CORONERS ACT, 2003

SOUTH *AUSTRALIA*

FINDING OF INQUEST

An Inquest taken on behalf of our Sovereign Lady the Queen at Adelaide in the State of South Australia, on the 18th and 24th days of December 2020, the 3rd, 17th, 18th, 19th, 22nd, 23rd, 24th, 25th and 26th days of February, the 1st, 2nd, 22nd, 23rd, 24th and 25th days of March, the 28th, 29th and 30th days of April, the 3rd, 4th, 17th, 18th, 19th and 27th days of May, the 15th and 25th days of June, the 6th day of August, the 7th and 9th days of September 2021 and the 7th day of June 2022, by the Coroner's Court of the said State, constituted of Ian Lansell White, Deputy State Coroner, into the death of Adelene Leong Yi Hui.

The said Court finds that Adelene Leong Yi Hui aged 8 years, late of Bukit Baru, 75150 Melaka, Malaysia, died at Women's and Children's Hospital, North Adelaide, South Australia on the 12th day of September 2014 as a result of multiple injuries. The said Court finds that the circumstances of her death were as follows:

1. Introduction and cause of death

1.1. Dwight D Eisenhower, 34th President of the United States said:

> '**There is no tragedy in life like the death of a child.**
> **Things never get back to the way they were.**'

These profound words are prominent in this Inquest into the death of 8-year-old Adelene Leong. Adelene sustained fatal injuries when she was ejected from her seat on the Airmaxx 360[1], a high energy amusement device[2], at the Royal Adelaide Show[3] at about 12:15pm on Friday 12 September 2014. From the date of its arrival into

[1] The Airmaxx
[2] AKA amusement ride - Although they are defined differently in practice and in evidence, these terms were used interchangeably in describing the Airmaxx
[3] The Show

Australia in April 2013, the Airmaxx and its operation was plagued with issues that finally proved to be fatal on 12 September 2014. Adelene's death that day was inexcusable. It could and should have been prevented.

1.2. President Eisenhower's words are acutely fitting when considering the grief expressed on behalf of Adelene Leong's mother, Adelene's only surviving parent.

1.3. This quote should also become relevant to the amusement ride industry. The circumstances of her death must never be allowed to be repeated.

1.4. The Airmaxx was imported into Australia from Spain in 2013 by Jenny-Lee Sullivan and Clinton Watkins who were both experienced operators in the amusement industry. They had purchased the Airmaxx from a Spanish company called Safeco Pty Ltd[4] for over $1,000,000. The purchase was financed by a loan from Indigenous Business Australia.[5] In April 2012 they became Directors and shareholders in the company CJ and Sons Amusements Pty Ltd[6], which was formed to purchase and operate the Airmaxx.

1.5. Ms Sullivan and Mr Watkins presented the Airmaxx at The Show which was convened by the Royal Agricultural and Horticultural Society.[7] The Show was located at 39 Goodwood Road, Wayville, South Australia. The Airmaxx was advertised by the Society as a new attraction for The Show. Prior to the Airmaxx's presentation here in September 2014, it had been operating around Australia at various other showgrounds.

1.6. On this day, Adelene was wearing a distinctive white jacket when she attended The Show at 10am with her mother. She enjoyed a number of other show rides prior to taking her seat unaccompanied on the Airmaxx at about 12:10pm. Minutes later she was ejected with great force from the ride and fatally injured in full public view, including her mother's. She died later that day at 1:42pm at the Women's and Children's Hospital[8] despite sustained efforts to keep her alive by the patrons[9], emergency responders and WCH medical staff.

---

[4] Safeco
[5] IBA
[6] CJS
[7] The Society
[8] WCH
[9] In particular Ms Alyssa Decristofaro, a student nurse

1.7. On the afternoon of 12 September 2014, South Australia Police[10] and SafeWork SA[11], the government agency responsible for Work Health and Safety governance in South Australia, immediately commenced a joint investigation concerning Adelene's death and the Airmaxx. A large number of witnesses were interviewed including the owners, operators and employees of the Airmaxx, as well as civilian eyewitnesses. The Airmaxx ceased operation and was officially seized, but remained onsite for examination by independent safety engineer, Mr Peter Kroon.

1.8. A post-mortem examination of Adelene was conducted on 15 September 2014 by Dr Neil Langlois, a forensic pathologist at Forensic Science South Australia. Dr Langlois' report tendered at the Inquest[12] revealed Adelene suffered and died from multiple injuries including skull and facial fractures.[13] I accept his opinion that her cause of death was due to multiple injuries. I make a finding accordingly.

1.9. This Inquest was conducted pursuant to Section 21 of the Coroners Act 2003.[14] Adelene's death was a reportable death under the Act.[15] The State Coroner considered it necessary or desirable to conduct an Inquest into the cause or circumstances of her death. This Inquest was both necessary and desirable to reveal the extent of the issues into the cause or circumstances of her death namely the Airmaxx's operation, maintenance and governance.

2. Adelene Leong

2.1. Adelene was born on 14 October 2005. She lived in Malaysia with her mother. On Tuesday 9 September 2014 she arrived in Adelaide with her mother to visit her late father's sister. Adelene had a very close relationship with her mother, especially since the passing of her father in 2009 due to liver cancer. They were due to return home on 20 September 2014. Adelene was an only child.

2.2. Adelene's mother did not accompany her on the Airmaxx due to feeling nauseous from a previous ride she had been on with Adelene.

[10] SAPOL
[11] SafeWork
[12] Exhibit C3a
[13] Exhibit C3a
[14] The Act
[15] Adelene's death was by an unnatural and unusual cause (Section 3 of the Act)

2.3. The Airmaxx was operating at full speed and maximum force when Adelene was ejected from her seat at a speed estimated to be between 100 and 200 kilometres per hour. Just prior to the ejection she was literally hanging from her seat upside down by her left ankle.

2.4. As stated, her mother was one of a number of distressed patrons of The Show who saw Adelene being ejected and land about 21 metres away. Due to the forces involved on her body, some medical evidence suggested '*…that whilst she was on the ride and free of the seat, the deceased's torso, head, upper limbs and right lower limb were the subject of significant rotational and centripetal forces*' so that Adelene '*…may have been rendered unconscious prior to her impact on the ground*'. [16] After the terrifying moments she must have suffered when coming out of her seat and hanging on by her left ankle, I certainly hope that small mercy was given to her.

3. The effect of Adelene's death on her mother

3.1. At the beginning of the Inquest, Mr Camatta appeared for Adelene's mother. He submitted that she did not wish to be referred to by name in public. Therefore, throughout this Inquest she was not identified by name. I requested the media to do likewise. As far as I am aware, they have honoured that request. That request is continued with respect to this Finding. I will only refer to her as Adelene's mother.

3.2. There is no better way to describe Adelene's mother's life since that day than quote from Mr Camatta's submissions at the conclusion of the evidence, as set out below:

> 'Adelene's mother came to Adelaide with Adelene to spend a few days here over the school holidays in September 2014. On 12 September excited Adelene got dressed up and planned to go to the show; she went to the show with her mother and a few friends.
>
> The tragedy that unfolded, in my client's words "Has broken my heart, has devastated my life, has made my life almost unliveable so that I have to live in a parallel world where I believe this did not happen".
>
> Adelene's mother's wish is that for those who are responsible, that they take responsibility and accountability. This is not the function of this tribunal. This investigation seeks to understand how joy and fun can become horror and death. Adelene's mother hopes that this investigation will recommend actions so that such an event will not happen again. Experts, supervisors, regulators, service personnel all had a part to play and I'm sure that you as coroner will assess that position…

[16] Exhibit C4, Statement of Dr Linke

> She does also appreciate the support she has had from the police and others around her at the time. I'm personally aware of the raw grief that this woman had when I spoke to her a few days after the event. It has been something that in 42 years of legal practice that lives with me most days. She hopes something like this will never happen again.' [17]

3.3. As will be seen, these brief, poignant and pointed submissions accurately set out the duty of this Court regarding her daughter's death.

3.4. This Court cannot by law make any finding or suggestion of civil or criminal liability regarding any person or corporation. This Finding is focused, as the law requires, to outlining the cause and circumstances[18] of Adelene's death and to make recommendations that '*might prevent, or reduce the likelihood of, a recurrence of a death similar to Adelene's*'.[19]

3.5. The Court may also make any recommendation that relates to a matter arising from this Inquest including (but not limited to) a number of matters of which '*public health or safety*' are concerned.[20]

4. '<u>Cause' and 'circumstances' definition under the Act</u>

4.1. On 7 June 2021, section 3(3) of the Act came into operation. This states that:

> 'For the purposes of this Act, a reference to the circumstances of an event may be taken to include matters related to or arising out of the event or its aftermath.'

4.2. As this Inquest began prior to 7 June 2021, there may be some doubt as to whether this definition applies to this Inquest.

4.3. The event under consideration is the death of Adelene and as will be seen immediately below, the section seems to mirror the breadth given to this phrase by the Supreme Court of South Australia,[21] prior to its enactment.

4.4. Therefore, it is important to outline the Supreme Court's guidance for the interpretation of the phrase. I refer to the decision of <u>WRB Transport and others v Chivell</u>[22] where Lander J stated:

> 'In my opinion, the jurisdiction given by the Act to the Coroner is quite extensive. It is not limited, as suggested, to a particular inquiry into the direct cause of death of the deceased.

[17] Transcript, page 2608
[18] Section 25(1) of the Act
[19] Section 25(2)(a)
[20] Section 25(2)(b)(II) of the Act
[21] Supreme Court
[22] [1998] SASC 7002

> The Coroner has a jurisdiction and, indeed, an obligation to inquire into all facts which may have operated to cause the death of the deceased and as well to inquire into the wider circumstances surrounding the death of the deceased.'

He also went on to say with respect to 'cause':

> 'In determining those events which may be said to give rise to the cause of death, the Coroner is not limited by concepts such as 'direct cause', 'direct or natural cause', 'proximate cause' or the 'real or effective cause'.'

and:

> 'The Coroner, therefore, has to carry out an inquiry into the fact surrounding the death of the deceased to determine what, as a matter of common sense, has been the cause of that person's death. The inquiry will not be limited to those facts which are immediately proximate in time to the deceased's death. Some of the events immediately proximate in time to the death of the deceased will be relevant to determine the cause of death of the deceased. But there will be other facts less proximate in time which will be seen to operate, in some fact situations, as a cause of death of the deceased.'

4.5. Based on these guiding statements from the Supreme Court, I have identified a number of issues relevant to the cause or circumstances of Adelene's death.

5. What was the Airmaxx?

5.1. The Airmaxx was an amusement device made by a Spanish company called Safeco. It arrived unassembled in Australia on 23 April 2013. Mr Kroon, in one of his investigation reports described the Airmaxx as a:

> '…carousel type ride. It features twelve arms, with each arm supporting two seats (24 individual seats in total). Each arm is connected to a centre turret via a hinge pin connection that allows the arm to move in arc in the vertical plane relative to the centre turret. Each arm is equipped with a pneumatic actuator referred to as an arm cylinder that raises and lowers the arm during the operation of the ride.' [23]

He continued:

> 'Each carriage is connected to an arm in a manner that allows the carriage to rotate. There is a disc brake arrangement incorporated in the connection point that can prevent movement of the carriage when engaged, however in normal operation this brake is released. Hence in operation the carriage is able to rotate freely relative to the arm it is connected to.' [24]

[23] Exhibit C83, page 18
[24] Exhibit C83, page 21

5.2. In order to more easily understand the description, I insert a part of the Investigation Report from Mr Kroon with photos illustrating and explaining the essential features of the Airmaxx.[25]

Figure 1 Airmaxx 360 Amusement ride - main components (P101287.JPG)

Main component of Airmaxx 360 amusement ride as shown in Figure 1:

1. Centre Turret
2. Arm
3. Carriage
4. Seat (part of carriage)
5. Frame (part of carriage)
6. Arm cylinder (pneumatic)

[25] Exhibit C83, figures 1 and 4

Figure 4 Airmaxx 360 Carriage, two seats and supporting frame (P1010289.JPG)

5.3 The overall system needed to operate the Airmaxx was complex and involved hydraulic, electrical, pneumatic[26] and mechanical systems. This system is controlled by a Programmable Logic Controller[27] that is the core controller connected to the operator's console including the restraint system. It is meant to guarantee that, should a restraint not be secure, it will immediately result in the ride becoming inoperable. The ride is operated from a control booth with an electronic touch screen and physical controls. It can be operated at various speeds of arm rotation. During a ride cycle, the arms turn in a clockwise direction and move up and down. This was repeated in an anticlockwise direction in the second half of the ride. The carriages attached to each

[26] Air pressure
[27] PLC

arm have independent movement and spin around simultaneously with rotation of the arms. The forces on a patron are therefore continually vertical and horizontal to the body. The operating console had a dial for the speed of the ride from 0 to 10, 0 being the slowest, 10 being the fastest. This is the scale of measurement for the speed of the rotation of the arms around the centre turret. At the setting of 10, a rotation is completed every six seconds. The Airmaxx is known as a high energy ride with good reason.

6. Issues at the Inquest

6.1. The Airmaxx was plagued with issues from the time CJS purchased this ride. The combined effect of these issues meant that Adelene was permitted on the Airmaxx at The Show in 2014, when she failed to meet Safeco's criteria for an eligible patron and the Airmaxx was operating without the registrations as required by Australian law. The issues plaguing the ride from the beginning can be categorised as follows:

- Issue 1 - The purchase of the Airmaxx;
- Issue 2 - Registrations required for the Airmaxx to operate in Australia;
- Issue 3 - The assembly and initial inspection of the Airmaxx;
- Issue 4 - Harnesses and restraints;
- Issue 5 - Lack of communication between State and Territory regulators;
- Issue 6 - Training and operation of the Airmaxx;
- Issue 7 - Inspections and audits, investigation and prosecution;
- Issue 8 - Approval to operate at the Royal Adelaide Show in 2014;
- Issue 9 - The setting of the 'minimum height' for passengers to be permitted onto the ride at The Show.

6.2. At this time I wish to briefly highlight Issue 9 which I will call the '*height issue*'. This was the most proximate issue prior to Adelene boarding the Airmaxx.[28] Due to her height, Adelene was not eligible to ride on the Airmaxx unaccompanied according to its manufacturer Safeco. In the user manual for the Airmaxx, Safeco had set the minimum height for an unaccompanied patron for this amusement device at 140cm. The owners expressly knew this through email correspondence with Safeco in October 2012. However, they set the height for an unaccompanied patron at 120cm.

[28] Summary of The Height Issue (Issue 9)

6.3. As the evidence revealed, this minimum height limit of 120cm allowed extremely young children as low as five years of age to be eligible to ride the Airmaxx unaccompanied. The owners operated the Airmaxx from May 2013 in defiance of Safeco's basic safety instruction. The height issue was of utmost importance as Adelene was only 137cm tall.

7. Issue 1 - The purchase of the Airmaxx

7.1. The funding and purchase of the Airmaxx

In 2012 the Airmaxx was purchased by Jenny-Lee Sullivan and her husband Clinton Watkins. They were both very experienced in the amusement ride industry. Mr Watkins was described as a '*sixth generation showman*'[29] and had worked in the industry all his life. He met Ms Sullivan through the industry when she became actively involved in or around 1991. Together, Ms Sullivan and Mr Watkins were involved in the industry of amusement rides for in excess of 20 years. They purchased the Airmaxx believing that their experience and love of the amusement ride industry made them suitable to operate this high energy ride. They also believed it would be instrumental in providing a secure future for them and their children.

7.2. Mr Watkins, a man of Aboriginal descent[30], was eligible to apply to IBA for a business loan. In August 2011, he and Ms Sullivan initiated their purchase plan by submitting to an interview with IBA to seek funding for the purchase of the Airmaxx. They submitted a formal business plan[31] on 6 January 2012 through a consultant.[32]

7.3. At this time, Mr Watkins was operating two jumping castles under the business name Watkins Amusements and Ms Sullivan was operating a mobile food and drink stall, selling general treats available at carnivals and Shows throughout Australia.

7.4. Together they sought funding of $1,025,250 with a ten year repayment plan. The business plan indicated they wished to purchase a ride called '*Smashing Jump*' from Italy.[33]

7.5. The '*Smashing Jump*' was described as a '*family ride*' and it operated;

---

[29] Exhibit C58, paragraph 8.1
[30] Exhibit C58
[31] 'The business plan'
[32] Exhibit C60, notes of interview of IBA and business plan
[33] Exhibit C60, page 8

> 'Like a spider, the ride has a centre body that houses the driving mechanism, from this centre hub twelve arms extend, each arm has a pod at its end, each pod holds two passengers. The ride therefore holds a maximum of 24 passengers… the ride takes its customers in a rotating motion: with each arm rising and falling, the ride does not transport its passengers upside down. This less aggressive ride enables the client to attract a broader customer base and offer a lower cost per ride. A computerised system controls the pre-set length of time the ride will run and controls the safety bars that hold the riders in their seats. The system will not permit the ride to commence if any of the safety bars are shown to be open.' [34]

7.6. As seen from this description, the ultimate use and purpose of the '*Smashing Jump*' was similar to the Airmaxx.

7.7. On 1 May 2012, the business plan was accepted by IBA. They offered CJS the loan as requested, with Mr Watkins and Ms Sullivan as guarantors. Their house and business assets were security for the loan. IBA categorised the owners as experienced business people.

7.8. CJS engaged a broker for the purchase, Mr Keith Emmett, who was based in the United Kingdom. On his recommendation, they were advised to purchase the new ride from Safeco in Spain. Mr Emmett was not called to give evidence to explain the terms of the contract. The contract of sale was not tendered.

7.9. In June 2012, having attended Safeco's business premises in person, Ms Sullivan and Mr Watkins purchased the Airmaxx as Directors of CJS.

7.10. Mr Watkins and Ms Sullivan purchased this ride '*so that we could better provide for our family*'.[35] It was a huge investment with a large loan and commitment of over $1 million to IBA. As quoted in the executive summary of the business plan submitted to IBA in 2012, '*they have also owned and run their own entertainment company*' in the previous 11 years.[36] This plan stated Ms Sullivan and Mr Watkins wanted the Airmaxx to be unique to Australia, presumably to give them a business advantage over other high energy amusement rides and to profit from that uniqueness.

7.11. It can be easily inferred from the fact that IBA had loaned a significant amount of money, namely $1,025,250 that CJS needed the Airmaxx to be very attractive and available to the public. This ten year loan required monthly repayments. It was

[34] Exhibit C60, page 8
[35] Exhibit C64, paragraph 5
[36] Exhibit C60, page 6

categorised as an interest only loan but operated as an amortising loan.[37] By any standards, it was a large loan with the usual power balance in the contract being with the lender.

7.12. According to the business plan the Airmaxx needed to be operational and profitable. It was required to be open to the public 13 hours per day during the multiple Shows that CJS were going to be involved in.[38]

7.13. The business plan[39] for the Airmaxx assumed that the loan was for 10 years and that it would operate as follows:

- Four shows per month;
- Cost of $8 per ride including GST for the first year, then $10 per ride for the second year;
- Ride time 90 seconds;
- Time to be ready for next ride, 90 seconds;
- Operating 13 hours per day at 30% capacity for 7 hours and 90% capacity for 6 hours;
- Income per day $26,208 '(*3600 customers at average of 277 per hour, 58% capasity (sic)*)'.[40]

7.14. The business plan set out the division of duties between Mr Watkins and Ms Sullivan in operation namely that Mr Watkins would erect and dismantle the ride, maintain the ride, '*AS3533 maintenance and operating logbook*' [41] and supervise ride staff and crowd control. The expense assumptions were set out in the business plan.[42] It did not set out anything other than a '*nominal amount*' for maintenance.

7.15. Ms Sullivan was to be in charge of cash control, bookkeeping, staff employment, wages and rosters, insurance, tax, WorkCover requirements, confirmation of Show dates and working in the ride booth.

7.16. It was suggested CJS placed profit above safety and proper procedure. This caused me to consider an analysis of the financial state of CJS in 2013 and 2014.

---

[37] Exhibit C58, Annexure JS3, page 5
[38] Exhibit C60, page 14 of 16
[39] Also Exhibit C58, Annexure JS2
[40] Exhibit C58, Annexure JS2
[41] Exhibit C60, page 11
[42] page 13-14

7.17. The financial position of CJS in 2013 – 2014

IBA documents and correspondence with the owners and their accountant clearly showed CJS was under acute financial stress as soon as they began operating the Airmaxx. The projected revenue from the business plan was substantially inaccurate. A perusal of IBA documents provided a clear snapshot and summary of the financial state of CJS and its ability to serve the IBA loan in 2013 and 2014.[43]

7.18. I shall briefly set out the financial position of CJS at certain dates based on the IBA documents. Before doing so I note that there is reference made to the '*…manufacturing and building of the ride, as well as the delays in shipping the ride to Australia… eventually arrived… on or about 5 April 2013 in Brisbane Port*'. The purchase price was paid ten months earlier in June 2012 and therefore the substantial amount of the loan was drawn down at least ten months before it began operating. It was also noted that a '*GST reimbursement of approximately $96,000*' was promised to be paid back to '*…reduce the loan amount*'.[44]

7.19. 27 May 2013

On 27 May 2013, IBA agreed to refund a monthly payment of $13,686 to '*…replenish working capital. While loan will go into arrears it is intended for client to clear the arrears from cash flow generated via QLD shows*'.[45]

7.20. 5 September 2013

An email from the owners to IBA seeking help '*…to get on our feet*'.[46]

7.21. 9 September 2013

An IBA internal email confirmed CJS '*will not be able to make this month's payment*'.[47]

7.22. 12 September 2013

By letter exactly a year before Adelene died, CJS' accountants, Enmark Chartered Accountants and Business Advisors,[48] submitted to IBA that '*…it will be difficult for the ride to achieve the level of sales that were forecast in the business plan*'.[49]

7.23. 13 November 2013

Mr Neil Michel, Director of Enmark, reported to Mr Roberts of IBA concerning trading

[43] Exhibit C34, MD63a
[44] Exhibit C34, MD63a, page 238
[45] Exhibit C34, MD63a, page 239
[46] Exhibit C34, MD63a, page 247
[47] Exhibit C34, MD63a, page 248
[48] Enmark
[49] Exhibit C34, MD63a, page 279

by CJS since 16 September 2013, where the average daily takings had been $4,100. This was well below the forecast of $12,581. As noted in this report '*The ride takings continue to be much less than forecast and are currently averaging ⅓ of the forecast revenue*'.[50] In commenting about the loan repayments, Mr Michel stated '*that loan repayments did not need to be paid in September and October and that interest only repayments are required for November to January*'.[51]

7.24. 28 November 2013

Mr Stephen Roberts, Manager Business Lending and Support with IBA, spoke with Ms Sullivan regarding the GST refund payment promised to be put towards the loan. Ms Sullivan advised that they had '…*used the funds to meet some ongoing expenses as they hadn't worked since the Campbeltown (sic) Show in October 2013*'.[52]

7.25. Mr Roberts asked what they had spent the money on and was told by Ms Sullivan that $9,000 was for registration, $12,000 for insurance and $10,000 for air tanks for the ride, totalling $31,000. Registration and the air tanks were a linked issue as will become apparent.

7.26. She requested that the GST payment be put off until March 2014.[53]

7.27. 5 December 2013

Mr Roberts spoke with Ms Sullivan again indicating that a '*Breach Notice letter*' would be sent for failing to pay the GST refund into the loan. Mr Roberts made a file note as follows:

> 'She explained that they have had to use funds as they are not currently working and they now need to replace the air tanks on the ride. She explained what the air tanks were (the hydraulic system that makes the ride go up and down.).' [54]

Although Ms Sullivan did not remember this contact when giving evidence,[55] she accepted that the money had not been paid. She asked Mr Roberts for an extension on the loan but was advised that ten years was the maximum allowed.

7.28. 9 December 2013

The '*Breach Notice letter*' was sent to CJS on this date demanding that the GST refund

[50] Exhibit C34, MD63a, page 300
[51] Exhibit C34, MD63a, page 300
[52] Exhibit C34, MD63a, page 270
[53] Exhibit C34, MD63a, page 270
[54] Exhibit C34, MD63b
[55] Transcript, pages 2247-2250

of $96,000 be redirected to the IBA loan and that they needed to advise IBA of the proposed payments to remedy the breach.

