transport. The compactor, including the rotary valve, was retained by Integrated Air Systems as it was Mr Woolston's understanding it was to be reused in its new extraction unit. A rotary valve did not form part of the wastepaper compaction system installed by WP.

For a number of months after purchasing and installing the binding line and paper trim extraction unit, WP operated the system without a compactor. As the collection hopper was not used the paper waste would simply be blown along the delivery pipe to a large bag and into a bin ready for disposal.[21] This method was unsuccessful as the air pressure at the delivery point was such that the paper was blown everywhere and had to be raked up and manually disposed of. This was one of Mr Knight's duties.[22]

The CU had a normal 3 pin 240 V electrical connection which was plugged into a 240 volt power point. The system consisted of an airline which was connected to the compressed air system operating in the factory which was plumbed to a point near the compactor. There was an on/off valve near the compactor.[23] Once a 660 L wheelie bin is placed inside the open space in front of the CU, the bin is raised to form a seal between the compactor and the top of the bin. The trimmed wastepaper is deposited in the bin. After the bin is positioned and the CU is turned on the left-hand side ram automatically lowers to allow paper to fall through and into the bin. As the paper builds up the compactor senses a level of paper and begins to compress the paper with the two feet, one after the other, until the bin is full. The 5 kN force is applied by the rams to compress the paper. Lights flash and a siren sounds to indicate when the bin is full and needs to be replaced. The compactor is depicted in the photographs as follows:

[21] Interview of Mr James Woolston: WST file volume 1 tab 22, pages 10 to 11.
[22] Interview of Mr Green: WST file volume 1 tab 15 page 7.
[23] See WST file volume 2 tab 8 photographs 6 and 7.

From the time the paper trim extraction unit was installed, and the CU connected by way of the locally manufactured chute from the large collection hopper the rams of the CU became blocked by paper trim which caused the CU to stop working.[24] As to why this occurred the manufacturer of the trim extraction unit, Integrated Air Systems, advised WST of the following:

"I can also see why the company have been experiencing problems in the operation of the system because it appears to have been incorrectly installed. There should have been a device to stop the air from blowing down into the compactor. This would be done with either an air balancing fan on the clean (exhaust side) of the dust filter or alternatively with a rotary airlock between the air separator and the compactor. As far as I can see from your photos neither of these devices have been fitted, therefore the compactor would have been operating in a pressurised condition which would lead to all sorts of problems…"

Had a properly installed rotary valve or airlock or air balancing fan been installed then the CU would not have been jammed, it would not have required unblocking and it follows therefore Mr Knight would not have entered the CU. Approximately every 10 minutes or so the CU had to be unblocked[25].

[24] Interview of Mr Green: WST file volume 1 tab 15 page 7.
[25] Interview of Mr Green: WST file volume 1 tab 20 pages 4 to 5.

The report from Sage Automation indicates the engineers who prepared that report found electrical power and air pressure could not be isolated on the CU unit itself. The CU was not being used at the time of this accident and Mr Green says the air was turned off and the power switch was off at the power point but an out of service tag had not been placed on the hose and the electrical supply.[26] However as indicated on page 6 when Mr Green went to turn the air on to the compactor so that he could assist Mr Knight he found it was already turned on and Mr James Woolston recognised the screen of the compactor was on which means the power was connected. [27] Sage Automation determined the right-hand side ram was leaking air, when the mains supply was turned off and this caused it to creep down overnight. This would have required WP to either place some shoring underfoot to support it to prevent it from lowering or keeping the air supply on so the operator could raise the foot as necessary. It appears from the evidence the air supply was kept on. There is no evidence on file that WP implemented an isolation procedure in respect of the CU.

Sage Automation also found there was no interlock which prevented motion of the rams on opening of the front guard. The report indicates new motion commands were not triggered by the control system during tests but stored pneumatic energy was not dissipated on opening of the guard. This is particularly hazardous in situations when a ram is jammed or otherwise stuck. In addition the emergency stop button was not safety rated and was not wired into the machine pursuant to the design drawings although it was wired to release all air pressure when pressed. Accordingly it was not interlocked to the front guard. In addition it was not interlocked to any other components of the machine and therefore when the button was reset the machine was fully functional again rather than having to reset the machine from a master control via the programmable logic controller (plc).