7.29. Enmark, in providing an '*update report*' advised that CJS' '*…trading results to date have been significantly lower than forecast and we believe this is due to incorrect assumptions being made in the original cash flow projections in the business plan*'. Mr Michel highlighted that average daily takings had been $3,034 compared to the forecasted $12,580 and the overall income from the ride for a five month period was $182,103 below forecast.[56] Mr Michel further advised that CJS had lost $43,802 thus making it $140,792 behind the forecast figure.

7.30. By 15 February 2014 the monthly repayments for the loan were $13,636 per month.[57] This was after a variation notice deferring September and October 2013 payments and then reverting to interest only payments of $8,000 per month from November 2013 to January 2014. This variation must have meant CJS was under considerable financial stress at that time.

7.31. In May 2014, Enmark produced a '*mentoring report*' for CJS to present to IBA. It noted that the sales between 1 January 2014 to 31 March 2014 were only:

> '…slightly below forecast but could have been better if several ride break-downs had not occurred during the Royal Sydney Easter Show'.[58] It was further noted that 'Although the ride continues to operate well below the original forecast, it is apparent that those sales forecast figures were overly optimistic and unlikely to be achieved outside of the larger city shows.' [59]

The report estimated:

> '…that the business needs to earn at least $469,000 in the next 12 months for it to be at least cover all of its costs, an average of $39,000 per month. This does not however allow for any capital improvements that may need to be carried out including the air tanks.' [60]

7.32. <u>11 June 2014</u>

Enmark provided an update report to IBA enclosing cashflow projections that assumed an increase in sales of 25%. Enmark explained:

> '…the purpose of increasing sales by 25% is to determine the capacity of the clients to make additional loan repayments during the year and to meet the increased loan repayments that are scheduled to begin soon.' [61]

---

[56] Exhibit C34, MD63a, page 277
[57] Exhibit C58, Annexure JS-3 Variation notice, see also Exhibit C34, MD63a, page 344
[58] Exhibit C34, MD63a, page 390
[59] Exhibit C34, MD63a, page 391
[60] Exhibit C34, MD63a, page 393
[61] Exhibit C34, MD63a, page 418

The report concluded that CJS:

> '…wish to repay the loan in as short a timeframe as possible and will aim to make additional loan repayments where working capital allows. However increasing the loan repayments at this stage of the business just as it is showing signs of increasing sales, may place unnecessary stress on the business and there is a risk that working capital may be stretched later in the year[62] which could lead to the clients not being able to meet all their loan repayment obligations.' [63]

7.33. 18 August 2014

Enmark reported to IBA via email that they had spoken to Ms Sullivan that day. She advised the ride had:

> '…suffered a further break down on Friday which severely impacted their takings over that last 3 days of the Ekka[64]… the ride could not operate properly on Friday to Sunday… only 2 of the 4 arms were operating.' [65]

Further, their income had been '*impacted*' and there are '*…insufficient funds to make the full loan repayment*'.[66]

7.34. I pause to note here that no contingency or allowance was made in the business plan for breakdowns of any substantial length or other adverse events in forecasting the finances associated with the Airmaxx. These significant breakdowns of the Airmaxx at EKKA are only 25 days before Adelene's death.

7.35. 2 September 2014

Enmark sent an email to Mr Roberts of IBA outlining that there were:

> 'a couple of issues … to stress:
>
> - Forecast sales are less than break-even sales… and that they require extra show days per year and 43 more customers per day on average.' [67]

The email concluded by stating that

> '…some changes are needed in order for the business to survive.' [68]

7.36. Annual repayments of about $160,000 is a significant impost on any small business. By September 2014, IBA had communicated a number of times with CJS due to their concerns about the loan and the operation of CJS.

---

[62] My emphasis
[63] Exhibit C34, MD63a, page 422
[64] The Royal Brisbane Show
[65] Exhibit C34, MD63a, page 473
[66] Exhibit C34, MD63, page 473
[67] Exhibit C34, MD63a, page 472
[68] Exhibit C34, MD63a, page 472

7.37. These documents provided a real context to the stressors under which CJS was operating at the time of The Show in early September 2014. This is all relevant to how the Airmaxx operated at that time and in particular with respect to maintenance and compliance issues. The conclusion I was asked to draw from the financial evidence was that these were desperate financial times for CJS and the potential revenue from The Show must have been vital. It was submitted that based on this, safety became less of a priority than maximising ticket sales.

8. Issue 2 - Registrations required for the Airmaxx to operate in Australia

8.1. As an amusement device, by Australian law, the Airmaxx had to be subject to Design Registration[69] in a State or Territory as well as Plant Registration[70] also in any State or Territory.

8.2. As described by Mr David Rynes, Chief Advisor Engineering, Technical Service Team of the Engineering Unit of SafeWork:

> 'Design registration is the process undertaken by a safety regulator in recording details about a high-risk plant design owned by a client who is either the designer of that plant, or the person with management or control of that plant in a workplace. The purpose of design registration is to ensure that the designer has used recognised published technical standards and/or engineering principles in the production of the design, such that plant manufactured to that design and located in a workplace will be without risk to the health and safety of any person who operates or uses that plant.' [71]

8.3. In relation to PR, Mr Rynes stated:

> 'Plant registration is the process undertaken by a safety regulator in recording details about a high-risk item of plant owned by a client and traceable by a serial number (or another unique identifier). The purpose of plant registration is to ensure that it is inspected by a competent person and is safe to operate in accordance with regulation 246(2) of the WHS Regulations.' [72]

8.4. As explained by Mr Rynes, DR and PR required significant work and documentation to be presented by an applicant concerning essential design and safety issues which can be shown to have reached the required safety standard. This standard is known as the Australian Standards,[73] set by an independent body called Standards Australia.

---

[69] DR
[70] PR
[71] Exhibit C97e, paragraph 7
[72] Exhibit C97e, pages 7 and 8
[73] AS

8.5. Australian Standards / Work Health Safety Act (SA)[74]

Mr Kroon gave evidence that the AS are the approved code of practice in South Australia under the WHSA. This was confirmed by the Executive Director of SafeWork, Mr Martyn Campbell in his evidence.[75] The AS are developed and issued by Standards Australia. They govern the amusement ride industry in the significant areas of design and construction[76], operation and maintenance[77] and in service inspection.[78]

8.6. There is a mutual recognition between Australian jurisdictions of DR and PR. Quite simply, all DR and PR from other jurisdictions are recognised in South Australia as valid and satisfying South Australian Work Health and Safety Regulations under their WHSA 2012.[79]

8.7. The AS are crucial as a reference point for any deficiency and provide guidance as to how owners, operators, inspectors and regulators should act in enforcing the standards on any particular amusement device.

8.8. AS were first developed as '*voluntary documents that set out specifications, procedures and guidelines that aim to ensure, products services and systems are safe consistent and reliable*'.[80] The relevant AS for amusement rides and devices is AS3533. It has three parts namely;

- AS3533.1 – Design and Construction
- AS3533.2 – Operation and Maintenance
- AS3533.3 – In-service Inspection

The objective of AS3533 is:

> '…to provide regulators, designers and manufacturers with requirements for the design and construction of amusement rides and devices to promote uniformity with regards to design principals, manufacture and registration of these devices.' [81]

[74] WHSA
[75] Exhibit C106 and Transcript, page 2421
[76] Exhibit C34, MD32, Part 1
[77] Exhibit C34, MD33
[78] Exhibit C34, MD34
[79] Exhibit C97e, paragraphs 8 and 44, WHSA
[80] Exhibit C34, MD32 page 2 - Also general statement on the website of Standards Australia, referred to as authors of AS
[81] Exhibit C34, MD32 page 4

8.9. The Committee of Standards Australia responsible for AS3533 included a number of bodies, both State and Federal. South Australia was represented by the Department of Premier and Cabinet.[82]

8.10. In South Australia, AS3533 has been given legal status as a Code of Practice and has been incorporated into the WHSA and its regulations. Therefore it follows that at a South Australian workplace a person conducting a business or undertaking[83] must comply with the AS. A failure to do so is a breach of criminal law that makes persons liable for prosecution under the WHSA. Mr Hamish Munro, an engineer who conducted an annual inspection of the Airmaxx at The Show in September 2014 was the subject of charges under WHSA that particularised breaches of AS3533. They were discontinued.

8.11. AS3533 imposed duties on all relevant persons involved in amusement devices/rides including owners, operators and maintenance personnel. In particular for annual inspections, professional engineers are included in the AS as a '*competent person*'. A '*competent person*' is someone '*who has acquired through training, qualifications or experience, or a combination of these, the knowledge and skills enabling that person to perform a specified task*'.[84]

8.12. As AS3533 stated, the objective of the standard '*specifies requirements for design, manufacture and construction of fixed and portable amusement rides and devices*'.

8.13. <u>Design registration for the Airmaxx</u>

CJS engaged Mr Brian Bradley, a well-known engineer in this industry, to be their agent and expert in obtaining the Airmaxx's DR.[85] In a letter to SafeWork dated 17 November 2014, in response to questions issued under a Section 155 Notice which Mr Bradley was required by law to answer,[86] Mr Bradley stated that he never completed this task and did not know whether it had done by someone else.[87]

[82] Exhibit C34, MD32, page 2
[83] PCBU, see also evidence of Mr Glan Farrell Director of Compliance at SafeWork Transcript, page 1946
[84] Exhibit C34, MD32 page 11
[85] Exhibit C23j and C23k, confirmed by email in January 2015 and November 2015
[86] Exhibit C23a
[87] Exhibit C23b, responses to section 155 Notice, Answers 52-64

8.14. Mr Bradley's responses to this notice were qualified due to his claim that he had a '*crash*' of his computer and that many records relating to the Airmaxx were '*lost*'. I insert his full written response of two pages below.

Brian Bradley
Consulting Engineer
ABN 97 320 985 651

PO Box 307 UNANDERRA NSW 2526
Email: gadgetinspector@optusnet.com.au
Mobile 0411 353 315

TO SafeWork SA
Attention Alison McCallum

FROM Brian Bradley

17 November 2014

Response to Q1, Q24, Q52
During 2012, actual date uncertain, Jennielee Sullivan, on behalf of herself and Clint Watkins, rang me and asked me to carry out the design verification on a Safeco ride, Airmax 360, that they were purchasing or had purchased.

Our arrangement was verbal or by email. No payment amount was discussed and I have not issued any invoices for work carried out as my normal practice is to invoice on completion.

I note that due to a crash of my computer, all emails and most other documents relating to this work are lost.

I received documents from Safeco and commenced my assessment, but from previous experience knew that the air tanks would be an issue as European tanks have previously shown that they do not comply with Australian Standards.

I asked a Brisbane firm to do the design verification on the tanks, but after some time they advised me that they could not verify them to an Australian Standard.

I advised Jennielee that she would need to purchase new tanks from an Australian manufacturer, who would also provide a design registration number for his tanks.

She believed that the tanks she had could be passed and didn't proceed to purchase new tanks. She approached a number of people to get them to assess her tanks, but no assessment was forthcoming.

As it was not possible to submit a design verification without the tanks being verified, I stopped my assessment until the tank verification, or new tanks, were available.

Neither of these occurred and I did not proceed with the design verification.

I was provided with documents by the manufacturer, but due to a crash of my computer not all of those are available. Those that I managed to retrieve from the crash are listed below and copies are attached:

Welding Procedure Specification 6.pdf	Welding Procedure Specification 5.pdf
Welding Procedure Specification 4.pdf	Welding procedure Specification 3.pdf
Welding Procedure Specification 2.pdf	Welding Procedure Specification 1.pdf
Verification Certificate EC.pdf	TARGET EXAMEN CE TIPO - HOMO...
Planta y alzado 461.dwg	Manual S-2000(12) 455-459.pdf
Informe tecnico remolque Pro.pdf	Informe completo pto ctral.pdf
EXAMEN CE TIPO - HOMOLOGACIO...	Esquemas 461 electrical.pdf
Copia de Safety&Health on the Jum...	CE 93521 - 93524 Ingles.pdf
Air tanks 559 022 60 001 -CJ- (2).pdf	2300_I120197 informe tecnico EN.docx
2300_I13_0197_ingles revisado.pdf	

As stated in answer to question 20, my CV is attached also.

Brian Bradley
17/11/14

8.15. The letter and other evidence[88] suggested that the major and ongoing issue was that the air tanks supplied by Safeco did not comply with AS. The Brisbane firm he referred to was OSD Engineering[89] with his contact being Mr Craig Sheather. An email was sent

[88] For example IBA correspondence
[89] OSD

on 18 November 2013 by Mr Bradley to Mr Sheather which I set out in full as follows due to its importance:

> 'Craig,
>
> After much chasing, I caught up with a bloke named Ian Anderson.
>
> I found that I was telling him a very different story to what he had heard from my client. Ian was under the impression that the tanks had been design registered and he was only required to do an inspection for item registration renewal. He was waiting for my clients to give him non-existent renewal notices.
>
> I have today told them that:
> 1. They cannot continue to operate the ride with a dodgy design registration number and no design registration on the pressure vessels.
> 2. They need to replace the pressure vessels.
> 3. They also need to pay for the work that was done by OSD in Brisbane. If not, then I will pay OSD and they [my clients] will then owe that money to me.
>
> I will follow up tomorrow and if there is no commitment to pay you immediately then I will finalise your account by Friday this week.
>
> I have the feeling of having been led up the garden path. That is an embarrassment as I am too old to be caught [I thought], but I should not have taken you with me.
>
> Watch this space.
>
> Regards
>
> Brian Bradley' [90]

8.16. The OSD email alleged the owners had behaved dishonestly. What is clear is that a legitimate DRN could not be obtained without verification of the air tanks.[91] The owners disputed they behaved improperly in any way. They claimed that they engaged Mr Bradley to obtain all of the legal registrations of the Airmaxx to allow it to operate.

8.17. The OSD email also supported the response given by Mr Bradley to SafeWork on 17 November 2014. At this point it is also important to recall Ms Sullivan's conversations with Mr Roberts of IBA on 28 November 2013 and 5 December 2013 as set out in paragraphs 7.25 and 7.27 of this Finding. It was clear she was told that the air tanks were not of AS.

8.18. Mr Ian Anderson, a self-employed pressure vessel inspector provided a statement[92] dated 16 March 2015, in which he outlined his professional relationship with

[90] OSD email
[91] Also known as pressure vessels
[92] Exhibit C25

Ms Sullivan and Mr Watkins. In November 2013 he was asked to certify the air tanks for the Airmaxx and inspected them promptly.

8.19. Following the inspection he did not certify the air tanks to be fit for operation. The vital facts from his statement were that he:

- Spoke to Ms Sullivan over the phone and told her that he could not certify the tanks due to a lack of documentation. Ms Sullivan reacted in an unhappy manner and complained that she had paid over a million dollars and why he could not '…*just certify them*'.[93]
- Explained to her that the air tanks had to be certified to AS.

8.20. In evidence Ms Sullivan said that she did not agree with his summary as set out above and that he had '…*told me they were – they were compliant*'.[94] No application was made by anyone to have Mr Anderson called.

8.21. The involvement of Mr Anderson was due to Ms Sullivan seeking a solution outside of Mr Bradley's expert help. Mr Bradley's description in the OSD email of '*after much chasing, I caught up with a bloke named Ian Anderson*' suggested he did not previously know Mr Anderson. Mr Anderson's contact about the Airmaxx was from a client, Peter Malonis, to make a physical inspection of the Airmaxx and to certify the air tanks.[95] Mr Malonis was in the amusement ride industry. As the OSD email clearly inferred, Mr Bradley knew nothing of Mr Anderson's involvement.

8.22. Mr Anderson outlined his observations of the air tanks and the problems with their construction, namely:

- The air tanks lacked a design code marking in the usual position.
- Hand welding indicated fittings were added '*post-construction*' and were '*very rough*'.
- No paperwork was produced to him upon request about the air vessels. [96]

8.23. I believe the involvement of Mr Anderson was due to the frustration of Ms Sullivan. She had already expressed her displeasure with OSD who were engaged by Mr Bradley

[93] Exhibit C25, page 5
[94] Transcript, page 170
[95] Exhibit C25, page 2
[96] Exhibit C25, page 4-5

to obtain DR for the air tanks. Mr Anderson was not engaged by Mr Bradley, rather through Mr Malonis. The air tanks were never certified as required by law.

8.24. Despite Mr Bradley never completing the DR process, the Airmaxx used a DR number[97] of Q21673 to get the required PR to begin operating the ride.

8.25. Mr Watkins and Ms Sullivan claimed that Mr Bradley gave them that DRN to use for the Airmaxx. The email to OSD indicated Mr Bradley was aware at least at the date of that email, that the Airmaxx was operating using a DRN which did not belong to it.

8.26. As the importer and operator of the Airmaxx, the owners needed to ensure the air tanks met AS and could be certified accordingly. Unless the air tank issue was resolved by modification or replacement, those standards were not going to be met and they were responsible.

8.27. As stated, the contract for the sale of the Airmaxx was not tendered in evidence. If CJS bought the Airmaxx without consideration of whether it met AS as built, it is a further fundamental error by them on top of the poor business plan. Certainly Mr Bradley had known of this type of problem from a previous experience, if his response to SafeWork was to be believed.[98]

8.28. As Mr Timothy Gibney, an engineer who specialised in the inspection of amusement rides and devices put it:

> 'If you purchase a ride from overseas and the overseas company sends it in, they have got a certain responsibility. When you are the importer of that plant, I believe you've got a higher level of responsibility, as the importer of that plant, to ensure it's safe to operate.' [99]

8.29. The safety of the Airmaxx was never properly assessed through DR by the failure of Mr Bradley or a subsequent engineer to complete the DR for CJS. What did happen was that the Airmaxx operated as if it had an approved DR and no one ever questioned it. This was despite the lack of a DR certificate within the logbook as produced to authorities on 12 September 2014. It seemed all inspectors and regulators worked off a Victorian PR certificate that nominated a DRN. This was another serious shortcoming that just kept allowing the Airmaxx to operate.

---

[97] DRN
[98] See paragraph 8.15 of this Finding
[99] Transcript, page 1500

8.30. There are a number of issues of concern in the owners' evidence regarding consultation with the experts. There was no doubt they were entitled to a degree, to say the experts were the ones that should have handled all the necessary certifications to allow them to operate the Airmaxx. However, the air tanks were known by them not to be suitable and they had promised IBA funds were to be used to replace them. That never happened.

8.31. The intensity of this issue must not be underrated. As Ms Sullivan put to IBA, the air tanks were part of the '*hydraulic system that makes the ride go up and down*'.[100] They had to meet AS and be registered before the Airmaxx could operate legally.

8.32. Logic dictated that the Airmaxx should never have been available to the public until DR was completed. Therefore, a significant issue emerged as to how it was possible for both DR and PR to officially be recorded as having been completed by 8 May 2013 in Victoria. This was the last day of the Airmaxx's initial inspection by Mr Rode-Bramanis, an engineer engaged by Mr Bradley. Mr Rode-Bramanis believed he was doing a '*structural visual inspection*'.

8.33. The Airmaxx had DRN Q21673 as seen in the Victorian Notice of Plant Registration. The prefix '*Q*' to this number indicated that the DR was supposedly granted by the Queensland Government. No document was produced to confirm that. It was clear the DRN was never allocated to the Airmaxx by the Queensland Government. Mr Bradley's documents indicated the DRN was to be obtained by him from the New South Wales Government.

8.34. This DRN had been used for two amusement devices designed and built by an Italian manufacturer[101], Satori Rides Limited[102] in 2002 and 2004 respectively. They were both called Techno Jump, although the earlier one was renamed Super Jump on its sale from the original owner Mr Robert Crowley to Ms Maria Jane Pickett. The other Techno Jump was owned by Mr Anthony Laurie. Both these amusement devices were registered by Mr Bradley who had confirmation that they were built to the same design.[103]

---

[100] Exhibit C34, MD63b as set out in paragraph 7.27 of this Finding
[101] See attachment to Exhibit C113
[102] Satori
[103] Exhibit C113, email from Mr Bradley to Inspector Robin Scott (OHS Inspector, Workplaces Services SA Government) and Mr Crowley

8.35. Safeco was completely independent from Satori. The Airmaxx was a different design. Therefore it needed a different DRN.[104] According to Mr Rynes, the Airmaxx '*…has a design variation to the Techno Jump. It has a freely rotating suspended carriage at the end of each arm that restrains a maximum of 2 independently seated patrons*'.[105]

8.36. The state of the evidence left three permutations as to how this DRN was able to be obtained for the Airmaxx and used on 8 May 2013 when the PR number[106] was obtained from WorkSafe Victoria and included this DRN. They are:

1) Mr Laurie was a direct or indirect source of the DRN for the owners and CJS.
2) Marie Jane Pickett was a direct or indirect source of the DRN for the owners and CJS.
3) Mr Bradley supplied the DRN despite not filing an application for DR or PR.

8.37. <u>Mr Anthony Laurie</u>

Mr Laurie gave evidence at the Inquest by affidavit and in person.[107] Mr Laurie is a fourth generation member of his family to be involved as an amusement ride operator. He has known Mr Watkins most of his life and his domestic partner is related to him.[108] He first became aware of Mr Watkins and Ms Sullivan purchasing the Airmaxx early in 2013. He regarded it as '*…their business*'[109] and never discussed any legalities or operational matters with them. He denied giving his DRN to Mr Watkins or Ms Sullivan.

8.38. He discussed the role Mr Bradley played in helping him purchase the Techno Jump, including travelling to Italy to inspect it, undertaking its initial inspection on site at the EKKA on 30 July 2004[110] and providing the paperwork to EKKA as required. Two technicians were sent from Satori to set it up and the inspection by Mr Bradley was performed in front of Queensland SafeWork representatives.

---

[104] Exhibit C97a, Statement of Mr Rynes dated 29 June 2016
[105] Exhibit C97a, Lines 66-68
[106] PRN
[107] Exhibit C50 and Transcript, pages 2166-2193
[108] Transcript, page 2173
[109] Transcript, page 2174
[110] Transcript, page 2178

8.39. Mr Laurie outlined the differences between the structure of the Techno Jump compared with the Airmaxx.[111] He viewed the Airmaxx in operation and described it as a '*…different machine having only one similarity to the Techno Jump and that being the air rams*'.[112] Based on this unchallenged evidence alone it is clear that a DR for the Techno Jump was not applicable nor appropriate for the Airmaxx.

8.40. The sworn denials of Mr Laurie made it difficult to find that he was the direct source of the DRN for the Airmaxx.

8.41. CJS, through their solicitors, provided a response to questions from SafeWork on the DR of the Airmaxx.[113] The responses were sent by letter dated 5 March 2015 from CJS' solicitors and basically set out that they believed the DR was '*pending*'. This was also the terminology used by Mr Bradley as he was waiting for certification of the pressure vessels. CJS stated that they were advised by Mr Bradley that the Airmaxx could operate whilst the application was pending. CJS alleged Mr Bradley was willing to provide the DRN on that basis because '*this number… related to a ride that was substantially similar to the Airmaxx*'.[114] The evidence of Mr Laurie and Mr Rynes and from SafeWork contradict the assessment that the Airmaxx was similar to the Techno Jump.

8.42. <u>Ms Maria Pickett</u>

I am satisfied that Ms Pickett purchased the other Techno Jump from a Mr Crowley.[115] She renamed it the Super Jump. She was well-known to the owners. The DRN for the Super Jump was the same as the Airmaxx.

8.43. A brief explanation is only needed to base my satisfaction on this topic. The Techno Jump originally owned by Mr Crowley had an identifier ending in 37006 from Satori. This was referred to in the paperwork of the Super Jump owned by Ms Pickett. Ms Pickett and Mr Crowley were not called to give evidence. Whether the DRN was passed to the owners directly or indirectly through this source, was not able to be explored or tested in those circumstances.

---

[111] Exhibit C50
[112] Exhibit C50, page 4
[113] Exhibit C34, MD39 page 15 - Question 40 in SafeWork notice, pursuant to section 155(2) of the Work Health and Safety Act '*SafeWork Act*' 2012 (SA) '*section 155 notice*'
[114] Exhibit C34, MD39 page 54, response to question 40
[115] Exhibit 113

8.44. Mr Brian Bradley

Mr Bradley's position to investigators was that he did not provide the DRN for the Airmaxx. I have already set out his position as he explained to SafeWork.

8.45. Ms Sullivan stated that Mr Bradley had obtained the patently false DRN from his workplace records where he had certified a number of previous rides including a similar but easily distinguishable ride called the '*Techno Jump*'. This device was referred to in the business plan as one of the choices Ms Sullivan and Mr Watkins had when requesting finance from IBA. The other ride mentioned in the business plan was expressed as the '*Hang Jump*'. Ms Sullivan stated that together Mr Watkins and herself decided to go for the Hang Jump as they wished to operate a unique ride. The Hang Jump was renamed the Airmaxx.

8.46. The owners could not test that claim at the Inquest as Mr Bradley is now deceased.

8.47. Plant registration of the Airmaxx

However it was that the owners came to be in possession of this DRN, it was then used to obtain plant registration for the Airmaxx. This was done through Victoria. The PR certificate was issued by WorkSafe Victoria on the basis of an online application without any requirement for a visual inspection. No supporting documentation was needed with the application. Once the Airmaxx was registered as a plant item in Victoria, it was mutually recognised in South Australia as having valid PR.

8.48. The PRN is a unique identifier and also recorded the serial number of the plant item. Here the Airmaxx had a long serial number ending in '*002*'. I note here that that number was officially recognised on the Notice of Registration in the Airmaxx's logbook.[116] The serial number was recorded also in various other documents within the logbook.[117] On the Notice of Registration, CJS had recorded their address as 11 Goolgowie Street, Rosebud, Victoria, which was in fact the address of Ms Sullivan's sister.[118] In most other Airmaxx documents, the contact address was in New South Wales.

[116] Exhibit C61d, page 13
[117] Exhibit C61d, page 10
[118] Transcript, page 176

8.49. I set out below the Notice of Registration from WorkSafe Victoria that confirms the Airmaxx purported to have both DR and PR by 8 May 2013.

Notice of Registration

Item of Plant

Occupational Health and Safety Regulations 2007

Plant Owner
C , J & Sons Amusements
11 Goolgowie St
Rosebud, VIC, 3939

Registration Date	Expiry Date
08/05/2013	08/05/2018

Registration Number	ABN Number
PL99008639	49157759290

Plant Details

Registration No.	PL99008639
Manufacturer	Safeco
Date of Manufacture	01/04/2013
Plant Design Number	Q21673
Model Number	900461
Serial Number	VS9BPW3E0CZ060002
Local ID Number	
Type	Mobile
Site Name	Rosebud
Site Address	11 Goolgowie St
Suburb/Town	Rosebud
State	VIC
Postcode	3939
Registration Date	08/05/2013
Expiry Date	08/05/2018
Amusement Structure	Mobile Structure ASM
Name of amusement ride	Airmaxx360

Reference Number: **R804648**

Please Note:

Registration of plant must be renewed after 5 years.

Under OHS regulation, 6.2.14, you must advise WorkSafe Victoria (WorkSafe) within 21 days if any of the following occurs:

- there has been a change of ownership of your registration plant
- your registered plant is altered to an extent which requires new measures to control risk
- your plant is normally fixed and is relocated and requires commissioning and new measures to control risk as a result of the relocation.

Note: Failure to notify WorkSafe in writing of the above can result in fines.

Retain this notice for your records

WorkSafe Victoria is a trading name of the Victorian WorkCover Authority

Page 13 of 178

8.50. As stated, the application for PR in Victoria received no scrutiny as the online system in Victoria did not demand it. The DRN entered as part of the application process was accepted on face value. From the moment the PRN was issued on 8 May 2013 it was never examined by authorities again until after 12 September 2014.

8.51. Ms Sullivan admitted that she completed the details for the PR application. She said it was on the advice of Mr Bradley that she used the State of Victoria to obtain a PRN.[119]

8.52. This evidence must be considered in light of an email from Mr Bradley to her, dated 13 May 2013, in which he attached an application from NSW WorkCover to register plant design to be completed by her.[120] The question arose as to why Mr Bradley sent a NSW application for '*the registration of plant design*' to her when CJS had a PRN certificate from Victoria in the logbook dated 8 May 2013 and the Queensland DRN.[121] Did it suggest that Mr Bradley had no idea about the Victorian PRN and the Queensland DRN?

8.53. Ms Sullivan denied that she applied for a PRN in Victoria without Mr Bradley's knowledge. She reconstructed that '*he would have told me to do it*'.[122] She denied the suggestion that she applied for a PRN in Victoria to avoid scrutiny of the inappropriate DRN.[123]

8.54. I have to consider Ms Sullivan's explanation on this topic in light of the OSD email of 18 November 2013 concerning the air tanks and Mr Anderson, and the registration email of 13 May 2013 to the owners. These emails suggested the owners were acting without Mr Bradley's knowledge on this topic.

8.55. The words and actions of the late Mr Bradley as recorded in documents are the only opportunity to assess his role in this matter. They contradict the owner's assertions about him with respect to PR.

---

[119] Transcript, page 177
[120] Registration email
[121] Title for NSW application
[122] Transcript, page 182
[123] Transcript, page 183

8.56. The PR certificate was found in duplicate in the Airmaxx's logbook.[124] DR was recorded in this form as Plant Design Number Q21673 and PR was recorded in this form as PL99008639. The source of the DRN is a contentious issue.

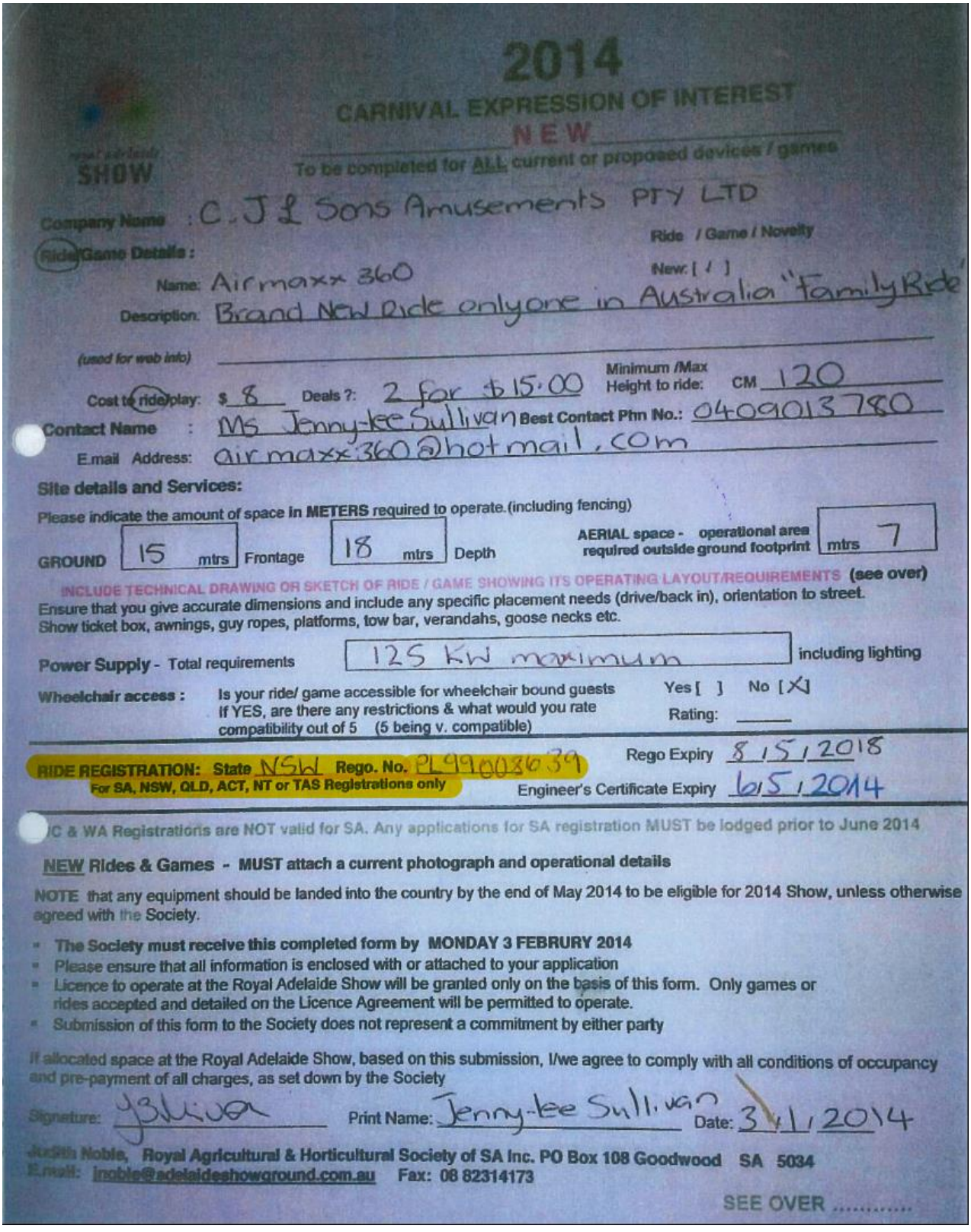
8.57. This Notice of Registration had the effect of everyone simply accepting this major issue of registration was satisfactorily dealt with until 8 May 2018 when the registration expired. This was despite the absence of a DR certificate.

8.58. Ms Sullivan stated this was their first venture into such a serious and complex form of an amusement ride. Therefore, they relied on Mr Bradley's expertise unreservedly all the way from finance and purchase through to presenting the ride to the public. The owner's evidence meant Mr Bradley must have acted deceitfully about DR.

8.59. As I have set out, the PRN was successfully obtained for the Airmaxx online in Victoria. However, the Society did not automatically accept amusement devices that had their PRNs registered in Victoria or Western Australia as valid.

8.60. The intricacies of the registration issue continued with Ms Sullivan signing the application document for The Show stating that the DRN was valid and the PRN, or '*Ride Registration*' as the document called it, was obtained from New South Wales. This error is hard to accept as an innocent one. I set out the relevant part of that application over the page.[125]

[124] Exhibit C61d, pages 13-14 of 178
[125] Exhibit C81, Annexure JMN 1, page 9



2014

CARNIVAL EXPRESSION OF INTEREST

NEW

SHOW

To be completed for ALL current or proposed devices / games

Company Name : C.J & Sons Amusements PTY LTD

Ride / Game / Novelty

Ride/Game Details :

Name: Airmaxx 360 New: [/]

Description: Brand New Ride only one in Australia "Family Ride"

(used for web info)

Cost to ride/play: $ 8 Deals ?: 2 for $15.00 Minimum /Max Height to ride: CM 120

Contact Name : Ms Jenny-lee Sullivan Best Contact Phn No.: 0409013780

E.mail Address: airmaxx360@hotmail.com

Site details and Services:

Please indicate the amount of space in METERS required to operate.(including fencing)

GROUND 15 mtrs Frontage 18 mtrs Depth AERIAL space - operational area required outside ground footprint mtrs 7

INCLUDE TECHNICAL DRAWING OR SKETCH OF RIDE / GAME SHOWING ITS OPERATING LAYOUT/REQUIREMENTS (see over)

Ensure that you give accurate dimensions and include any specific placement needs (drive/back in), orientation to street.

Show ticket box, awnings, guy ropes, platforms, tow bar, verandahs, goose necks etc.

Power Supply - Total requirements 125 KW maximum including lighting

Wheelchair access : Is your ride/ game accessible for wheelchair bound guests Yes [ ] No [X]

If YES, are there any restrictions & what would you rate compatibility out of 5 (5 being v. compatible) Rating: ____

RIDE REGISTRATION: State NSW Rego. No. PL990086 39 Rego Expiry 8/5/2018

For SA, NSW, QLD, ACT, NT or TAS Registrations only Engineer's Certificate Expiry 6/5/2014

C & WA Registrations are NOT valid for SA. Any applications for SA registration MUST be lodged prior to June 2014

NEW Rides & Games - MUST attach a current photograph and operational details

NOTE that any equipment should be landed into the country by the end of May 2014 to be eligible for 2014 Show, unless otherwise agreed with the Society.

- The Society must receive this completed form by MONDAY 3 FEBRURY 2014
- Please ensure that all information is enclosed with or attached to your application
- Licence to operate at the Royal Adelaide Show will be granted only on the basis of this form. Only games or rides accepted and detailed on the Licence Agreement will be permitted to operate.
- Submission of this form to the Society does not represent a commitment by either party

If allocated space at the Royal Adelaide Show, based on this submission, I/we agree to comply with all conditions of occupancy and pre-payment of all charges, as set down by the Society

Signature: Print Name: Jenny-lee Sullivan Date: 31/1/2014

Judith Noble, Royal Agricultural & Horticultural Society of SA Inc. PO Box 108 Goodwood SA 5034

E.mail: jnoble@adelaideshowground.com.au Fax: 08 82314173

SEE OVER .....

8.61. It raised the whether this application referring to '*NSW PRN*' was part of a multiplicity of lies deliberately made to ensure that the Airmaxx could continue to operate illegally without DR or whether this was an innocent error.

8.62. Consequences of Airmaxx's DRN and PRN being accepted as legitimate

There were numerous significant consequences of the design registration being bypassed, and the plant registration relying on the misappropriate design registration number:

- The design registration process necessitated a consideration of the suitability of the restraints on the ride. By avoiding design registration, that crucial consideration of the suitability of the restraints on the Airmaxx by a regulator did not take place at any time;
- All inspections by subsequent engineers and regulators assumed that the assignment of a DRN and PRN meant the necessary verifications for the registrations had occurred.
- The avoidance of scrutiny of the height issue that had already been reduced from Safeco's standard of 140cm to 120cm for an unaccompanied patron. A DR application in South Australia should include a review of documents that includes '…*manufacturer information identifying operating parameters. This information may be in the form of a product brochure or operating manual produced by the manufacturer*'.[126]
- The air tanks that operated the Airmaxx had no DR for them as required and they were not compliant with AS

8.63. In brief, the Airmaxx never obtained DR. It was described as '*bypassing the system*'.[127]

9. Issue 3 - The assembly and initial inspection of the Airmaxx

9.1. As indicated, although the purchase was completed in June 2012, the Airmaxx did not arrive into Australia until April 2013. This long time gap was subject of comments in the IBA correspondence set out in detail above.

9.2. Understandably, when the Airmaxx did arrive in Australia and was released by Customs, the owners were keen to assemble it as quickly and efficiently as possible. The owners were expecting Safeco to assist them practically in the assembly of the Airmaxx by sending a Safeco employee to provide technical assistance in person.

[126] Exhibit C97e, Affidavit of Mr David Rynes, paragraph 22.13
[127] Transcript, pages 1215-1216

9.3. This issue is neatly summarised by the broker, Mr Emmett, in his email to Safeco on 4 April 2013 when he said:

> '…I cannot stress enough how important it is for a technician to go to Australia for the installation of Safeco Ride.
>
> CJ Sons AMUSEMENT PTY LTD and myself understand from our first meeting at your factory, that you were going to send a technician to Australia
> and this was normal procedure, when Safeco Ride was contracted.
>
> However, we understand there is (sic) costs and if these costs were missed at our first meeting and contract. CJ and Sons should pay Hotel and Food
>
> I would expect One Thousand Euros to be taken from my commission payment…
>
> Safeco should pay One Thousand Euros also towards Air Travel Ticket for technician to go.
>
> All parties should except (sic) this and agree.
>
> If you do not send a technician from Safeco for the installation, you will jeopardise any future sales from us in Australia.
>
> Please reply ASAP.' [128]

9.4. On 9 April 2013, after a reminder email of the same day from Mr Emmett, Safeco replied that they were '*…planning to send the Operator trip to Australia. We are always available to our customers and more here (sic)*'.[129] A technician never arrived, despite the promise from Safeco.[130] Mr Watkins was left to rely on email communications with Safeco about any problems he saw in following a complicated manual to set up the Airmaxx.[131] What followed was a large number of emails seeking clarification of how the Airmaxx should be properly assembled.

9.5. This was highly unsatisfactory and potentially dangerous for Mr Watkins and later the public who initially used the ride.

9.6. A brief summary of the issues raised regarding the assembly of the Airmaxx is set out below:

(1) <u>6 May 2013</u>

Mr Watkins '*could not get the 4 highest spaces out*'.[132] This issue took three more emails to resolve that day.[133]

---

[128] Exhibit C34, MD39 pages 60 and 61
[129] Exhibit C34, MD39 page 60
[130] Exhibit C34, MD39, page 65
[131] Safeco manual or user manual
[132] Exhibit C34, MD39 page 459
[133] Exhibit C34, MD39 pages 461-463

(2) 6 May 2013

CJS inquired regarding Safeco's model and serial number for the Airmaxx.[134]

(3) 6 May 2013

CJS inquired what '*parts of the ride are left to be sent and when will we get them?*'.[135]

(4) 7 May 2013

A general complaint was made by CJS regarding missing parts and '*problems*' with the ride. I shall set out the emails in full.[136]

From: airmaxx360@hotmail.com
Sent: Tuesday, 7 May 2013 2:57:10 PM
To: Jose Ibargüen (comercial@safeco-rides.com)

This is what we think is missing , additional ramps that was ment to come with steps,centre ball and pole for it to go on, sign for top of ticket box, 2sides of ticket box, silences for air cylinders & arrow to go around centre ball !we have had so many problems with this ride with hoses not being hooked up and there was pop rivets left all over ride which has left rust all over it !

Sent from my iPhone

From: Jose Ibargüen (comercial@safeco-rides.com)
Sent: Tuesday, 7 May 2013 3:03:44 PM
To: 'clinton watkins' (airmaxx360@hotmail.com)

Regarding additional ramps. I can prepare four ramps and send the package to the field, I need to know what size you want them.
It is very common to make the ramps but when they do are often made of 500 mm wide.
The arrow of the sphere is in the package.
Silencers are placed within the central point.

The concerning aspects from these emails was that it appeared the owners were struggling with the detailed instructions necessary to set up hoses. Further, they had general complaints about the Airmaxx already rusting.

(5) 7 May 2013

At 10:39pm, CJS outlined that '*…on the touch screen I can't get the lights and spotlights or strobe lights to work I've got to do it in controlboard (sic)??*'.[137] The

[134] Exhibit C34, MD39 page 464 and Safeco reply, page 465
[135] Exhibit C34, MD39 page 468 - See response of Safeco, page 469
[136] Exhibit C34, MD39 pages 470-471
[137] Exhibit C34, MD39 page 476

reply from Safeco attached instructions in Spanish, that were translated in English. The following day, 8 May 2013 at 5:56pm, CJS emailed Safeco that '*Still not working we push buttons nothing happens?*'.[138]

Safeco responded requesting that a photo of the control board be sent.[139] Mr Watkins replied that he '*will do this next week az (sic) I have packed the ride up ok*'.[140]

(6) 8 and 9 May 2013

On these days email correspondence between CJS and Safeco also dealt with a request by CJS for the pre-opening and daily checklist[141] and the '…*maintenance schedule for ride*' including a query of '…*how many hours to grease main ride bearing & car hanger bearings?*'.[142]

Further there is a request for electrical schematics[143] and queries regarding '…*how tight the bolts have to be on arms, cars & hangers?*'.[144]

9.7. Although it is possible to argue that these are problems consistent with an initial assembly, Mr Watkins should not have been left on his own to set up this complicated ride. The volume of enquiries indicated that he needed help from a qualified person within Australia or, as he and his broker Mr Emmet believed, a qualified person from Safeco. It would have been ideal if Safeco had assisted practically at that time, in order to educate Mr Watkins who was predominantly, if not solely, responsible for the assembly and maintenance of the Airmaxx.

9.8. I find this situation to be totally unsatisfactory. The fact that Mr Watkins had to learn assembly and maintenance, basically on the run, was unacceptable for such a powerful and high energy amusement device. It was arguably a breach of the law as the assembly should have been supervised by a '*competent person*'. It was debatable that Mr Watkins qualified as a '*competent person*' at that stage. If he was, then he still should have had assistance from a more experienced competent person from Safeco.

[138] Exhibit C34, MD39 page 480
[139] Exhibit C34, MD39 page 482
[140] Exhibit C34, MD39 page 483
[141] Exhibit C34, MD39 page 493
[142] Exhibit C34, MD39 page 495
[143] Exhibit C34, MD39 page 496
[144] Exhibit C34, MD39 page 516

9.9. First inspection of Airmaxx by Steven Rode-Bramanis, 6 May 2013 - '*Commissioning Inspection*'

Once assembled, the Airmaxx needed to be inspected for the purpose of obtaining the DR and PR. Mr Bradley had arranged for Mr Steven Rode-Bramanis to be contacted by Ms Sullivan to perform the initial inspection. Mr Rode-Bramanis was to report the results of the inspection back to Mr Bradley.

9.10. The initial inspection was conducted at the Redcliffe Showgrounds in Brisbane from 6 May 2013 to 8 May 2013 by Mr Rode-Bramanis. It should be noted here that 6 May 2013 was also the day three emails were sent to Safeco by Mr Watkins regarding assembly issues.[145]

9.11. Mr Rode-Bramanis is a qualified engineer having graduated from the University of Queensland in 2000 with a Bachelor of Engineering, majoring in mechanical and space.[146] He is a member of the Institute of Engineers Australia and upon graduation worked for 11 years in a company called Wade Design Engineers primarily in the '*structural field*'.[147] This involved designing engine membrane structures, buildings and amusement ride inspections in the Brisbane area for approximately seven years.

9.12. In 2012 Mr Rode-Bramanis left Wade Design Engineers and started his own company called Form Structural Engineers.[148] By that time he had been inspecting amusement rides at a rate of about ten per year.

9.13. The initial inspection of the Airmaxx was a crucial governance duty for DR and PR. In the amusement ride industry this is known as '*The Commissioning Inspection*'.[149] A CI was described at the Inquest as '*…an annual inspection on steroids*'.[150] I note here that the term CI does not appear in the AS. That is a strange situation. As will be seen, his inspection was deficient and unsatisfactory. The records of this inspection became a core but inaccurate reference point for future inspectors and regulators.

9.14. The term CI was repeatedly mentioned during the Inquest in describing Mr Rode-Bramanis' inspections on 6 and 8 May 2013. The evidence from engineers subsequently involved in the Airmaxx defined this term as the first inspection of any amusement device prior to it being available to the public. Mr Timothy Gibney, a

[145] See paragraph 9.6 of this Finding
[146] Transcript, page 1137
[147] Transcript, page 1137-1138
[148] Transcript, page 1138
[149] CI
[150] Transcript, page 1539, as described by engineer Mr Timothy Gibney

consulting structural and geotechnical engineer who urgently assessed the Airmaxx at the Royal Melbourne Show[151] in 2013[152] described a CI as:

> '…even more stringent than an annual inspection, because you would normally be having all the electrics checked out, all the controllers checked out. If a ride has a PLC involved in the operation of the ride, it technically needs to be verified by a mechanical engineer or… by myself and an electrical engineer.' [153]

He further described that you would:

> '…normally have the electrical engineer on site to debug any problems or to confirm any issues, and also have them try and defeat the safety systems on the ride, prior to commissioning it.' [154]

9.15. He described an annual inspection as:

> '…not a major inspection. It is confirming that the critical components are safe, that the restraints are safe, and what's set out in the requirements of the Australian Standards 3533.3 clause 11.4.3.' [155]

9.16. A CI would be longer and '*go beyond*' an annual inspection as people with different qualifications would be involved. There would also be a close look at the logbook and helping '*…fill that in properly*'[156] and extracting information from the user manual and to work out what are the '*…critical components on the ride*'[157] and also what inspection or maintenance regime needed to be followed for the ride.

9.17. Mr Rode-Bramanis confirmed that the logbook was, as far as he was aware '*completely blank*'.

9.18. Mr Rode-Bramanis sent an email to Mr Bradley on 6 May 2013[158] at 9:32pm as seen below.

> 'Hi Brian
>
> I inspected Jenny-Lea's (sic) Airmaxx 360 this afternoon. And I've rated it as a class 3 ride.
>
> With Restraint Type 4. F=3, P=2, H=4, V=3. Total=12. The restraint mechanism on the ride is fairly extensive. There is an over the head pull down bar, which is locked in position by the ride, and an added seat belt webbing from the bar to the seat is added for

[151] RM Show
[152] To be discussed in detail later
[153] Transcript, page 1523
[154] Transcript, page 1523
[155] Transcript, page 1523
[156] Transcript, page 1523
[157] Transcript, page 1524
[158] Exhibit C110, the 6 May email

> redundancy. The ride will not start until the sensors have picked up that all the bars have been locked in position. And should one fail during the ride, it shuts down automatically.
>
> Maximum speed is 10 rpm (approximately 7 m/s)
>
> Max height around 6.5m with base diameter around 13m.
>
> Let me know if you require any info to assist with the design registration. As always many thanks for your help.' [159]

9.19. The content of this email regarding '*Restraint Type 4*' referred to a formula totalling 12. Mr Rode-Bramanis admitted this formula was incorrect due to the entry F=3 should have been F=5 making a total of 14.[160] This figure of 14 meant a Type 5 restraint was necessary. This error was never detected and had profound consequences. A Type 5 restraint is the highest level of restraint under AS.