In addition Sage Automation found the plc used was not designed or capable to be used in conjunction with any safety-related functions. The front guard had a safety rated sensor or switch fitted which was connected to the plc. The guard's switch was not wired into any safety-related functions on the machine nor was it possible for the guard switch to have any safety functionality at all. Sage Automation determined that during loss of total natural power the plc may lose track of where in the automatic sequence it was so the raising of the bin on restoration of electrical

[26] Interview of Mr Green: WST file volume 1 tab 20 page 10.
[27] Interview of Mr Green: WST file volume 1 tab 15 page 3 at line 153 and interview of Mr James Woolston WST file volume 1 tab 14 page 7 at lines 326 to 334.

power may not be a major issue however if the ram had slipped down during a period of electrical disconnection, then on initial application of electrical power it would immediately move to its default position of being raised. This did not comply with some Australian standards[28] which required switching on an external supply shall not result in a hazardous situation and spontaneous restart of a machine when re-energised after power interruption is to be prevented if it can generate a hazard. During a test conducted on 13 November 2014 to demonstrate how the CU worked the left-hand ram would not raise to its position. It was later found the ram was stuck in the down position and would not raise to the up position until it was physically wriggled. Sage Automation found there was no air supply lubricator fitted as per the design drawings and the left-hand ram would become jammed in the down position and the right-hand ram was found to leak and lower itself overnight when the air was turned off.

In addition it was found the CU had insufficient protection against the ingress of paper and water which increased the likelihood of corrosion and malfunction. It was concluded indoor installation would have avoided any problems which arose due to the ingress of water as a result of poor weather. There were also non-compliance issues with respect to gaps in guarding that allowed access to internal mechanisms and there were no identified risk controls which prevented hazardous movement of the compaction rams or bin lift mechanism while a bin was not present or by the hazard posed by the lowering of a full bin. While there were two documents provided by WP which related to the safe operation of the CU at the time the incident which detailed requirements for isolation and energy dissipation prior to maintenance such as cleaning, and clearing obstructions or jams this was said to be no substitute for suitable guarding.

Although Mr James Woolston and Mr Green received instructions from Mr Arcuri as to operation of the CU, isolation of the CU in the event of mechanical failure and its safety features Mr Knight was not provided with any of this information.[29] Although WP had two documents with respect to the safe operation of the CU[30] and although the first document contains guidelines for operator personnel including a direction to keep out of the compactor and that an obstruction or jam is to be cleared when the CU is nonoperational and is disconnected from the power and air supply there is no evidence WP had sufficient systems in place to ensure the guidelines were followed. Further there is no evidence Mr Knight was aware of the guidelines or that Mr Knight was ever provided with any form of instruction or training with respect to the

[28] AS/NZS 4024:1201:2014 clauses 6.2.11.2 and 6.2.11.4 or AS 4024:1202:2006 clauses 5.11.3 and 5.11.5.
[29] Interview of Mr James Woolston: WST file volume 1 tab 14, page 18.
[30] WST file volume 2 tab 2

isolation of machinery from all energy sources prior to servicing or performing maintenance or repairs. He was also not provided with any instructions with respect to the operation, maintenance and troubleshooting with respect to the CU despite his duties requiring him to work with and around that unit.[31]

Although the CU was installed in late July or early August 2014 it malfunctioned because the paper was being forced into the unit under pressure due to the lack of a rotary valve or a properly engineered air balancing fan. WP persevered in its use however the CU was shut down and not used from about mid to late October 2014 which coincided with a trip Mr Green had planned to New Zealand. The plan was to fix the problems when he returned on 10 November 2014. Mr James Woolston says Mr Knight was instructed *"never to touch it, don't ever touch all he had to do was rake the waste back from the ground and place in the bins."*[32] Mr Green said the binding line was not running while he was on holidays which means Mr Knight did not start to rake the paper out of the compactor until, at the earliest, Monday, 10 November 2014 two days after which he was fatally injured. Mr James Woolston advised the binding line was running on the subsequent two days that being the Tuesday and Wednesday; that is 11 and 12 November 2014.