9.20. Mr Rode-Bramanis assumed that DR '*hadn't been completed*'[161] at the time he finished his inspection on 8 May 213. He was correct. In fact, DR was never obtained at least in part due to the continuing issue of the air tanks that needed to be modified or replaced. The air tanks needed a separate DR before the Airmaxx could obtain its own DR. The official records of the Airmaxx in the logbook that followed 6 May 2013 claimed that DR was obtained for the Airmaxx and the air tanks. The truth was the opposite.

9.21. As already noted, according to the official logbook documents, the DR and the PR had been obtained on 8 May 2013.[162] Mr Rode-Bramanis described that as '*interesting*'.[163] Further, the DR and PR were never obtained by Mr Bradley who was engaged by CJS to do that very task.

9.22. The only conclusion is that someone has acted by 8 May 2013 to cause this wholly inaccurate and dangerous claim that DR had been obtained. Mr Rode-Bramanis' email of 6 May 2013 to Mr Bradley indicated an open invitation to help further with DR if necessary.

9.23. Three key documents were associated with Mr Rode-Bramanis' inspection. To properly understand the circumstances of what happened as a result of the 6 May 2013 inspection and at a follow-up inspection on 8 May 2013, it is best to insert these documents now to allow ease of reference to his evidence.

---

[159] Exhibit C110, email from Mr Rode-Bramanis to Brian Bradley 6 May 2013
[160] Transcript, page 1280
[161] Transcript, page 1192
[162] Exhibit C61d, pages 12-13
[163] Transcript, page 1247

9.24. Document One – Record of Annual Inspection of Amusement Device

form structural engineers

Record of Annual Inspection of Amusement Device

(Under Regulations 240 & 241 of the Work Health and Safety Regulations)

Amusement Device details

Name and type of device ..... ARMATX 360 .....

Design Registration No. ..... Issued by ..... } NEW RIDE AWAIT REGISTRATION

State Registration No. ..... Issued by .....

Inspection Details

Name of person inspecting the device ..... Steven Rode-Bramanis

Qualifications of person inspecting the device ..... RPEQ 12193

Date(s) of inspection ..... 6/6/2013 .....

Location(s) of Inspection ..... REDCLIFFE SHOWGROUNDS .....

The class of the device [to AS 3533.1 2009] recorded in the logbook was Class .....

As initialled, the following checks were carried out:

NEW RIDE ASSESSED WITH LOGBOOK SETUP

- ☑ Operational history since the last annual inspection has been checked
- ☑ Log book up to date
- ☑ Maintenance and Inspections undertaken under Regulation 240 and in accordance with the maintenance and inspection program have been recorded in the logbook
- ☑ Required NDT or other tests have been conducted and records maintained. 8/5/2013
- ☑ ~~N/A~~ Electrical Inspections in accordance with AS 3533.3 Clause 11.4.3 have been conducted and a statement that the electrical installation is safe to use or operate has been provided by a qualified person and recorded in the logbook.

The integrity of the device, including critical components, has been assessed and a physical inspection, of those components of the unit that were visible, was carried out in accordance with relevant technical standards and by supplementary methods where necessary.

In my opinion, at the time of inspection, and as far as my inspection could determine, this device had been correctly maintained, required testing satisfactorily completed and was free of visible defects that could adversely affect the safety of the device.

Steven Rode-Bramanis
BE CPEng MIEAust RPEQ NPER

FORM Structural Engineers Pty Ltd
PO Box 7202
Redland Bay, Qld 4165
ABN 48 154 529 027

p 07 3114 3143
m 0420 821 958
e steven@formeng.com.au

9.25. This document was titled to be a Record of Annual Inspection of Amusement Device. It referenced Regulations 240 and 241 of Work Health and Safety[164] Regulations. It assumes that a DR has been obtained. The relevant section was left blank by Mr Rode-Bramanis with the handwritten note '*NEW RIDE AWAIT REGISTRATION*'. He understood the DR for the Airmaxx was to be conducted by Mr Bradley.

9.26. Document One required confirmation concerning previous operational history, logbook entries, maintenance and inspections and in particular a requirement for '*non-destructive testing*', labelled as NDT and electrical inspections. In other words, this document was not set up for CIs. All these requirements were ticked even though they were inapplicable on 6 May 2013.

9.27. NDT occurred on 8 May 2013. An NDT is defined in AS3533.3 as follows:

> 'NDT provides evidence of whether certain critical components of a mechanical or structural nature which form part(s) of an amusement ride or device are free of faults. NDT may also be called for by an inspector as an addition to any inspection. NDT should, when appropriate, form part of the qualification of repairs carried out at any time.' [165]

9.28. The NDT overseen by Mr Rode-Bramanis was documented and placed in the logbook.[166]

9.29. Mr Rode-Bramanis described that NDT was testing of the critical components '*to make sure there's no cracking or damage to various parts*'.[167]

9.30. A further handwritten note was used to alter or explain further entries. The second note read '*NEW RIDE ASSISTED WITH LOGBOOK SET UP*'. Finally, this Document required confirmation that an electrical inspection had been conducted in accordance with AS3533.3 clause 11.4.3 to verify that the '*electrical installation is safe to use or operate*'.

9.31. Mr Rode-Bramanis told investigators that he had assumed a full electrical inspection had been conducted prior to 6 May 2013. He told investigators '*…he saw an entry in the Log Book saying "Electrical Contractor"'.* He assumed it meant a full electrical inspection and made '*…no attempt to check whether his assumption was accurate*'.[168]

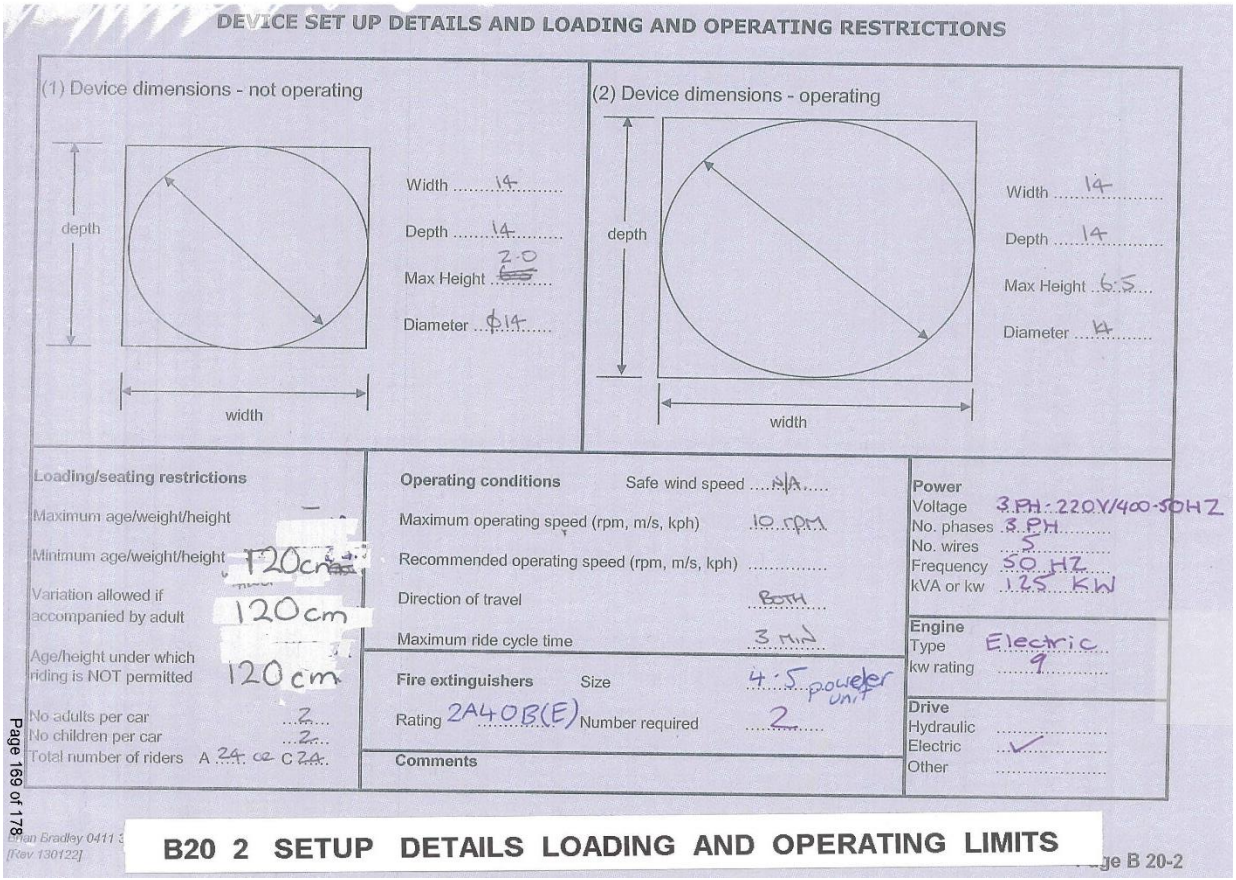
---

[164] WHS
[165] Exhibit C34, MD34, page 21
[166] Exhibit C61d, page 164
[167] Transcript, page 1158
[168] Exhibit C34a, pages 127-128 of SAPOL report

9.32. To the contrary, no electrical systems inspection had occurred. However, power inlets for set up motors and electrical connections for the generators had been installed by an electrician.[169]

9.33. When asked about this aspect of Document One which concerned electrical inspections and '*the electrical installation is safe to use or operate*', Mr Rode-Bramanis agreed that he did not see a statement that the electrical installation was safe to use or operate.[170] He agreed he should not have ticked that item on Document One as having been completed. He further stated that the last paragraph outlining that the Airmaxx had been '*…correctly maintained, required testing satisfactorily completed and was free of visible defects*'[171] was inaccurate. Finally he admitted he should not have signed Document One and provided it to the owners to put into the logbook.[172]

9.34. <u>Document Two – Device set up details and loading and operating restrictions</u>



DEVICE SET UP DETAILS AND LOADING AND OPERATING RESTRICTIONS

(1) Device dimensions - not operating

depth

width

Width 14

Depth 14

Max Height 2.0

Diameter Ø14

(2) Device dimensions - operating

depth

width

Width 14

Depth 14

Max Height 6.5

Diameter 14

Loading/seating restrictions

Maximum age/weight/height —

Minimum age/weight/height 120cm

Variation allowed if accompanied by adult 120cm

Age/height under which riding is NOT permitted 120 cm

No adults per car 2

No children per car 2

Total number of riders A 24 C 24

Operating conditions Safe wind speed N/A

Maximum operating speed (rpm, m/s, kph) 10 rpm

Recommended operating speed (rpm, m/s, kph)

Direction of travel BOTH

Maximum ride cycle time 3 min

Fire extinguishers Size 4.5 powder unit

Rating 2A40B(E) Number required 2

Comments

Power

Voltage 3 PH: 220V/400-50HZ

No. phases 3 PH

No. wires 5

Frequency 50 HZ

kVA or kw 125 KW

Engine

Type Electric

kw rating 9

Drive

Hydraulic

Electric ✓

Other

Page 169 of 178

[Rev 130122]

B20 2 SETUP DETAILS LOADING AND OPERATING LIMITS

Page B 20-2

[169] Exhibit C34a, SAPOL report, pages 127-128
[170] Transcript, pages 1251-1252
[171] Document One, final paragraph
[172] Transcript, page 1252

9.35. This Document was only partially completed by Mr Rode-Bramanis. It was altered by Ms Sullivan to indicate the minimum height for the Airmaxx to 120cm. He stated that this Document is usually completed when '*setting up the ride*' and is referred to as part of an annual inspection to check height restrictions.[173]

9.36. Underneath the recording of that height on the three lines is '*white out*' that previously indicated 110cm for the second and third entry.[174] In the box headed '*operating conditions*' Mr Rode-Bramanis was unable to find any document to indicate the recommended operating speed as he '*didn't know exactly what the recommended operating speed was*'.[175] This type of document was known to Mr Rode-Bramanis but was <u>not</u> part of the scope of an annual inspection.[176]

9.37. The heights recorded in the original unaltered document[177] were given by way of verbal instruction by the owners to Mr Rode-Bramanis in this inspection.[178] He gave evidence he was concerned about the lack of certainty in the initial information supplied by the owners regarding height. This caused him to ask them to '*…provide information… from the manufacturer and that's why I wrote – on that other form, … 'TBA' because I wasn't 100% sure the information they were telling me was correct*'.[179] In my view this was perverse logic. Mr Rode-Bramanis should have demanded to see the source document or source information from the owners concerning the height issue which he knew was such a vital fact for an amusement ride. Nothing should have been recorded or ratified by him until that happened. If he had adopted that stance, it would have correctly placed the onus for the owners to provide proof that allowed him to verify the accuracy of their information.

9.38. Document Two was flawed by Mr Rode-Bramanis' reliance on the owners for vital information rather than his own independent research. Those viewing Document Two until Adelene's death, assumed the information about the minimum height was correct. The original Document with entries made by Mr Rode-Bramanis was inaccurate about

[173] Transcript, pages 1260-1261
[174] Exhibit C85(b) 'AM3' as annexed
[175] Transcript, page 1170
[176] Transcript, page 1260
[177] Exhibit C85(b) 'AM3' as annexed
[178] Transcript, pages 1262-1264
[179] Transcript, page 1264, referring to Document 3 (Exhibit C61d, page 177)

the height, therefore the amendments made by Ms Sullivan over '*whiteout*' do not excuse Mr Rode-Bramanis' lack of diligence and accuracy on this issue. I am sure he did not intend or understand the full enormity of the consequence on having not independently checked the height restrictions given by the owners when dealing with them on 6 and 8 May 2013. His total reliance on them for this vital fact was well below the standards expected in such a circumstance.

9.39. This situation is compounded for the worse by the 120cm height entry made by Ms Sullivan which was deliberately misleading and inaccurate given the confirmatory email from Safeco on 9 October 2012 as set out in paragraph 15.9 of this Finding. The circumstances of what led to this false height limit will be analysed in full detail later.

9.40. In summary, Document Two was unsatisfactory in that:

1) The sole source regarding appropriate heights for patrons were the owners verbal instructions rather than any independent research by Mr Rode-Bramanis.

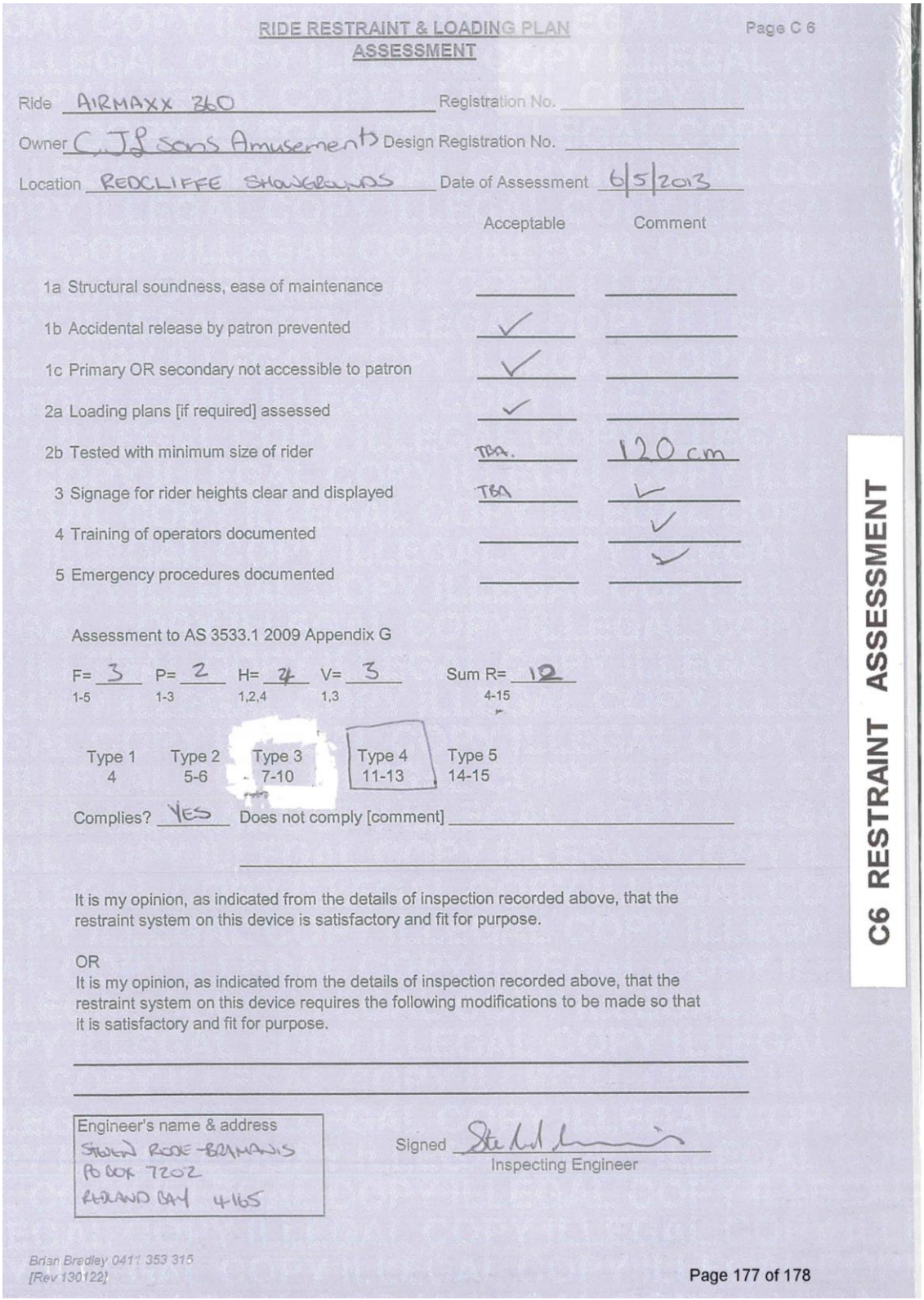
2) Mr Rode-Bramanis knew that any information on this Document would be vital for subsequent annual inspections.[180]

3) His evidence that it was '*acceptable for the ride operator… to fill in the details on this form*' on the provision '*it's correct*' is totally contrary to his responsibility to deal with the Document.[181]

4) It was unacceptable that he did not ever try to investigate what was the recommended operating speed of the Airmaxx, which Safeco had stated was 8.5 rpm.[182] Adelene's ride was operating at the maximum speed of 10 rpm.[183]

[180] Transcript, page 1261
[181] Transcript, page 1270
[182] User manual, page 19
[183] Transcript, page 1048, Mr Kroon

9.41. Document Three – Ride restraint and loading plan assessments



RIDE RESTRAINT & LOADING PLAN ASSESSMENT

Page C 6

Ride AIRMAXX 360 Registration No. _____

Owner C.J.S. Sons Amusements Design Registration No. _____

Location REDCLIFFE SHOWGROUNDS Date of Assessment 6/5/2013

	Acceptable	Comment
1a Structural soundness, ease of maintenance		
1b Accidental release by patron prevented	✓	
1c Primary OR secondary not accessible to patron	✓	
2a Loading plans [if required] assessed	✓	
2b Tested with minimum size of rider	TBA.	120 cm
3 Signage for rider heights clear and displayed	TBA	✓
4 Training of operators documented		✓
5 Emergency procedures documented		✓

Assessment to AS 3533.1 2009 Appendix G

F= 3 (1-5) P= 2 (1-3) H= 4 (1,2,4) V= 3 (1,3) Sum R= 12 (4-15)

Type 1	Type 2	Type 3	Type 4	Type 5
4	5-6	7-10	11-13	14-15

Complies? YES Does not comply [comment] _____

It is my opinion, as indicated from the details of inspection recorded above, that the restraint system on this device is satisfactory and fit for purpose.

OR

It is my opinion, as indicated from the details of inspection recorded above, that the restraint system on this device requires the following modifications to be made so that it is satisfactory and fit for purpose.

Engineer's name & address
STEVEN RODE-BRAMANIS
PO BOX 7202
REDLAND BAY 4165

Signed _____ Inspecting Engineer

Brian Bradley 0411 353 315
[Rev 130122]

Page 177 of 178

C6 RESTRAINT ASSESSMENT

9.42. The importance of Document Three cannot be underestimated. Its accuracy and detail was essential for good governance of the Airmaxx by the authorities. Mr Rode-Bramanis signed Document Three as an '*Inspecting Engineer*' and must be responsible for its representations other than the entries of Ms Sullivan made

afterwards. This begged the question as to why he gave the owners control of a document he had not completed knowing it was going to be used as an official record of the Airmaxx.

9.43. The already identified further problem existed as Mr Rode-Bramanis' assessment for the appropriate type of ride restraint needed was incorrect. This was only the third time Mr Rode-Bramanis had done such an assessment with the previous two being '*…on smaller rides*'.[184] The error in the data was the rating given to what is known as the Ejection Force Factor[185], identified as '*F*' in Document Three. The EFF was calculated subsequently and independently by an expert engineering firm, Automotive Safety Engineering[186], and confirmed by Mr Gibney who had read and agreed with the finding as well as conducted his own independent test on that topic.[187] Their calculations increased the EFF from three to five. Therefore the assessment should have been that a Type 5 restraint was needed.

9.44. This error concerning the incorrect calculation of the EFF resulted in Document Three verifying a Type 4 ride restraint. In other words, the restraints for the Airmaxx needed to be of the highest level of intensity and security as demanded for a Type 5 ride restraint. Further, if Mr Rode-Bramanis knew a Type 5 restraint was needed, he did not possess the expertise to assess whether the Airmaxx restraints were Type 5.[188]

9.45. The Airmaxx was not fitted with Type 5 ride restraints and according to uncontested evidence from Mr Kroon, the ride restraints were not even compliant with Type 4 requirements.[189] This was another significant inaccuracy about Document Three, namely that despite the classification being a Type 4 ride restraint, the ride restraints were not even compliant at that level as Document Three implied. The ride restraints could easily be described as a structural or manufacturing issue. This problem could and should have been discovered had this issue been considered in a DR application for the Airmaxx.

---

[184] Transcript, page 1183-1184
[185] EFF, Transcript, page 972, Mr Kroon
[186] Exhibit C30a
[187] Exhibit C92B
[188] Transcript, page 1280
[189] Transcript, page 989

9.46. Similar to Documents One and Two, Document Three had serious flaws namely:

1) It should never have been provided to the owners, especially as Mr Rode-Bramanis did not fully trust the accuracy of the 120cm figure given by the owners on the height issue.[190]

2) The classification of the ride restraint was not part of a CI but is '*part of the design verification process*'.[191] Mr Gibney explained that:

> '…on all of the applications for design verification or design registration, it asks you what the class of the ride is – that's mandatory to fill in. And you need to know the type of restraint when you're checking the documentation for the design registration of the ride.' [192]

In other words, this type of document needed to be completed to support the DR of the Airmaxx. Mr Rode-Bramanis was not engaged in DR but was conducting a CI. In any event, if he was to perform the task and record the results in Document Three, he needed to be accurate.

3) Mr Rode -Bramanis admitted that he could not make a proper assessment of whether the ride restraint was fit for purpose without knowing the minimum height for a patron which he did not specify in part 2b of Document Three.[193]

9.47. When pressed on why he signed Document Three, in light of that problem alone, he said '*I don't know. It was yeah, don't know, same as the certificate I don't know why I did it I want to know why I did it I don't know*'.[194] Therefore, simply based on Mr Rode-Bramanis' entries, Document Three should never have been signed by him nor formed any basis for the representative that the Airmaxx had the correct restraints for the patrons.

4) It was wrong of Mr Rode-Bramanis to rely on the owners to '*get back to me in regards to the minimum height of the rider…the manufacturer had specified*'.[195] The owners never did that. It left Document Three liable to be amended as it was when Ms Sullivan filled out the minimum height as 120cm.

---

[190] Transcript, page 1264
[191] Transcript, page 1538
[192] Transcript, page 1538
[193] Transcript, page 1277
[194] Transcript, page 1277
[195] Transcript, page 1276

9.48. Mr Rode-Bramanis did not use the information from Document Two about the height issue for Document Three because of the opinion he formed about the uncertainty of the owners on that issue. Document Three was also signed without Mr Rode-Bramanis expressing his opinion about whether the restraint system on this device was '*satisfactory and fit for purpose*'. According to the calculations on Document Three it was a Type 4 restraint and to which his single comment was '*yes*' as to whether the restraint complied with that standard.[196] It transpired he was wrong on this issue according to Mr Kroon.[197]

9.49. Mr Rode-Bramanis' position was not independent of CJS. He was hired by CJS to assist Mr Bradley. The information he gathered needed to be from the best possible source, rather than relying on the owners

9.50. Mr Rode-Bramanis made significant errors as follows:

- He incorrectly undertook to classify the restraints as part of a CI. This was a task for DR.
- He incorrectly classified the restraint for the Airmaxx as Type 4 (Document Three);
- The Documents One, Two and Three which he completed and were inserted into the logbook were inadequately filled out and contained inaccurate height limits that had been given by the owners;
- He made no independent investigation on the height issue or recommended rotational speed by reference to Safeco or the Safeco manual. He never contacted Safeco by phone or email to verify the height limit figures given to him by the owners which he himself doubted as being accurate;
- In a partial defence of him, the classification of restraints should have been independently reviewed as part of obtaining a DR. By a combination of circumstances beyond his control, a DR never occurred and no doubt unexpectedly for him, a fake DRN was given to the Airmaxx which meant the ride was never subject to the usual and necessary tests for DR. This will be discussed further in a separate consideration of this issue;

[196] Document Three, see entry below calculations
[197] Transcript, page 989

- The effect of his documents '*gave the impression to the other inspecting engineers and to the regulators that these matters had been considered as per the requirements of the design registration and commissioning inspection process*';[198]
- The EFF error and '*TBA*' for the vital height limit followed by the signing of Document Two is internally contradictory. If he had not properly and independently discovered the height limit, Document Two should never have been endorsed by him through his signature;
- Mr Rode-Bramanis understood his work or his inspection would be reviewed as part of the DR by Mr Bradley. As it eventuated, Mr Bradley declined to complete the DR for the owners;[199] Documents One, Two and Three remained in the logbook and were always assumed to be accurate.
- Such was the uncertainty involved in the nature of what Mr Rode-Bramanis was doing on 6 and 8 May 2013 that he classified the inspection as a '*structural visual inspection*'[200] and not as a commissioning or annual inspection. The title structural visual inspection was not known in the industry or AS.

10. Issue 4 - Harnesses and restraints

10.1. Patron restraints for the Airmaxx

The patron restraint for each seat was subject to a three tiered locking system. It was described by Mr Kroon as:

> '…individual over the shoulder rigid restraint harnesses to restrain patrons. There are three locking mechanisms that either retain the restraint harness in position or limit the movement possible whilst the restraint is in the locked state.' [201]

10.2. He described the locking mechanism's as follows:

> 'Primary lock system – trapped fluid type;
> Secondary lock system – spring over pneumatic;
> Latching crotch belt; and
> Manual release system.
>
> The primary and secondary lock systems are not visible when the access covers on the seat are in place.' [202]

---

[198] Transcript, page 2477, Submissions of Ms Giles, counsel assisting

[199] Exhibit C23 - Letter of Mr Bradley to Alison McCallum of SafeWork SA, dated 17 November 2014 in response to particular questions issued to him by SafeWork SA pursuant to Section 155 of the Work Health and Safety Act 2012 (SA) (Section 155 answers)

[200] Exhibit C61d, page 116

[201] Exhibit C83, page 24

[202] Exhibit C83, page 24 - See also explanation in Exhibit C67, statement of Agreed Facts for sentence for Ms Sullivan and CJS in South Australian Employment Tribunal before Deputy President M Ardlie

10.3. There are five types of restraints labelled Type 1 through to Type 5. Type 5 is the most severe.

10.4. Shown below are the relevant views of the seats and restraints as described.[203] I have included Mr Kroon's explanations of the important features of the restraints and how they operated.

The Airmaxx 360 is equipped with 24 body-contoured seats that incorporate individual over the shoulder rigid restraint harnesses to restrain patrons. There are three locking mechanisms that either retain the restraint harness in position or limit the movement possible whilst the restraint is in the locked state.

These locking mechanisms are:

- ∀ Primary lock system – trapped fluid type;
- ∀ Secondary lock system – spring over pneumatic;
- ∀ Latching crotch belt; and
- ∀ Manual release system.

The primary and secondary lock systems are not visible when the access covers on the seat are in place.

Figure 7 Airmaxx 360 Seats with restraint harness lowered (P1010506.JPG)

The following features are highlighted in Figure 7

1. Over the shoulder rigid restraint harness
2. Latching crotch belt

[203] Exhibit C83, figure 7 and figure 8

Figure 8 Airmaxx 360 Carriage showing access covers on seat in place (P1010258.JPG)

The following features are highlighted in Figure 8:

1. Access covers

The primary and secondary lock systems are controlled from the operator console by a selector switch or from virtual buttons on the operator panel.

These controls allow the restraints to be set to lock or release. Positioning of the restraints is performed manually, with either the patrons or ride attendants pulling the restraints down into position. When unlocked the restraints automatically raise.

The latching belt is manually engaged or released by either the operator, ride attendants or the patrons.

The primary and secondary lock systems can be unlocked locally at the seat by a button that is independent of the control system. This button is located under each seat and can only release the primary and secondary locks for that seat. These manual releases buttons are not accessible to patrons seated on the ride.

3.2 Restraint harness

The restraint harness fitted to each seat of the Airmaxx 360 is of a rigid construction and coated with a foam rubber type material where it may come into contact with patrons. The harness connects to the seat structure via a common shaft that is also the connection point for the primary lock system and an arm that forms part of the secondary lock system arrangement.

10.5. Unfortunately, the evidence from expert engineers in this Inquest confirmed that the restraints for the Airmaxx were not up to the necessary standards required in Australia, namely a Type 5 restraint.

10.6. What is a Type 5 restraint?

This is defined in AS3533. I shall set out in full the definition according to the standard. A Type 5 restraint is:

> '… a device or system of components specifically designed and provided to confine a patron to, and support the patron in, a unique position and an appropriate posture that, while retained, ensures that the forces that are acting on the patron produced by the action of the ride in both normal and unusual (e.g. emergency) circumstances, do not cause the patron to be ejected from the ride. Patrons cannot unlock the restraint.' [204]

10.7. Examples of Type 5 restraint systems include:

> 'The lap and lap 'T' bars and over-shoulder devices with crushable bolsters, body harnesses and other systems in combinations associated, typically, with body contoured moulded seats or beds where the restraint precludes a patron from moving from the designed position and posture.' [205]

10.8. This definition means that a patron, once properly restrained, effectively cannot move from the ideal position a Type 5 restraint forced on the body. Logic suggested that the powerful forces produced by the Airmaxx lead a reasonable mind to conclude any other restraint other than a Type 5 was not safe. That is the opinion of the experts as well. No examples of amusement rides or devices with Type 5 restraints were produced in evidence.

10.9. The main issue of structural non-compliance for the Airmaxx was the restraints for the patrons. At best the restraints were Type 4.[206] The overwhelming evidence was that Type 4 restraints were not compliant with the AS for the Airmaxx. Type 5 restraints were needed for patrons.

10.10. The owners, having imported the Airmaxx, took legal responsibility for the compliance of the restraints under AS. This should have been remedied from the incorrect assessment by Mr Rode-Bramanis. This issue was never considered again until after Adelene's death.

10.11. Mr Bradley was engaged by the owners and CJS in October 2012 to undertake the necessary DR and PR requirements for the Airmaxx to operate. However, he was not engaged pre-purchase to verify the suitability of the Airmaxx to be operable and

[204] Exhibit C34, MD32, Part 1, page 36
[205] Exhibit C34, MD32, Part 1, page 36
[206] Mr Kroon does not agree the restraints met Type 4 standards

compliant with AS. Mr Bradley did not visit Safeco with them according to Ms Sullivan.[207]

10.12. Ms Sullivan gave evidence that:

> 'The device that we were given is pretty much identical to the ride that we purchased, the only difference is, is the chairs. The operation and set up of the ride is the same, it's the chairs are different'.[208]

The basis of this evidence she said was advice from Safeco and Mr Bradley. She stated she had '*full faith in Mr Bradley being the expert to guide me the right way*'.[209]

10.13. Engineers' opinions concerning inadequacy of Airmaxx restraints

Mr David Nery has an Honours degree in Science and a Master's degree in Human Factors Engineering from the University of London. He was hired by SafeWork to review the Airmaxx with respect to the safety restraints and in particular their suitability for patrons from 120cm upwards.

10.14. He visited the site on 24 September 2014 and had two 10-year-old girls participate in experiments with the restraints whilst the Airmaxx was stationary. He conducted a number of re-enactments and tests with these two girls on Arm 8 and in particular Seat 15, Adelene's seat. Both girls were above 120cm in height, namely 140cm and 143cm.

10.15. Mr Nery took a number of photographs of the girls concerning their ability to move once seated and secured by the Primary Lock System[210] and Secondary Lock System.[211] He photographed the girls in a number of positions within the seat and concluded as follows:

> 'The two 10-year-old girls involved in the user trials were able to move out between the restraint harness and the right hand side of the seat. The seat tested was the same one that was involved in the incident in question… This result was achieved with the restraint harness in the primary lock secured position (PLSC) and in the secondary lock secure condition (SLSC). This indicated that the restraint harness could not secure the test participants in their seat in conditions where the pre-conditions for the ride to commence the full cycle of motion and reduced ride motion...' [212]

---

[207] Transcript, page 319
[208] Transcript, page 114
[209] Transcript, page 114
[210] PLS
[211] SLS
[212] Exhibit C31a, page 3

10.16. The user trial test involving the restraint harness also identified that both the test participants could climb unaided out through the front centre section of the restraint harness.

10.17. Unsurprisingly he came to the following conclusion namely:

> 'The restraint harness was not able to restrain the two 10-year-old girls, who were of similar anthropometry[213] to the Fatality Victim in question. With the clearance between the restraint harness and the seat for PLSC… the restraint harness does not, in my view, provide a fit for purpose level of restraint for persons of similar or smaller anthropometry to the Fatality Victim.' [214]

10.18. He then dealt with the topic of why the Airmaxx was allowed to operate with a minimum height for an unaccompanied patron of 120cm in contradiction to the user manual which he believed set the height at 140cm. As he put it:

> 'It is not clear why the ride operator allowed patrons at or above 1200 millimetres[215] in height to have access to the ride when the Airmaxx 360 Amusement Ride documentation specified the minimum height for patrons of 1.4 metres. No material has been provided to the writer in relation to a risk assessment by the Airmaxx 360 Amusement Ride operator (or others) have undertaken any type of risk assessment to verify that the restraint harness system is fit for purpose and safe for patrons smaller than the manufacturer specified minimum height of 1.4 metres.' [216]

10.19. Finally, he concluded that:

> 'In fact, the participants in the user trials were 1400mm and 1430mm in height so I would not consider the restraint harness for the testing conditions noted in this report a safe form of seat restraint.' [217]

10.20. Mr Nery's uncontested report was not supplemented by oral evidence. I have read his report carefully and was impressed with the clarity in which he expressed his views, the basis upon which his opinions were made and his explanation about the restraints locking systems. I accept his evidence without hesitation.

10.21. Based on Mr Nery's opinion, the minimum height set by Safeco was still not adequate to deal with the safety problems created by the inappropriate restraints.

---

[213] Physical measurements
[214] Exhibit C31a, page 4
[215] 120cm
[216] Exhibit C31a, page 4
[217] Exhibit C31a, page 4

10.22. Mr Kroon was asked of his opinion regarding the restraints. He stated the restraints were not compliant to be Type 4 let alone Type 5.[218]

10.23. Mr Gibney was cross-examined by Ms Giles and conceded the restraints were '*not fit for purpose*' and stated '*No. I don't believe these restraints are appropriate for children*'.[219]

10.24. In his evidence, Mr Rode-Bramanis agreed that Type 5 restraints were needed for the Airmaxx. He went on to say that he had never inspected a ride that required Type 5 restraints and that he would not have known how to properly assess whether the restraints were Type 5.[220] His error of 6 May 2013 classifying them as Type 4 was conceded.

10.25. Based on these uncontested opinions I find the restraints on the Airmaxx were not fit for purpose and further did not satisfy the requirements of the AS to be Type 5.

11. Issue 5 – Lack of communication between State and Territory regulators

11.1. This Inquest received two submissions from professional bodies associated with the amusement ride and device industry. I will set out their areas of concern which have emerged as being relevant to this Inquest. This includes a criticism of the lack of information sharing between jurisdictions by the absence of an organised national database of information.

11.2. AALARA – Australian Amusement Leisure and Recreation Association

AALARA describes itself as the '*peak industry body for amusement leisure and recreational industries in Australia*'[221] and is involved with Standards Australia representing in particular as a representative on the committee concerning AS3533.

11.3. It was formed in 1994 and now has approximately 400 members.

11.4. CJS and the owners were not a member of AALARA in 2014.

[218] Exhibit C83, Transcript, page 989
[219] Transcript, pages 1497-1498
[220] Transcript, page 1280
[221] Exhibit C109

11.5. AALARA '*advocates for the global harmonisation of amusement device safety standards*' and provides a number of services to its members including monthly newsletters, safety alerts and an '*online resource centre*'.

11.6. It is eager to view any findings to prevent a death such as Adelene's.

11.7. SIA – Safety Institute of Australia[222]

I received a letter and a six page submission outlining concerns with the registration, inspection and operation of amusement devices that travel around Australia.[223] Its primary submission was to emphasise the need for consistency of regulation between jurisdiction was vital.[224]

11.8. A submission was also received that was originally produced to the Coroners Court of Queensland regarding the Inquest into the deaths of four people on 25 October 2016 at the Dreamworld theme park in Queensland due to being crushed on the Thunder River Rapids ride.[225]

11.9. The AIHS is a voluntary industry body for health and safety professionals. Like AALARA, it has a comprehensive network of membership features for the advancement of knowledge and standards in health and safety.

11.10. The submission to this Court and the Dreamworld Inquest identified a number of important and relevant topics for this Inquest namely:

- The adequacies of annual and long term inspections and audits. '*The annual inspection requirements, although specified in legislation, are completed differently by the various engineers in the industry. This lack of consistency is concerning. It is the regulators responsibility to audit these reports to determine whether or not the engineer has completed the task appropriately*.' [226]
- Management of modifications of the manufacturer's specifications for an amusement ride or device;
- The role of AS for rides manufactured overseas;

[222] Now known as Australian Institute of Health and Safety - AIHS
[223] Exhibit C118, page 4
[224] Exhibit C118, page 2
[225] Dreamworld Inquest
[226] Exhibit C118

- The adequacy of maintenance of structural, mechanical and electrical/electronic aspects of a ride or device;
- The training and competency of the operators and the supervisors and maintenance personnel for the ride or device.
- '*Forum shopping for design registration*' – looking for the easiest compliance regime to obtain registration.[227]

11.11. In essence they recommend a comprehensive change in the current system of governance for amusement rides and devices. They are concerned that there is '*no formal mechanism to assess the competence of those engineers who elect to practice*'.[228]

11.12. In what the AIHS submitted was '*the reality*' [229], they report that '*some engineers in the industry have been reported as inspecting ten or more mobile amusement devices in a day, which is considered impossible if a thorough process is undertaken*'.[230] AIHS note the unfairness of this compared with more thorough engineers who '*cannot compete effectively with an engineer that gives the ride a quick visual inspection*'.

11.13. It also notes that '*regulators, who should be ensuring inspection standards are maintained, generally only look for the logbook entry that an annual inspection has been completed by an engineer without any consideration of the completeness of the inspection process*'.[231]

11.14. They are concerned with the complexity of many rides and devices and the practices of one competent person only completing an entire inspection. They note that '*it is unlikely that one person will encompass all the required technical competencies of covering structural, mechanical, electrical and control system engineering. Accordingly any sign off involving only one person is likely to be flawed*'.[232]

11.15. I found the AALARA and AIHS submissions to be extremely helpful with respect to identifying the goal of providing a framework in which standards across Australia for

[227] Exhibit C118, page 4
[228] Exhibit C115, page 2
[229] Exhibit C118, page 5
[230] Exhibit C118, page 5
[231] Exhibit C118, page 5
[232] Exhibit C115, page 3

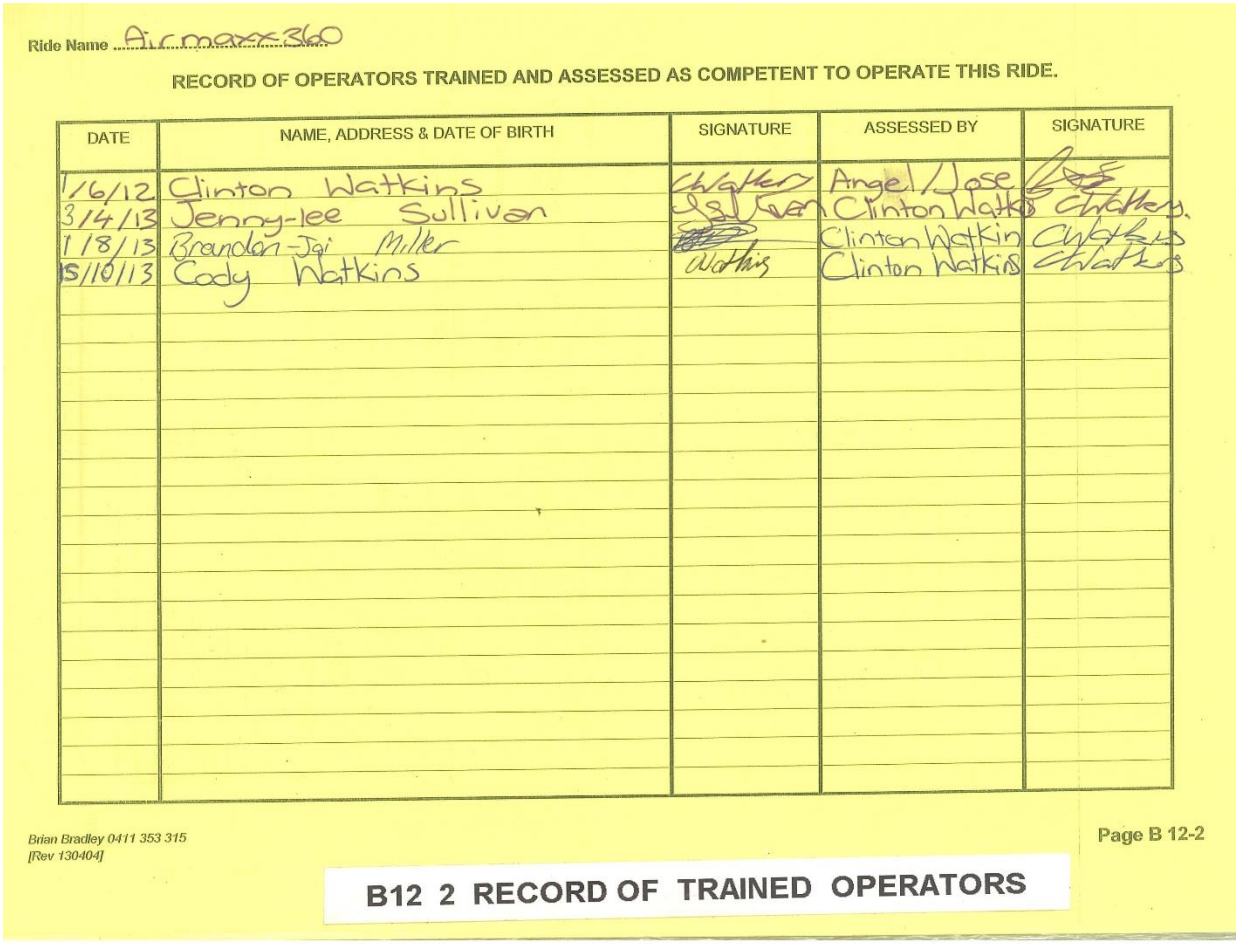
all of the compliance matters are uniform and reliably recorded for all relevant inspectors and regulators to access.

11.16. These bodies suggest a national database of information be established that is accessible by the authorities nationwide. Their submissions were supported by The Society, SafeWork and counsel assisting, Ms Giles.

12. Issue 6 – Training and operation of the Airmaxx

12.1. The training of staff to operate the Airmaxx

I will deal first with the training of Ms Sullivan to operate the Airmaxx. She and her husband Mr Watkins went to Spain in 2012 to view the Safeco factory. The evidence suggested that, at best, Mr Watkins was trained by Safeco at that time. I attach the logbook document recording the training of operators.[233]



Ride Name Aircmaxx 360

RECORD OF OPERATORS TRAINED AND ASSESSED AS COMPETENT TO OPERATE THIS RIDE.

DATE	NAME, ADDRESS & DATE OF BIRTH	SIGNATURE	ASSESSED BY	SIGNATURE
1/6/12	Clinton Watkins		Angel Jose	
3/4/13	Jenny-lee Sullivan		Clinton Watkins	
1/8/13	Brandon-Jai Miller		Clinton Watkins	
15/10/13	Cody Watkins		Clinton Watkins	

Brian Bradley 0411 353 315
[Rev 130404]

Page B 12-2

B12 2 RECORD OF TRAINED OPERATORS

[233] Exhibit C61d, page 95

12.2. The logbook indicated Mr Watkins trained Ms Sullivan on 3 April 2013. I note that the month and year for that entry is in purple pen and the day is written in blue pen. The mystery of that entry deepened when it was proven that the Airmaxx did not arrive into Australia until after 3 April 2013 and was only assembled for operation on 4 May 2013. This purple pen was used for the bulk of their entries including the month and year of the owners training. Blue pen was used to complete the entry concerning the day. That suggested reconstruction and unreliability of these entries.

12.3. Ms Sullivan's evidence on this topic was submitted to be highly unsatisfactory[234] in claiming that she just '*made a mistake*' or '*guessed the date*'.[235] It can be reasonably argued that her lack of care for the requirements of recording the training was indicative of an attitude that the official records for the ride including maintenance and inspections, were not important. The training Ms Sullivan claimed that occurred on 3 April 2013 was extensive. It recorded her as being the operator of five rides without patrons and a number of other practice runs.[236]

12.4. I am not confident that the training needed for the owners and Mr Brandon Miller occurred as recorded. It tended to suggest that they learnt how to operate the Airmaxx as they went along.

12.5. <u>Mr Brandon Miller</u>

At the time of giving evidence, Mr Brandon Miller was 27 years of age and lived in Arizona as he felt '*he had to get away*'. He was the main operator for the Airmaxx from 2013 and was operating Adelene's ride.

12.6. Mr Brandon Miller was part of a large family group in the amusement ride industry that included Mr Watkins and Ms Sullivan. He described them as his Auntie and Uncle.[237] As such, they all helped each other as a close knit cooperative culture. His whole working life had been to operate amusement rides of all types of intensity from the age of 15. He classified the Airmaxx as '*pretty intense*'. One of the very first things he was taught in his early working life was the significance of minimum heights which he factored as '*the most important consideration*'.

---

[234] Transcript, pages 197-204
[235] Transcript, page 203
[236] Exhibit C61d, page 93
[237] When speaking to SafeWork in 2016

12.7. He has tried to block his memory as much as possible about Adelene's death. Despite that he said he had a memory of her last moments including her excitedly waving at her mother just as the ride started on what he has called '*the jogging lap*'.[238] This lap is when the arms do not rise vertically but simply slowly move around one full rotation which is also a final check for him that all patrons are secure.

12.8. Mr Brandon Miller's part in an inquiry at the RM Show concerning a nine-year-old girl on 23 September 2013 was significant. He was told the next day by WorkSafe Victoria to check the minimum height with the manufacturer.[239] His evidence on this topic was that he did not recall this direction. They ordered the height for an unaccompanied patron be moved to 130cm for the remainder of the RM Show. The order to raise the minimum height limit was noted as being voluntary obeyed.[240] Although the owners were not referred to in this report, they were aware of the order.[241]

12.9. The 2013 RM Show was a missed opportunity to discover and enforce the manufacturer's specified height of 140cm. It was another example of authorities failing to discover Safeco's recommendation of the height issue that carried on to 12 September 2014. At the RM Show the height issue was exposed for scrutiny and should have been resolved.