Finally a vinyl strip had been taped as a flap covering the LCD screen of the control panel located on the front of the CU. The LCD screen permits the user to set the CU in motion or to control its functions. When electricity is turned on the screen lights up and provides a user access to the functions. When electricity is turned off the screen is blank. This vinyl strip may have prevented Mr Knight from seeing the electricity to the CU was turned on. He knew from what he had been told it had been turned off and was out of action. He had also seen Mr Green get inside the CU on a number of previous occasions in order to clear the paper[33].

(iv) Post-Mortem Examination

A post-mortem examination was conducted by the forensic pathologist, Dr Christopher Lawrence on 13 November 2014. The post-mortem consisted of an internal and external examination, histological examination, and a toxicological examination. As a result of considering

[31] Interview of Mr James Woolston: WST file volume 1, tab 14 page 18, and volume 1 tab 22, page 27.
[32] Interview of Mr James Woolston: WST file volume 1, tab 22, page 25.
[33] See photographs 5 and 8: WST file volume 2 tab 8 and interview of Mr Green: WST file volume 1 tab 20 pages 10 to 11 and pages 18 to 22.

the results of those examinations Dr Lawrence concluded Mr Knight's death resulted from chest and abdominal injuries and chest compression due to being crushed by a wastepaper compactor.

The autopsy revealed Mr Knight had cerebral palsy with extensive old damage to the left front and parietal cortex of the brain with weakness in the right arm and probable weakness in the right leg. In addition Dr Lawrence found fractures of the ribs, contusion of the lungs, a large amount of retroperitoneal haemorrhage but no major organ damage in the abdomen. Mr Knight had quite marked old damage to the left hemisphere of the brain. There was no petechiae or congestion. Dr Lawrence says death appeared to be the consequence of compression of the chest wall and chest and abdominal injuries. He noted the cerebral palsy condition probably effected Mr Knight's *"mobility and agility which could have been significant in him being trapped in the paper compactor"*.

I accept the opinion of Dr Lawrence.

(v) Toxicology

No alcohol or illicit drugs were detected on toxicology. Two antiepileptic drugs were detected at therapeutic levels. These drugs did not in any way cause or contribute to Mr Knight's death.

Summary, Comments and Recommendations

The CU was not working correctly because a rotary valve or airlock or air balancing fan had not been installed. This led to the CU becoming jammed and it therefore required unblocking very regularly. Because of these difficulties the CU was taken out of service in or about mid to late October 2014 until Mr Green returned from leave at which time it was proposed to be fixed. Despite turning off the air and power supply and directing Mr Knight not to touch the CU, as it was not his job to do so, on 12 November 2014 both the air supply and the power were switched on. The book binding line had not operated while Mr Green was on leave, but it operated on 10, 11 and 12 November 2014. This produced paper trim which was extracted from the book binding line by the extraction system and into the CU. It was Mr Knight's job to rake up the paper trim and deposit it into the 660 L bins. The CU became blocked at which time Mr Knight entered the CU to unblock it. When he attempted to do this, he inadvertently came into contact with the left-hand side ram which began to rise thereby lifting Mr Knight whereby he became trapped between the two rams and sustained fatal injuries.

The circumstances of Mr Knight's death are not such as to require me to make any comments or recommendations pursuant to Section 28 of the *Coroners Act* 1995. In addition I can see no utility in making any comments or recommendations given the long delay between Mr Knight's death and the finalisation of both the prosecution of WP and these proceedings.

I convey my sincere condolences to the family and loved ones of Mr Knight.

Dated: 26 March 2024 at Hobart in the State of Tasmania.

Magistrate Robert Webster
Coroner