12.10. This order from WorkSafe Victoria unfortunately was transient and the Airmaxx's standard mode of operation regarding the minimum height, resumed at the end of the RM Show. In their own words the owners continued to do '…*the wrong thing because they kept the ride height at 120 cm*' when they knew that Safeco instructed it should be at 140cm.[242]

12.11. The next time the Airmaxx operated was in Shepparton in October 2013. Mr Brandon Miller was absent at this event. The height limit returned to 120cm. Ms Sullivan said in evidence her '*impression*' was that the 130cm height limit was just for the duration of the RM Show.[243]

---

[238] The first rotation
[239] Exhibit C61d, page 162 - See entry in WorkSafe Victoria report in logbook
[240] Exhibit C61d, page 162
[241] Transcript, page 238
[242] Transcript, page 2591, submission of Ms Veale counsel for the owners and CJS
[243] Transcript, page 238

12.12. Mr Brandon Miller believed the correct way to measure the height of a patron was without shoes.[244] In addition to this he was also proactive in discouraging patrons he thought were unsuitable for the Airmaxx based on their build.[245] In particular he focused on two types of builds namely an extremely thin person and/or child and conversely a heavy person. He believed both of these builds affected the restraints from being a total safeguard to patrons falling out or being injured.

12.13. A number of times Mr Brandon Miller '*didn't quite recall*' many issues of significance. I wavered as to whether that was truly his state of mind. His detailed accounts of the day and associated issues were subject of two separate interviews. The first was at 3:30pm on 12 September 2014 by SAPOL and the second being by SafeWork on 17 February 2016.

12.14. He accepted that in those two interviews he was trying to be as honest and accurate as possible and therefore details from those interviews are likely to be far more accurate than his evidence in this Inquest.[246]

12.15. Mr Brandon Miller was questioned in the second interview that he was involved in maintenance of the harness restraints and specifically stated that '*hydraulic oil was bought and then put in the hydraulic cylinders of the harnesses*'.[247] He further stated that the hydraulic cylinders for the restraints would be topped up '*once every couple of months*'.[248] Unfortunately as will be discussed, this was an incorrect and dangerous method of maintenance for the harness restraints.

12.16. <u>Ms Skye Brooks</u>

Ms Brooks is a 30-year-old single mother who worked for CJS as an attendant for the Airmaxx. She had limited experience in the industry and mainly worked as the ticket box attendant. She was hired due to her attendance at a karaoke night in Hawkesbury, the night before the 2013 Hawkesbury Show began. She and her friend Jade Rutter asked some owner/operators of rides for a job. She was approached by Ms Sullivan that night and they met at the Hawkesbury Show the next day. She was hired by CJS immediately together with Ms Rutter.

---

[244] Transcript page 446
[245] Being either too big or too small
[246] Exhibit C65 and C65a
[247] Exhibit C65a
[248] Exhibit C65a

12.17. At the Hawkesbury Show, Mr Watkins operated the Airmaxx. Ms Brooks sold tickets and took turns with Ms Rutter as the deck attendant. When Mr Watkins had a break, Ms Sullivan operated the Airmaxx. The minimum height for the ride when Ms Brooks was involved was always 120cm. She was told by Ms Sullivan that this was for '*safety reasons*'. No instructions were given about distinguishing accompanied from unaccompanied child patrons.[249]

12.18. Ms Brooks said she and Ms Rutter did not do the RM Show when the height was lifted to 130cm by WorkSafe Victoria. She met Mr Brandon Miller who only worked for the '*bigger shows*', usually in the capital cities.[250] Most of her working life with the Airmaxx was as the ticket booth attendant.

12.19. She was not given any paperwork to study nor written instructions to follow concerning securing patrons into the seat. However, she formed a routine that she wanted the harness of each seat to touch the chest of each patron, irrespective of their build. This was her own standard. When she did the double checking just before the ride started she would always push the harness in if she thought it was not tight enough. She would tell patrons to keep their head back and tell little children to '*wriggle back into their seat*'.

12.20. During her time working with the Airmaxx she noticed the '*free spin*' of the individual carriages. It appeared to her they had no control.

12.21. She was involved in maintenance on occasions including checking bolts on the top of the seat and on the back and the bottom of the seat. She was shown how to do this with a torque wrench by Mr Watkins.

12.22. At The Show Amanda Minniken joined the crew to work. Ms Brooks understood she was a friend of Ms Sullivan and Mr Watkins and was only ever given the role of deck attendant.

12.23. On occasions, for her own fun, Ms Brooks was a patron of the ride and liked to make herself feel safe by having the harness as tight as possible.

[249] Transcript, pages 554-555
[250] Transcript, page 557

12.24. Ms Brooks was shown a video of footage taken of the ride at The Show on 6 September 2014 by SG, a member of the public.[251] The video was notable as it showed at different points Mr Brandon Miller and then later Mr Watkins emerging from the epicentre of the ride which had come to an unexpected halt.[252] The '*on the run*' maintenance during the ride was a telling sign of the manner in which this ride was maintained by the owners and operators on a makeshift basis. This was understandable as no expert was ever involved in instructing them. The fault for that situation lay with Safeco as well as the owners. The SG video will be discussed later.

12.25. Other evidence noted the repeated chaotic approach to the important aspects of maintenance of such a ride. The SG video was a record that should be regarded as a microcosm of the operation of the Airmaxx.

12.26. <u>Ms Jade Rutter</u>

Ms Rutter was 29 years of age at the time of giving evidence and presented as an intelligent woman badly affected by 12 September 2014. Although she was not working at the time of Adelene's ride, Adelene's death has had a significant impact on her and she suffers anxiety about it.[253] She felt the effects of that day deeply. She wanted to see the video record of Adelene's ride '*that was apparently going around, to ease my mind of how it actually happened*'.[254]

12.27. I find that she has no responsibility for the cause or circumstances of Adelene Leong's death. This young lady was a very vigilant employee who was always bringing problems she encountered concerning the Airmaxx to the attention of the owners.

12.28. Her training was minimal but she was obedient and enterprising. She was also involved in minor maintenance and again conducted herself above the basic standard that she was taught. Whilst growing up she was interested in becoming a mechanic. She had a pre-apprenticeship but did not pursue it. Her vigilance about issues of the Airmaxx extended to sometimes riding with a child she believed was not fully suitable for the ride due to his or her '*petit*' stature.

12.29. Like the other employees, she worked a long day during shows, basically 12 hours with at best one hour in total breaks.

---

[251] Exhibit C75 'SG video'
[252] At 2 minutes and 40 seconds of the video
[253] Transcript, page 689
[254] Transcript, page 690

12.30. She had real concerns at The Show with the professionalism of co-worker Ms Minniken, who by her observations did not watch the ride at times. Further she witnessed her speaking to Show patrons thereby losing concentration on the ride. She noticed her at times putting lip gloss on during a ride.

12.31. Ms Rutter was knowledgeable in general about the following issues that were raised with her in two separate records of interview with SAPOL, the first being at 4:56pm on 12 September 2014[255] and the second in Parramatta on 17 March 2015[256] namely:

- Maintenance of the restraints;[257]
- An oil leak into the air tank at The Show. The air tank was '*emptied out every night*';[258]
- The continual breakdown of the Airmaxx at the EKKA with Mr Watkins '*trying his best to find out… what was wrong with the ride*';[259]
- Sensor problems at The Show;[260]
- Harness problems. She described '*one or two harnesses would go up higher*' than the others when released and hit the arm.[261]

I accept that she was honest and doing her best to be accurate with the authorities in both interviews.

12.32. <u>Ms Amanda Minniken</u>

Ms Minniken was 36 years of age at the time of giving evidence. She was recruited to work for CJS as an attendant at The Show. After minimal training she was told the height for eligibility for the Airmaxx was 120cm. She was trained for a couple of hours with Ms Rutter and Ms Brooks. I am doubtful about the extent of knowledge gained in training however she had enough experience to know the basic duties as she called it of '*lock and loading*' as well as observing the ride for problems.

12.33. Her history with Ms Sullivan and Mr Watkins was that she worked for them when she was 15 years old at the Semaphore Show in the summer of 2000-2001.

---

[255] Exhibit C78, Adelaide interview
[256] Exhibit C78a, Parramatta interview
[257] Parramatta interview, pages 15-17
[258] Parramatta interview, page 32, questions 314-317
[259] Parramatta interview, pages 44 and 45, questions 420-427
[260] Parramatta interview, page 41, questions 388-395
[261] Parramatta interview, pages 58-60

12.34. She talked about issues that concerned '*topping up the oil*' in the middle of a ride by Mr Brandon Miller. She recalled a situation where '*a lot of people were working on the ride with oil*' for '*one hour*' at lunch time which could have been anywhere between 11am and 2pm.

12.35. She was the sole deck attendant when Adelene got on her ride. Ms Minniken remembered her and in particular the visible white jacket. She stated she checked on Adelene '*two maybe three times*' and asked her '*to wiggle all the way back*' into her seat.[262]

12.36. She believed Adelene did not speak English. As she was attending to her there was another parent on the ride near to Adelene who was yelling at her.

12.37. She demonstrated to Adelene to use what she called the '*cross over*' grip, which she had been showing people throughout the week. This grip was literally holding the harness like a hug which she said was for '*emotional security*'. The video of the ride does not ever show Adelene using this technique.

12.38. She said she made sure Adelene's harness was '*all the way back*'.

12.39. She recalled buckling Adelene up with the seatbelt whilst Mr Brandon Miller dealt with an angry parent. It must be remembered at this point that Adelene's mother said she had to point out this issue to Ms Minniken.

12.40. Ms Minniken was interviewed by SAPOL on 12 September 2014 and told the Inquest that she was trying to be honest and accurate as well as helpful with the police enquiry at that stage.

12.41. She was interviewed again in 2015, again saying she was trying to be honest, helpful and accurate.[263]

12.42. An answer in the second interview concerning her previous general experience with minimum height limits for amusement rides is worth setting out in detail namely:

> 'Q742 (AM) Do you know where the height of 120, did anyone say where that came from, like how the 120 was calculated?
>
> A Um no but from personal experience I know that usually when a ride gets manufactured and stuff like that they do um advise height restrictions and most, most people that own rides usually go above, like, you know, one ride could say

[262] Transcript, page 925
[263] Exhibit C82a, 29 April 2015 '*the second interview*'

> oh you know 100cm and then the owner will go well we're gonna make it 120…to make it safer.' [264]

12.43. She was shown the SG video of 6 September 2014 but did not provide any helpful perspective to that ride.[265]

12.44. The video of Adelene's ride showed that her attention to the ride was poor.[266] This was consistent with the evidence of Ms Rutter. Whether close attention to Adelene would have changed her fate will not be known. However, it is yet another error and fault associated with Adelene's death. Ms Minniken was easily identifiable in a blue polo work shirt and red hair. She admitted to SAPOL that night that she did not know Adelene was ejected and thought someone had passed out.

12.45. When spoken to by police that evening, Ms Minniken declined to give a voluntary blood sample for drug and alcohol testing due to a stated reason of not liking needles. When it was further suggested a sample of saliva from her tongue could be taken, she said it would not work because of the medication affecting her tongue. Despite these comments she cooperated to provide a sample. SAPOL reported that she, Ms Rutter, Ms Brooks and Mr Brandon Miller all provided voluntary samples that returned a negative result for the presence of drugs and alcohol.[267]

12.46. The fact that Ms Minniken did not see Adelene in distress, hanging by her foot, or being ejected, was indicative of a level of inattention on Ms Minniken's part during Adelene's ride. Unfortunately, even if she had been attentive, she could probably not have alerted Mr Brandon Miller in time to save her.

13. Issue 7 - Inspections and audits, investigation and prosecution

13.1. SafeWork SA[268]

SafeWork is a unit of the South Australian Department for Treasury and Finance. In 2014 SafeWork was a unit of the Department of Premier and Cabinet. Its

[264] Exhibit C82a
[265] Exhibit C75
[266] Exhibit C71b
[267] Exhibit C34, pages 101-102
[268] SafeWork

responsibilities are to deliver Work Health and Safety[269], Industrial Relations[270] and Public Safety[271] and Regulatory and Education Services across South Australia.[272]

13.2. SafeWork inspected and audited the Airmaxx at The Show prior to its public operation. It became involved immediately again after Adelene's death together with SAPOL. Both SafeWork and SAPOL conducted investigations into Adelene's death, working cooperatively. As stated, SafeWork engaged Mr Peter Kroon, safety engineer, to conduct a number of inspections and reports concerning the Airmaxx. These reports became a vital part of the investigations and evidence at this Inquest. SAPOL's final report into Adelene's death dated September 2018 relied extensively on the findings and opinion of Mr Kroon.[273]

13.3. Investigation of Airmaxx by Mr Kroon

Mr Kroon was 46 years of age at the time he gave evidence. He is a safety engineer who has specialised in industrial automation and is one of only 150 recognised functional safety experts worldwide under the TUV Functional Safety Program based in Germany. He is also a member of committees of Standards Australia concerning the areas of functional safety in general and for machinery.[274]

13.4. His curriculum vitae attached to his reports showed an extensive career as a qualified engineer and particularly in the area of amusement rides. He has '*assisted people with understanding options on how they can implement controls and automation on the amusement devices and I have done a lot of work for the regulator in auditing amusement devices*'.[275]

13.5. As he is based in South Australia, the regulator he referred to was SafeWork. He was also very familiar with AS3533 concerning amusement devices.

13.6. His professional life requires detailed knowledge of AS3533 relating to amusement devices and rides as well as AS4024 concerning safety of machinery. He confirmed that AS3533 is accepted as a code of practice in South Australia by way of legislation.

---

[269] WHS
[270] IR
[271] PS
[272] Exhibit C106, paragraphs 1-7 - Affidavit of Martin Campbell, Executive Director of SafeWork
[273] Exhibit C34a
[274] Exhibit C83, pages 106-107 and AS62061 and AS4024
[275] Transcript, page 942

13.7. Mr Kroon was engaged by SafeWork to comprehensively examine the Airmaxx and report on its general condition, systems used for its operation and any faults. His examination identified a number of issues with the Airmaxx. He also naturally concentrated on Adelene's seat and restraint. This was Arm 8 and Seat 15.

13.8. 19 September 2014

Mr Kroon examined the Airmaxx onsite at The Show. He spent 29.5 hours physically examining it and its components over a one month period. He produced three reports on the Airmaxx titled:

1) Restraint System.[276]
2) Hydraulic Lock Unit.[277]
3) Annual In-service Inspection Vs Defects.[278]

13.9. The reports totalled over 400 pages of information, findings and conclusions. Mr Kroon did a thorough and comprehensive examination of each working component and gave clear oral evidence explaining his observations and concerns about the Airmaxx.

13.10. In the myriad of issues concerning the Airmaxx, he was unable to interrogate the data from the PLC about its operation at The Show due to a data retention system not being available. This was the responsibility of the manufacturer. Therefore he was not able to '*interrogate the history of the restraints system*'.[279] I see no valid reason for the manufacturer allowing this system to be programmed in such a way that it could not be interrogated.

13.11. Locking mechanism for restraint of harness for patron

I have already dealt with the significant issue that the restraints were not fit for purpose for the Airmaxx and they did not comply with Type 5 classification standards set by the AS.[280] That was a universal view amongst the engineers that gave evidence. In addition, the internal working system of the restraints within the seats were not satisfactory.

[276] Exhibit C83, dated December 2014
[277] HLU, Exhibit C83b, dated February 2016
[278] Defect's report, Exhibit C83a, July 2016
[279] This data was gathered by the PLC
[280] Issue 4

13.12. I have attempted to provide the simplest summary of a complex system.

13.13. I begin with the three basic working systems to restrain a patron as first discussed in Issue 4.[281] The first is the PLS which is connected to a '*common shaft*' [282] by which the harness is attached to the seat. This was best explained and shown by Mr Kroon in his Investigation Report.[283] The photo below is of the internal workings of the restraints systems for a seat as seen once the back panel of the seat is removed.

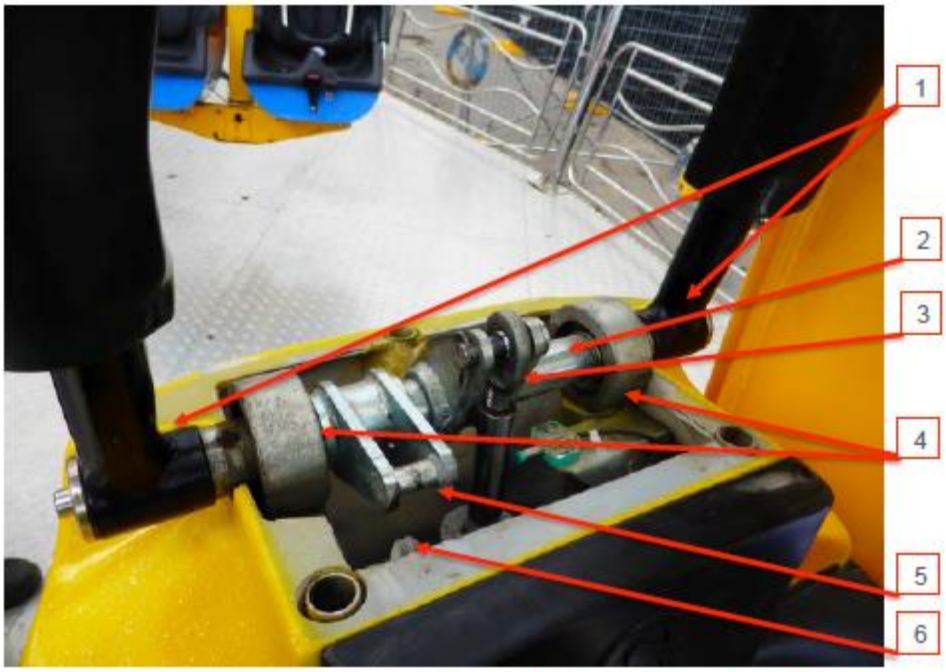


Figure 9 Airmaxx 360 Over the shoulder rigid harness connection point (P1010564.JPG)

The following features are highlighted in Figure 9:

1. Shoulder restraint connection points
2. Common shaft
3. Primary lock cylinder connection point
4. Seat frame connection point
5. Secondary lock system arm
6. Secondary lock system stop pin

The common shaft is a splined shaft that has spacers between the other critical components mounted on the shaft. These components hide the splines, giving the appearance of a typical round shaft.

Splined shafts provide a means of providing a connection between a rotating shaft and another component that can withstand high torque loads (twisting forces) without the possibility of slippage, as there is positive engagement between the components. In the context of the Airmaxx 360 restraint system, the use of splined shaft ensures there is a positive connection between the restraint harness and the locking systems. The use of a splined shaft eliminated the possibility of components connected to the shaft slipping. This ensures the orientation between the locking systems and the restraint harness are maintained, if engineered correctly.

Slippage of any component on the shaft would result in the relative orientation of that restraint component being altered, potentially compromising the integrity of the restraint system.

[281] See paragraphs 10.1 and 10.2 of this Finding
[282] Also known as a spline shaft
[283] Exhibit C83, figure 9 of page 26

13.14. As noted by Mr Kroon the use of the shaft '*ensures there is a positive connection between the restraint harness and the locking systems*'.[284]

13.15. Feature 3 of Figure 9 shows the connection of the primary lock cylinder[285] to the common shaft. This was the key component to the PLS that operated based on hydraulic components assembled into a single unit. A further illustration of the PLS is shown below in Figure 17 which demonstrated its position with respect to the harness and the unmarked SLS.[286]

The primary lock cylinder is connected to the restraint harness via an arm that is mounted on the common shaft located at the back of each seat. This shaft is splined to prevent slippage at the connection point. Therefore ensuring the orientation of the primary lock system arm maintains its relative orientation to the restraint harness.

Figure 17 Airmaxx 360 Primary lock system connection (P1010565.JPG)

The following features are highlighted in Figure 17:

1. Rod end
2. Pin
3. Primary lock system arm
4. Primary lock cylinder

The primary lock cylinder is connected to the primary rod arm with a pin that is retained in position with either a split pin or an R clip.

3.3.9 Operation

The primary lock cylinder works on the trapped fluid principle. As hydraulic fluid is not compressible, when hydraulic fluid is trapped in one end of a hydraulic cylinder it forms a barrier preventing further movement in that direction.

The primary lock cylinder is arranged so that it retracts when the restraint is being closed (locked) and extends when the restraint is being opened (unlocked).

[284] Exhibit C83, page 26
[285] PL cylinder
[286] Exhibit C83, page 33

13.16. Operation of PLS

This worked on what is known as the '*trapped fluid*' principle described by Mr Kroon immediately above in Figure 17. That is, hydraulic fluid, not being compressible gets trapped at one end of the PL cylinder which forms a barrier preventing further movement in that direction.

13.17. The cylinder is closed when the restraint is locked and is open when the restraint is unlocked. The cylinder allows fluid to pass from the bottom to the top of the cylinder at any time through the hydraulic check valve. When the hydraulic fluid is at the top, it prevents upwards movement. As Mr Kroon explained:

> '…when you pull the harness down, the harness will force the cylinder rod down into the cylinder… So as you push the cylinder down, the fluid has to move somewhere, it's not compressible.' [287]

13.18. That is, as the harness closes hydraulic fluid will go to the top of the PL cylinder which gives '*an infinitely variable locking position*'.[288] This allows the harness to be closed at different positions for a patron but will not be allowed to rise. In very basic terms, when the harness is pulled down, the hydraulic fluid moves to the top of the PL cylinder. When the harness is released from a locked position it moves to the bottom of the Programmable Logic Controller.[289]

13.19. This procedure for locking and unlocking was monitored by the operator in the control booth by the electronic system of the PL cylinder.

13.20. A patron cannot get access to nor operate the PLS. It is variable and designed to accommodate the size of an eligible patron so that it has '*an infinite number of positions in which it will lock wherever… wherever you stop… the harness – and it will stay in that position*'.[290] It can move from the original locked position further downwards if there is room to do so.

13.21. PLS faults

As explained earlier one of the key components of the PLS is the PL cylinder.

---

[287] Transcript, pages 957-958
[288] Transcript, pages 957-958
[289] PLC
[290] Transcript, page 965

13.22. The PL cylinder is shown below.

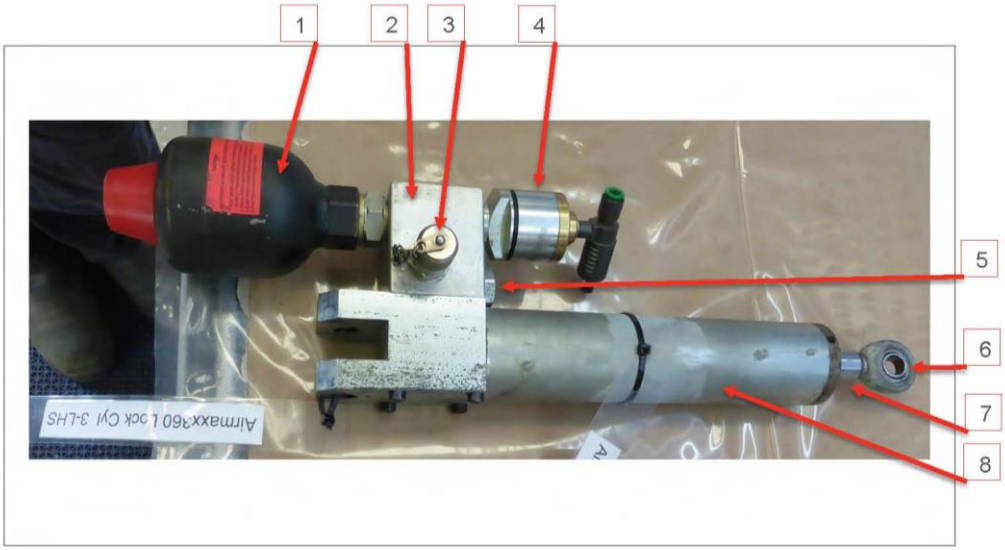


Figure 12 Primary lock cylinder with key components labelled (P1010827.JPG extract)

The following features are highlighted in Figure 12:

1. Accumulator
2. Manifold
3. Test point
4. Pilot check valve
5. Hydraulic check valve
6. Rod end
7. Cylinder rod

13.23. Its connection to the common shaft was the only way the PLS can be used as intended.

13.24. As Figure 17 of Mr Kroon's report[291] showed in paragraph 13.13, the PL cylinder's sole connection to the common shaft is at the midpoint.[292] It is a threaded connection.

13.25. Needless to say, if any fault emerged in the threaded connection point then it could only be classified as serious or even dangerous. It was discovered that for 9 of the 24 seats the connection was not fully engaged. The PL cylinder for Seat 11 was almost fully disengaged with 7 of the 8 threads exposed. Mr Kroon believed it '*was only a matter of time*' before the PL cylinder '*completely disengaged*'. He believed the '*likely*' disengagement would happen '*under the load of a patron*'.

13.26. If this happened, the restraint '*would open rapidly*' until the SLS engagement point, assuming the SLS was not faulty or the latching seat belt.[293]

[291] Exhibit C83, page 33
[292] Item 4 of figure 17, paragraph 13.13 of this Finding
[293] Exhibit C83, pages 70-71

13.27. I insert below the photo[294] of Seat 11[295] and the PL cylinder as Mr Kroon saw it. It also showed a connecting clip here called an '*R-clip*'[296] which is correctly placed to hold the end of the PL cylinder[297] in place through the connecting rod.

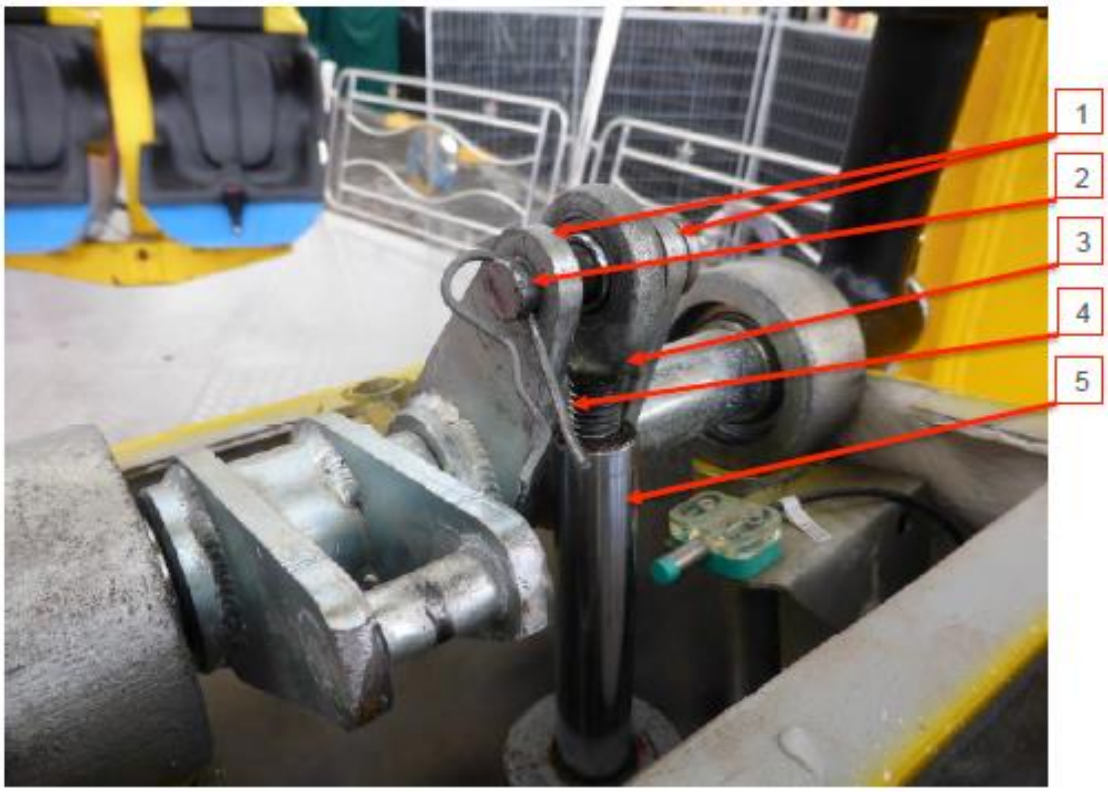


Figure 34 Airmaxx 360 Arm 6 RHS (seat 11) primary lock cylinder connection (P1010540.JPG)

The following features are highlighted in Figure 34:

1. Primary lock system arm plates
2. Connecting rod
3. Rod end
4. R-clip
5. Primary lock cylinder

Note a detailed description of the primary lock system is provided in section 3.2.

Areas of concern identified during the inspection are:

- ∀ Rod ends are unthreading
- ∀ Connecting pins installed in reverse orientation
- ∀ State of R-clips and split pins

13.28. The seats with exposed threads were as follows:

- Seat 3 – 1 thread

[294] Figure 34
[295] Exhibit C83, page 70 - Item 5 in Figure 34
[296] Exhibit C83, page 70 - Item 4 in Figure 34
[297] Exhibit C83, page 70 - Item 3 in Figure 34

- Seat 6 - 3 threads
- Seat 9 – 1 thread
- Seat 11 - 7 threads
- Seat 13 – 1 thread
- Seat 14 – 1 thread
- Seat 15 - 4 threads (Adelene's seat)
- Seat 20 - 2 threads
- Seat 24 - 5 threads

The remaining 15 seats were fully engaged, however Seat 7 was loose and Seat 23 had a different design of PLC which Mr Kroon classified as having a far superior connection compared to the others.

13.29. The effect of exposed threads was noticeable on the inspection of the seats with covers on, in that the restraints of those with threads exposed sat higher than the fully secured seats. Adelene's seat had four threads exposed. It was observed that her restraint was higher than the empty Seat 16 next to her which was fully engaged. In addition all of the rod ends had been grounded and cut, producing a length of either 8 or 9 threads.[298]

13.30. A further problem was noticed about some of the connecting pins, namely they were in '*reverse orientation*'. Mr Kroon identified Seats 1, 2, 5, 9 and 17 had incorrect orientation for the connecting pin.

13.31. The problems created by this were:

- The green proximity switch or sensor could continuously and falsely indicate to the operator's console that the harness is down. If the sensor is disconnected then the Airmaxx should stop under the PLC system in the control booth.
- The sensor could be damaged by the R-clip as shown below in Figure 38. The R-Clip is in the background of the photo on the right hand side. Its function is to fasten the connecting pin.[299]

[298] Exhibit C83 pages 72-73 - Figure 35 and 36 for seat 6 and seat 15
[299] See Figure 34, paragraph 13.27 of this Finding

- The R-clip could catch on the sensor and cause the clip to fall out and create the danger of the connecting pins falling out therefore making the PLS ineffective.[300]

Figure 38 Airmaxx 360 Damaged proximity switch due to contact with R-Clip (P1010459.JPG)

7.2.3 State of R-clips and split pins

Some of the R-clips and split pins installed in the ride were in a poor state, which is likely to compromise their function. The R-clip shown in Figure 34 has been spread open and twisted reducing its capacity to remain engaged.

The split pin shown in Figure 39 is damaged. Based on the marks it appears to have been removed and reused. Split pins are not intended to be reused as the section that is bent over to ensure they stay in place becomes brittle and breaks away. The damage sustained when being removed increases the likelihood of this occurring.

Mr Watkins was unaware of the need for correct orientation regarding the R-clip being away from the sensor.[301] He was the main person performing maintenance. It was a vital piece of information he needed to have been taught by Safeco or learnt himself.

13.32. This correct set up is best explained by reference to Figure 34[302] which shows the R-Clip and green sensor on either side of the connecting pin. An incorrect set up has the R-Clip and the green sensor on the same side as seen in Figure 37 below[303] and Figure 38 above.

[300] Transcript, pages 998-999
[301] Transcript, pages 416-417
[302] See paragraph 13.27 of this Finding
[303]

Figure 37 Airmaxx 360 R-clip contacting proximity switch (P1010402.JPG)

There are three significant issues with this:

- ∀ R-clip could be ejected leaving the connecting pin free to dislodge
- ∀ Damage to the proximity switch as shown in Figure 38
- ∀ R-clip could be detected by proximity switch even when primary lock arm has moved clear of sensor, allowing the restraint harness to be more open that designed without loss of indication.

The pins being installed in the reverse orientation is likely to have occurred during maintenance as the pins are easier to reinstall in the incorrect orientation.

13.33. In addition to this problem of incorrect orientation affecting certain seats, Mr Kroon identified there was a general problem with the sensors for each seat.[304] I shall explain this as succinctly as possible and insert extracts from his evidence that demonstrate this general danger.

13.34. The sensors indicate the harnesses are closed to the PLC '*…very early on in the lowering of the harness…so there is nothing in the way it detects the position of the harness to say that that person is secure*'.[305] In other words, the sensor only made an

[304] Also called '*proximity switches*' by Mr Kroon
[305] Transcript, page 978

indication that the harness was lowered to the engagement point of the sensor not that it was fully and appropriately lowered for the individual patron in the seat.[306]

13.35. This was an important situation especially for a smaller patron, such as Adelene. That is, a sensor that indicated the harness was closed for a small patron needed the extra safeguard of the patron and/or a deck attendant to make any further adjustments to ensure the patron was as secure as possible.

13.36. If the ride cycle began based on the indicator the harness was lowered, but was not secure or '*tight*'[307] then the patron is not '…*being effectively restrained*' [308] and further '…*if the harness started to lift during the ride, it can move quite a distance before it would be detected by the ride and actually cause a trip*[309]*...So for relatively small patrons, this harness can be well and truly clear of the patron allowing for quite a bit of movement, without actually indicating a problem*'.[310]

13.37. On 19 September 2014, the following three photos were taken by SafeWork in the presence of Mr Kroon that showed Adelene's seat in a position '*that the sensor is detected in the control booth*'.[311] Adelene's seat is to the right of the arm as a patron would sit.

[306] Exhibit C83, pages 50-51
[307] Transcript, page 981
[308] Transcript, page 981
[309] '*trip*' means stopping the ride completely
[310] Transcript, page 981
[311] Exhibit C86f, photos 18,19 and 20 - Photos of Ms McCallum, Principal Inspector of SafeWork

Photograph No.	18	**Negative or Image No.**	P1010278
Taken by	A McCallum	**Company**	C, J & Sons Amusements Pty Ltd
Taken on	19/09/2014	**Address**	Airmaxx 360 location - Royal Adelaide Showgrounds
Infonet File	2014-6302	**Description**	View from left side of carriage on arm 8. Right hand seat restraint located at the position that the sensor is detected in the control booth.

Photograph No.	19	**Negative or Image No.**	P1010279
Taken by	A McCallum	**Company**	C, J & Sons Amusements Pty Ltd
Taken on	19/09/2014	**Address**	Airmaxx 360 location - Royal Adelaide Showgrounds
Infonet File	2014-6302	**Description**	View of carriage on arm 8. Right hand seat restraint located at the position that the sensor is detected in the control booth.

Photograph No.	20	**Negative or Image No.**	P1010280
Taken by	A McCallum	**Company**	C, J & Sons Amusements Pty Ltd
Taken on	19/09/2014	**Address**	Airmaxx 360 location - Royal Adelaide Showgrounds
Infonet File	2014-6302	**Description**	Measurement of clearance (150mm) from restraint to right hand arm frame of right hand seat of carriage 8 when sensor is detected.

13.38. These photos show the considerable space and gap that was available for her seat to be considered as lowered by the PLC.

13.39. The comparison between her seat and the other one in these photos is obvious. Photo 18 was basically taken on the same angle as Adelene's mother's photo taken just after Adelene's ride began.[312] The position of the harness in these photos was not safe for an active ride.

[312] Exhibit C1a, see paragraphs 17.12-17.14 of this Finding

13.40. Split pins

This was the other means of fastening the connecting pin, see Figure 39 below. They were used on 19 seats. Split pins are only to be used once. That is, if they are withdrawn from the connection point, they must be replaced. Some of the split pins were in poor condition and had been reused.

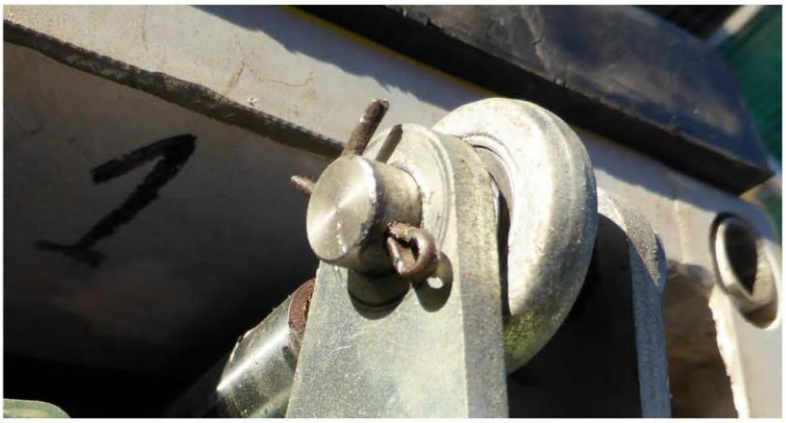


Figure 39 Airmaxx 360 Damaged split pin (P1010479.JPG)

13.41. Secondary lock system[313]

This is best explained by way of focusing on a photo within Mr Kroon's report and his explanation. I refer again to features 5 and 6 of Figure 9 set out in paragraph 13.13 of this Finding and Figure 20 set out below which shows the SLS in an engaged position.

[313] SLS

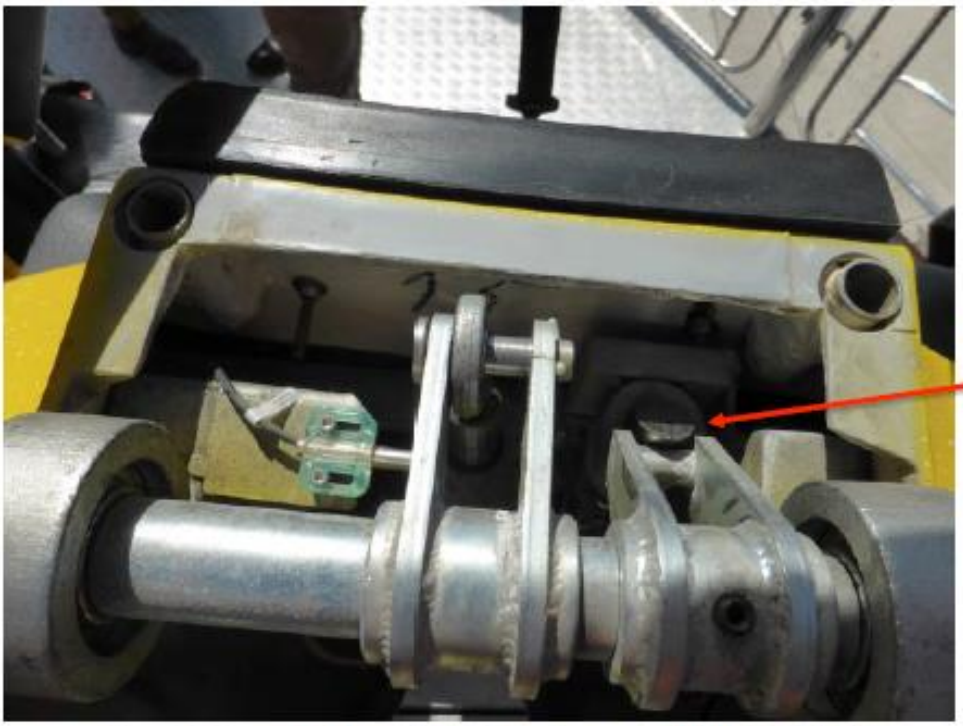


Figure 20 Airmaxx 360 Secondary lock system engaged (P1010282.JPG)

The following features are highlighted in Figure 20:

1. Stop pin

In Figure 20 the secondary lock system arm is engaged with the stop pin preventing the restraint harness from rising further. This is highlighted by arrow 1.

3.4.3 Secondary lock cylinder

The secondary lock cylinder is a single acting pneumatic cylinder (SMC CD85KN20-25T-B). It requires pneumatic energy to retract (unlocked state). A spring inside the cylinder then extends the cylinder when pneumatic energy is removed.

The cylinder rod in the secondary lock cylinder has a hexagonal profile to prevent rotation of the rod.

The secondary lock cylinder is secured to a mounting plate via the threaded end of the cylinder body with a nut. The mounting plate is bolted to the support plate, which in turn is connected to the seat frame by welded connection.

There is no mechanism in this mounting arrangement to prevent rotation of the secondary lock cylinder body.

13.42. Mr Kroon explained that the '*secondary lock is automatically operated in combination with the primary lock*'.[314] When the SLS was engaged a click sound was heard. This sound was commonly described in the patrons' and attendants' evidence.

13.43. The SLS was a system '*…driven by air pressure, and it's a spring return*'.[315] The SLS provided a '*fixed position*' in that it was '*…just a pin that moves up into the path of the*

[314] Transcript, page 966
[315] Transcript, page 964

arm. So essentially, the restraint can move to the point where the arm on the restraint actually strikes the pin and that's where it will be stopped'.[316]

13.44. When describing the combination of PLS with SLS, Mr Kroon stated that the PLS started to engage as the harness came down. At that point the SLS engaged and there was a further feature namely, the PLS could engage even further. He described that there is '*a reasonable amount of travel after the secondary lock engages before the restraint will be moved into a suitable position for restraining*'.[317] He agreed that this suggested that the position at which the '*secondary*' lock was engaged left '*quite a gap in the restraint*'. I refer again to Figure 20 above which showed that the pin indicated at feature 1 had engaged with the SLS arm and therefore had performed its function. The pin was retracted when the SLS was not engaged.

13.45. The SLS in the Airmaxx had a major deficiency. A Type 5 restraint demands that SLS must have the same '*trapped fluid*' operation as the PLS. If not, the SLS must be able to produce the same force as a PLS with a trapped fluid system. The SLS on the Airmaxx did not meet that standard according SafeWork's interpretation of the AS.[318]

13.46. <u>Latching crotch belt</u>

The latching crotch belt can be seen in Figure 22 below which Mr Kroon described as '*similar to a car seat belt with one end fixed to the restraint harness and the other to the front of the seat*'.[319]

[316] Transcript, page 965 - Feature 1 of figure 20 above
[317] Transcript, page 967
[318] Exhibit C83, page 55, See also Mr Campbell (Transcript 2434-2435) and Mr Gibney (Transcript 1484)
[319] Exhibit C83, pages 38 and 39, Figure 22

The term "latching" in AS3533.1:2009 [Ref 10] is used where the patron can release the restraint. Whereas "locking" is used where the restraint can only be unlocked by the operator.

Figure 22 Airmaxx 360 Latching crotch belt restraint (P1010251.JPG)

3.6 Unlock control for restraint locking systems

The primary and secondary restraint locking systems are unlocked by the use of pneumatic energy. When pneumatic energy is removed the restraint locking system reverts to the locked state.

The pneumatic circuit for the restraint system is included in Appendix D (Página 15).

The control of pneumatic energy is via electrically operated pneumatic valves. The electrically operated valves used are SMC SY3A00-5U1 manifold valves located in a cabinet in the centre turret. Each SMC SY3A00-5U1 valve slice includes two valves. The valve manifold is equipped with a Devicenet head to allow the PLC to control the valves over the Devicenet network. The Devicenet head and Devicenet network are discussed in more detail in section 4.

13.47. Other faults of the Airmaxx discovered by Mr Kroon

In Mr Kroon's report headed '*Annual in-service Inspection Vs Defects*'[320], he catalogued the following faults which he believed should be '*…performed as part of the annual in-service inspection of an amusement ride*'.[321] They were as follows:

a) Seat 2 - Secondary lock stop pin jammed in the unlocked position.[322]

b) Seat 2 - Secondary lock stop pin is incorrectly orientated which created the potential consequence of the pin not engaging with the SLS arm to provide restraint thus making the SLS for the seat ineffective.

c) Seat 2 - Defective sensors in Seats 1 and 5 that indicated the restraints for those seats were closed to the PLC in the control box irrespective of whether they were closed or not.[323]

d) Seat 13 - damaged tip of SLS stop pin which would be a '*likely cause for the stop pins jamming in the unlocked position*'.[324]

e) Insecure mounting of SL cylinders to the seat in Arm 2 and Arm 3.[325]

f) Escutcheon plate on the electrical board which exposed live electrical connections of the electrical system.[326]

g) Electrical connections in the wiring of the harness were located on top of some Arms and were sitting in water. This has a potential cause for short circuiting that system and giving a false indication that the relevant harnesses were closed.[327] One of the arms with this problem was Arm 8, the one for Adelene's seat.

13.48. Mr Kroon believed that the identified faults should have been detected in an annual inspection if the internal restraint system was examined. If tests were conducted the inspection would take at least seven hours, more likely one working day.

13.49. This certainly was not the manner in which Mr Munro conducted his inspection of the Airmaxx at The Show in September 2014. There was debate whether Mr Munro was bound under the AS to perform such a detailed inspection as outlined by Mr Kroon.

---

[320] Exhibit C83a
[321] Exhibit C83a, page 10
[322] Exhibit C83a, page 14
[323] Exhibit C83a, pages 16 and 35
[324] Exhibit C83a, pages 17 and 36
[325] Exhibit C83a, pages 22 and 41
[326] Exhibit C83a, pages 24 and 43
[327] Exhibit C83a, pages 24 and 44

This depended upon how someone decided the interpretation of the AS was the correct one.

13.50. General summary

I found Mr Kroon to be a very impressive and reliable witness who had a genuine concern about the circumstances in which the Airmaxx was allowed to be presented to the public in 2013 and 2014.

13.51. Mr Kroon's evidence was complex concerning the examination and analysis of the Airmaxx and its components. I believe it was essential that this Finding detailed the faults discovered by him at a design, operational and maintenance level. As will become obvious, his evidence was relevant to many of the issues in this Inquest. Importantly his evidence was essentially unchallenged.

13.52. Mr Paul Ploenges

Mr Ploenges is an experienced WHS consultant. He was 50 at the time of giving evidence. He was employed at Business SA as a senior WHS consultant from 2013. Prior to that he worked at SafeWork in the audit team and was involved in inspections and audits, including audits of amusement devices. I accept his experience and work history, including obtaining formal qualifications in occupational health and safety which qualified him to speak about WHS issues with authority.

13.53. In 2013 he approached the Society to work as their event safety co-ordinator[328] for The Show through Business SA.[329]

13.54. As ESC for The Show, he was generally available to the Society for all WHS issues both at The Showground and elsewhere. His history with SafeWork of auditing amusement devices for The Show allowed him to provide assistance to Ms Judith Noble, project manager for the Society.

13.55. On 3 September 2014, Mr Ploenges was present at the Society's meeting with SafeWork and the intended presence of representatives from the amusement devices owners and operators. No such representatives attended. At that meeting it was decided

[328] ESC
[329] Exhibit C79, statement of Mr Ploenges to SafeWork - 7 November 2014

that no rides were to operate until SafeWork had confirmed that all audits of amusement devices and rides were complete.

13.56. When The Show was open to the public from 5 September 2014, Mr Ploenges worked at The Showgrounds every day until 15 September 2014 save for 9 and 10 September 2014. He was on The Showgrounds when he was alerted to Adelene's emergency. Up to that point he had not had any involvement with the Airmaxx and had not been informed of any safety or related issues concerning it.

13.57. He described logbooks that he had seen previously as a SafeWork inspector which could be placed into three categories namely '*the good, the bad, the ugly*'. He gave a list of the number of matters he would '*expect to see*' in a well maintained logbook.[330] They included a DRN, manufacturer's specifications, documents to confirm operators and attendants are properly trained and any testing required by the manufacturer or engineer during an inspection. Mr Ploenges was taken to the Airmaxx logbook[331] and identified the following deficiencies in documentation namely:

- Missing a date of verification and the issuing State for DR on the Airmaxx Identification document.[332]
- '*120cm's*' [333] on top of whiteout on a document concerning the minimum height. He plainly said '*I wouldn't accept that*'. When asked why he stated:

  > 'Because I'd want to see some signatures around it and then - no I would go back and get the verification maybe from the manufacturer's recommendations. I don't like whiteout. As an auditor you see whiteout, what's it hiding. It's a bit like a tape over an electrical cord, what's it hiding. Is there a safety issue there, is there something. So as an auditor it's just a trigger for maybe looking a bit deeper.' [334]

- He believed that Document Three of Mr Rode-Bramanis containing the word '*tba*' were '*not acceptable*' relating to restraints.[335]
- The Show checklist.[336] He was unaware that the Airmaxx owners did not return this document. Had he been aware he would have discussed the implications of this failure with Judith Noble.

[330] Transcript, pages 702, 704 and 768
[331] Exhibit C61
[332] Exhibit C61d, page 10
[333] Exhibit C61d, page 169
[334] Transcript, page 782
[335] Exhibit C61d, page 177, Document Three
[336] Exhibit C59, document 11

13.58. Given the number of people that came forward after the death of Adelene with concerns about their rides on the Airmaxx, it was a pity that no one reported any such issues to Mr Ploenges prior to Adelene's ride.

13.59. Carnival Incident Protocol Card

This was a small, laminated check card for the operators of rides/devices of contacts for The Show, should an incident occur. The incidents were put into three categories.

CARNIVAL INCIDENT PROTOCOL
Royal Adelaide Show 2014

In the event of an incident involving a ride please follow the below procedure: -

1. **Comfort of injured party**
2. **Isolate area until Inspector arrives**
3. **Notify Ride Owner**
4. **Notify :-**
   RA&HS Carnival Liaison Officer, Cameron/ Adam on (Redacted) or Society Switch 8210 5211
5. **RA&HS Safety - Paul (Redacted)**

Important Numbers

St Johns		**8210 5239**
Police		**8221 6529**
SafeWork SA	**Type 1 & 2**	**1800 777 209**
	Type 3 Julia	**(Redacted)**

Type of Incident

1. People have been injured
2. Near miss – where potential for people to have been injured
3. Occurrence which may cause public concern:
   a) Ride stopping mid cycle
   b) Ride stopped for maintenance

13.60. Type 3 incidents included rides stopping mid-cycle or for maintenance. It was classified as an '*occurrence*' which may cause public concern. It named two examples that were commonplace for the Airmaxx at The Show, namely '*1) Ride stopped mid-cycle and 2) Ride stopped for maintenance*'. This was supported by civilian statements gathered by SAPOL after Adelene's death.[337] This situation should have attracted the Society's attention given the volumes of stoppages mentioned in evidence.

13.61. Mr Ploenges was shown the SG video that clearly showed that ride plagued by stoppages and maintenance.

[337] Exhibit C77

13.62. He accepted that the video up to the 58 second mark showed Mr Brandon Miller leaving the control console and then returning to the control booth. He also noted at about the three minute mark, Mr Watkins emerged from the centre of the Airmaxx.

13.63. As consultant for The Show in 2014 he had no involvement in setting the height restrictions. This begged the question whether the Society should set the height restrictions based on knowledge gained from the manufacturer and take that control away from the operators.

13.64. In 2015 Mr Ploenges noticed a dramatic change in the attendance and attitude of SafeWork SA which he described as '*very strong*' as well as adopting a '*rigorous approach*'. During The Show's public hours there were four inspectors on site at all times. The method used for the height issue was that they dealt with it on some occasions by pulling patrons from the lines to measure height. He thought that was an unfriendly method.

13.65. <u>The Show report of Mr Ploenges</u>

This report catalogued incidents of significance throughout the 2014 show. One of those was WHS incident 48 which occurred on 10 September 2014 when it was noted that there was a lack of communication between SAPOL, SES, St Johns Ambulance and security at The Show. It was resolved that this issue would be discussed at a review after The Show.

13.66. This issue became important when Adelene needed these agencies on 12 September 2014. It quickly came into focus when South Australian Ambulance Service[338] tried to gain entrance into The Showground as quickly as possible to assist Adelene.

13.67. Ultimately this did not become a main focal point in the attempts to save Adelene's life at The Show. It is a situation that needs to be resolved because in different circumstances it could be the difference between life and death.

13.68. I will detail the delay of SAAS reaching Adelene to highlight this issue in due course.[339]

13.69. <u>Annual Inspection of the Airmaxx 1 September 2014 by Mr Hamish Munro</u>

Mr Hamish Munro was a qualified engineer having graduated from Auckland University in 1984 with a Bachelor of Mechanical Engineering.

[338] SAAS
[339] See paragraph 17.25 – 17.31 of this Finding

13.70. In 1988 Mr Munro started his own consulting business which was '…*primarily engaged in road transport, craneage and amusement ride inspections and designs, in New Zealand*'.[340]

13.71. He came to Australia in 2010 for the purpose of finalising his purchase of Mr Bradley's engineering inspection business. This involved observing Mr Bradley working and dealing with his clients for six months at showgrounds and gradually dealing with the clients himself under the observation of Mr Bradley.

13.72. The purchase of the business was finalised in 2012.

13.73. Mr Munro gave evidence of his involvement in inspecting the Airmaxx on four occasions, the first being 20 September 2013 and the last being an annual inspection on 1 September 2014 at The Show. By that time Mr Munro was commonly used in the amusement industry for mandatory inspections, including annual inspections.

13.74. He gave evidence of the circumstances of performing the annual inspection for the Airmaxx on 1 September 2014.[341]

13.75. He stated that Ms Sullivan rang him on the basis that he need not do a set up inspection which surprised him based on what he knew of The Show's policy.[342] Ms Sullivan then rang again a few days later requesting both a set up and an annual inspection. Mr Munro had observed the Airmaxx being assembled as he was on The Showgrounds performing inspections for other clients. He saw this numerous times as the Airmaxx was in a central location. I was not convinced of the value of these observations.

13.76. He explained the annual inspection in general terms as follows:

> 'Between 1 September and 5 September, I competed (sic) my inspection by attending site, reviewing the logbook and carrying out the deck related checks (primarily harness engagement checks). At this time there was what appeared to be an electrical inspection sign off in the logbook (and a related electrical inspection certificate in the logbook). This was I believe subsequently (after the incident) changed to a tag and test description. I do not know what subsequently happened to the inspection certificate or why the description in the logbook referred to an annual inspection if that is not what was performed.' [343]

13.77. As part of the annual inspection, he reviewed the logbook to identify '…*whether maintenance has been carried out as recommended by the manufacturer, reviewing*

[340] Exhibit C93, paragraph 9 of Mr Munro's Affidavit dated 27 April 2021
[341] Exhibit C93 and in oral evidence
[342] Exhibit C93, paragraph 39
[343] Exhibit C93

NDT reports and electrical reports'.[344] He also outlined the limitations of a logbook review as he could '…*only take into account matters that are either recorded in the logbook or that I am informed about by the operators. There is no independent source of that information*'.[345]

13.78. Further, he checked the engagement of harnesses for obvious visual defects and to check they engaged and remained locked. In oral evidence he outlined that he used his forearm to test whether that could be subject of secure harness contact at the back of the seat.

13.79. He was criticised for not removing covers on the seats. His response was that:

> '…the standard that I base my inspections on specifically doesn't require me to remove covers, it only requires me to look – to ask for covers to be taken off if I have an indication that this is something wrong. So with a cover on I wouldn't have an indication that there was something wrong unless the operator is saying to me "Hey, this ride won't work".' [346]

13.80. He observed the Airmaxx on the opening day and found it was '…*operating adequately*'.[347]

13.81. Mr Munro's relationship with SafeWork was, by his description, a '*strained working relationship*'.[348] He did not have any independent memory of what interaction he had with SafeWork inspectors at The Show in 2014.

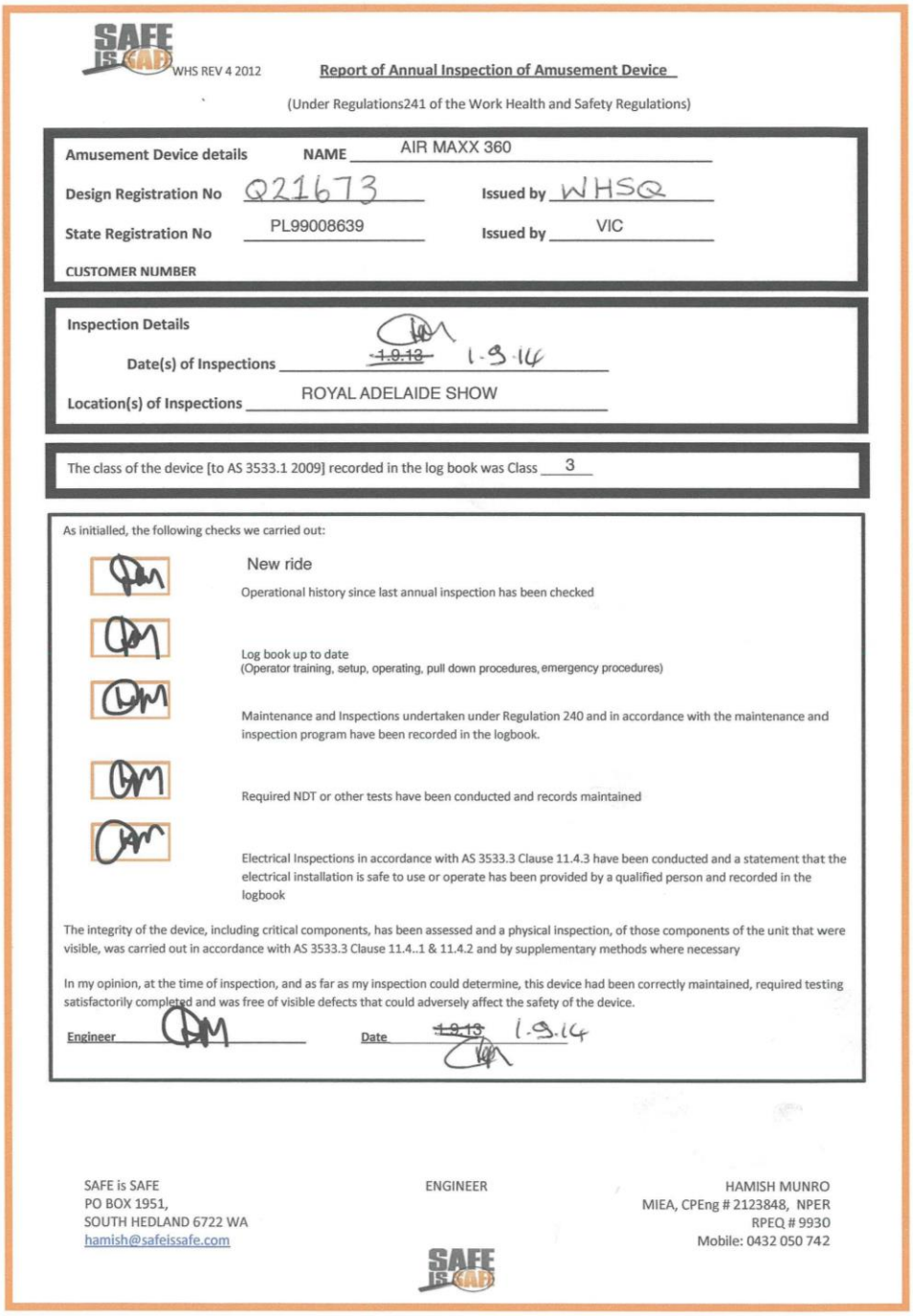
13.82. Mr Munro was subject of criticism at the Inquest, namely that he took the least onerous interpretation of the AS to fulfil his duties for an annual inspection. He was questioned on numerous aspects of the AS and provided a pattern of answers that maintained the issues raised were not part of what he believed were involved in an annual inspection.[349] These included air pressure vessels[350], hydraulics[351], cracked arm[352] and internal examination of the seats.[353]

---

[344] Exhibit C93, paragraph 43a
[345] Exhibit C39, paragraph 43a
[346] Transcript, page 1591
[347] Exhibit C93, paragraph 45
[348] Exhibit C93a, paragraph 46
[349] Transcript, pages 1608-1713
[350] Transcript, pages 1670-1671
[351] Transcript, page 1671
[352] Transcript, pages 1675-1676
[353] Transcript, pages 1654-1659

13.83. With respect to the restraints, he was satisfied that by pulling harnesses to a closed position with the result they '*stayed down*' meant '*it worked*'. Mr Munro was unaware of any comment or reputation that he was an '*easy tester*'. [354]

13.84. Mr Munro's annual inspection certificate was within the logbook and dated 1 September 2014.[355] This had been corrected to that date from the print entry '*1.9.13*'. This was after he was told by SafeWork of this error.[356] The cost of the inspection was $715.



SAFE IS SAFE WHS REV 4 2012

Report of Annual Inspection of Amusement Device

(Under Regulations241 of the Work Health and Safety Regulations)

Amusement Device details NAME AIR MAXX 360

Design Registration No Q21673 Issued by WHSQ

State Registration No PL99008639 Issued by VIC

CUSTOMER NUMBER

Inspection Details

Date(s) of Inspections ~~1.9.13~~ 1.9.14

Location(s) of Inspections ROYAL ADELAIDE SHOW

The class of the device [to AS 3533.1 2009] recorded in the log book was Class 3

As initialled, the following checks we carried out:

New ride

Operational history since last annual inspection has been checked

Log book up to date
(Operator training, setup, operating, pull down procedures, emergency procedures)

Maintenance and Inspections undertaken under Regulation 240 and in accordance with the maintenance and inspection program have been recorded in the logbook.

Required NDT or other tests have been conducted and records maintained

Electrical Inspections in accordance with AS 3533.3 Clause 11.4.3 have been conducted and a statement that the electrical installation is safe to use or operate has been provided by a qualified person and recorded in the logbook

The integrity of the device, including critical components, has been assessed and a physical inspection, of those components of the unit that were visible, was carried out in accordance with AS 3533.3 Clause 11.4..1 & 11.4.2 and by supplementary methods where necessary

In my opinion, at the time of inspection, and as far as my inspection could determine, this device had been correctly maintained, required testing satisfactorily completed and was free of visible defects that could adversely affect the safety of the device.

Engineer Date ~~1.9.13~~ 1.9.14

SAFE is SAFE
PO BOX 1951,
SOUTH HEDLAND 6722 WA
hamish@safeissafe.com

ENGINEER

HAMISH MUNRO
MIEA, CPEng # 2123848, NPER
RPEQ # 9930
Mobile: 0432 050 742

SAFE IS SAFE

[354] Transcript, page 1713
[355] Exhibit C61d, page 5
[356] Transcript, pages 1880-1881

13.85. The DRN was recorded in handwriting by Ms Sullivan.

13.86. Mr Munro has been criticised by taking the most favourable interpretation of his duties under the AS. There was reference within the certificate to clause 11.4 of AS3533.3 which included a requirement that the annual inspection '…*shall include a view of the ride or device fully established on a site and in operational state, although not necessarily loaded*'.[357]

13.87. In Mr Munro's affidavit[358], he noted that:

> 'The nature and scope of the annual inspection required by AS3533 has long been a topic of discussion between the qualified Engineers who conduct those Inspections and Regulators from a variety of states and territories around the country.' [359]

13.88. He gave evidence of his interpretation of AS3533.3[360] and distinguished an annual inspection from a '*Major Inspection*' as set out in AS3533.3. [361]

13.89. Mr Munro's evidence was that those two types of inspections were '*significantly different*' as a major inspection involved the disassembly of critical components of the amusement device and included a detailed visual inspection.[362] He argued that the terms of the AS3533.3 meant that despite stern criticism from SafeWork in this Inquest, his actions were consistent and satisfied a reasonable interpretation of that AS for an annual inspection.

13.90. He believed the criticisms raised in this Inquest of his testing of the harnesses by only opening and closing them were not justified by reference to the AS.

13.91. Similarly, his failure to see cracks in the Airmaxx as discovered by SafeWork on 26 September 2014[363] were not a breach of the AS as '…*these are things that I would expect an NDT report to tell me*'.[364]

13.92. The NDT report supervised by Mr Rode-Bramanis was in the logbook.[365] It did not raise any issue of cracking but did report on corrosion at sites.[366] Mr Munro gave

[357] Exhibit C34 MD34, page 17 - Clause 11.4.1(B)
[358] Exhibit C93a, dated 27 April 2021
[359] Exhibit C93a, paragraph 22
[360] Exhibit C93a, paragraphs 25-31
[361] Exhibit C34 MD34, pages 19-21
[362] Exhibit C93a, paragraph 31
[363] Exhibit C86h
[364] Transcript, page 1587
[365] Exhibit C61d, pages 49-60
[366] Exhibit C61d, pages 49 and 59

evidence that he did not see any notice from WorkSafe Victoria in the logbook regarding the RM Show in 2013,[367] nor did he see any instruction from Safeco concerning the height issue being 140cm. The first time he saw Safeco's instruction was while giving evidence.[368] He stated that even if he disagreed with Safeco's instruction, he would have deferred to them regarding the height issue as they were the manufacturer.[369] I note that his interpretation of the Safeco instruction when he first saw it, coincided with my interpretation, namely that a patron under 140cm must not ride the Airmaxx unaccompanied.

13.93. Mr Munro was unaware of any issue with DR in 2014. He relied on the assumption the DRN was valid and noted that there was no system where he could independently verify the DR status of any device he was examining. That evidence identified a glaring problem that needs to be fixed instantly.

13.94. The assumption about the DRN must have been made even though no DR certificate was in the logbook. This situation was not unique to him for the Airmaxx as every other regulator and inspector had made that same assumption despite the absence of a DR certificate.

13.95. Summary regarding Mr Munro

I have carefully thought about Mr Munro's evidence and in particular the criticisms of him by SafeWork and the owners. I have also noted SafeWork's evidence of an inspection completed by Mr Munro in 2013 in Queensland of an amusement structure called the Fun Factory. The photos produced by SafeWork clearly did not match the '*satisfactory*' approval rating given to it by Mr Munro.[370] Mr Munro was not asked to comment on this issue as it arose in evidence after he was released. His claim of lack of procedural fairness on that point was well made. He was not requested to be recalled.

13.96. The report on the Fun Factory was sent to SafeWork in 2013. It was also another example of haphazard information sharing between regulators without a national database. It was not acted upon by SafeWork until after Adelene's death.

13.97. I am also concerned with the fact that Mr Munro was satisfied with the records of the inspection of the electrical system which he said he did. The only record with reference

[367] Transcript, page 1644
[368] Transcript, pages 1695-1696
[369] Transcript, pages 1696-1697
[370] Exhibit C97l

to any electrical situation for the Airmaxx was the certificate of compliance conducted by Rawson's Electrical on 3 September 2014.[371] Rawson's were providing an '*electrical certificate of compliance for the installation as it was set up at The Show as required for SafeWork SA. Rawson's were not conducting an annual inspection to ensure the safety of the ride and rider restraint integrity or the safety systems or controls*'.[372]

13.98. In other words, they were not electrical engineers but simply an electrical company doing what is known as a '*tag and test*' procedure.

13.99. I find that the evidence leads me to conclude that there was not a thorough examination of the Airmaxx as part of the annual inspection completed by Mr Munro at The Show. Mr Munro was adamant that the logbook as presented to him did not contain crucial documents such as the WorkSafe Victoria reports and Safeco's instruction on the height issue.

13.100. Ultimately I agree with the submission that, although Mr Munro's inspection may well have been considered inadequate by many, he had performed many inspections since taking over from Mr Bradley and his interpretation of the AS was never challenged. If he has taken advantage of the generalities and lack of clarity within the AS then that was a fault of the ability of the AS to allow for his interpretation.

13.101. I also agree that I cannot completely discount the proposition that what he saw of the Airmaxx might be different from before its use at The Show before Adelene died. In other words, it is arguable he cannot be responsible for the maintenance issues that arose during The Show, an example of which can be seen in the SG video of 6 September 2014.

13.102. <u>Mr Kym Miller</u>

Mr Kym Miller was a senior Work Health and Safety inspector for SafeWork.[373] He had been appointed to this position in January 2004 and retired in 2019. A major part of his core duties from 2008 were to perform audits on '*amusement rides at the Royal Adelaide Show…to verify compliance with…regulations*'.[374] The core document for an audit of an amusement ride or device was the National Audit Tool.[375] The NAT

[371] Exhibit C61d, pages 7-8
[372] Exhibit C29a, Affidavit of David John Pearce 19 November 2014
[373] Safety Inspector
[374] Exhibit C84a dated 10 October 2014, page 3
[375] NAT

must be completed during an onsite inspection. There were two classes of audit within NAT, a full audit or a site audit.

13.103. A full audit is conducted annually and requires the NAT to be fully completed. A site audit only requires two of the three sections of the NAT to be completed. These audits are conducted in the prelude to the public opening of The Show, previously described as the '*bump-in period*', which in 2014 was from 1 September until 4 September.

13.104. Mr Kym Miller was allocated by SafeWork to conduct a full audit on the Airmaxx. The amusement rides were randomly allocated to safety inspectors. On 1 September 2014 Mr Kym Miller had his first look at the Airmaxx. He was accompanied by engineer, Mr David Rynes, from SafeWork who was curious to see the Airmaxx as it was new to The Show. The owners were in attendance and produced the logbook as necessary for the NAT audit.[376]

13.105. Mr Rynes was told the ride could not operate despite being assembled because the owners were '*waiting for a part*'.[377] As previously mentioned, at that time the seat covers for the Airmaxx were on all the seats. Mr Rynes was very unhappy with this situation as he expected to see the Airmaxx in operation. He left and did not return to inspect the Airmaxx until after Adelene's death.

13.106. Mr Kym Miller described the logbook as being '*light on documentation*'.[378] He discontinued the audit once he discovered that an annual inspection had not been performed.[379] That was a good decision. He did not mention seeing the WorkSafe Victoria Entry Report from the RM Show made on 24 September 2013.[380]

13.107. Mr Kym Miller gave evidence that on 2 September 2014 he received an anonymous phone call to his office phone in the afternoon.

13.108. He gave evidence of what can only be described as a bizarre series of events caused by that call. These events were not subject of any statement to investigators by him until 2018 when he was due to be a witness at Mr Munro's trial concerning charges laid by SafeWork regarding Adelene's death. Mr Kym Miller formed the view that

[376] Exhibit C61
[377] Transcript, pages 1844-1846
[378] Transcript, page 1844
[379] Transcript, page 1844
[380] Transcript, pages 1802-1803

the following events were not connected with Adelene's death.[381] A statement was prepared for that prosecution. He described this anonymous phone call as follows:

> 'In the late afternoon of 2 September 2014 between approximately 4:30-4:45pm I received an anonymous phone call (male) on my landline. On answering the phone I introduced myself. The person made mention of the Airmaxx and what was being done about it. I said it was being audited. I asked him if there was a problem and he told me I should be at The Show after 6, I assumed he meant 6pm that night. I asked why and said I'm not going over when it's dark. He replied so you're not coming. I said no, If there is a problem tell me. The caller hung up. I thought to myself whether there was something in this, if there was a safety issue or is this a set up and someone trying to cause trouble.' [382]

13.109. At about 8:30am on 3 September 2014, Mr Kym Miller went to the Airmaxx. He said he saw a round steel plate lying on the deck next to a screwdriver with the name Pickett labelled on the handle. At the Inquest he said that the plate was '*saucer sized*' as shown below.[383] He was referred to photos of the back of seats[384] from SafeWork taken on 10 October 2014. He did not video or photograph the scene as he described it.

Photograph No.	2	**Negative or Image No.**	P1010520
Taken by	A McCallum	**Company**	C, J & Sons Amusements Pty Ltd
Taken on	10/10/2014	**Address**	Airmaxx 360 at Royal Adelaide Showgrounds
Infonet File	2014-6302	**Description**	Arm 3 carriage - cover removed on left hand seat.

[381] Transcript, page 1831
[382] Exhibit C84b, statement of Kym Miller dated 24 April 2018
[383] Transcript, page 1856
[384] Exhibit C86k, photos 2 and 167 – photos of Allison McCallum

13.110. When pressed in evidence about whether he was referring to the back plate shown in the photo above, Mr Kym Miller was uncertain, but believed it was one of the three circular discs as seen within the plate.[385] In his statement in 2018 he described the item as a '*round steel plate*'.[386]

13.111. As he saw the screwdriver and plate lying next to each other, he became aware that Mr Watkins and Mr Brandon Miller were standing behind him. He asked them whether they had been doing any work on the seats and was told '*no*'. When he pointed out the plate and the screwdriver to the men, their reaction was one of '*confusion*'.[387] Mr Kym Miller then told them to get in contact with Mr Munro and added that if someone had not been working on the ride then '*someone else might be causing problems for them*'.[388]

13.112. Mr Kym Miller did not tell anybody about these events until shortly before Mr Munro's trial in 2018. Ultimately, Mr Munro's trial did not proceed due to the charges being withdrawn.

13.113. As stated, he believed this event did not have anything to do with the cause or circumstances of Adelene's death and therefore kept the matter to himself. He did not make any handwritten notes at any stage, nor describe it in his initial statement to investigators about Adelene's death.

13.114. It was suggested to him that this phone call and his subsequent follow-up did not occur. He denied that.

13.115. Evidence confirmed that the screwdriver would be unable to remove the steel plate containing the three discs, nor an individual disc itself. The potential sabotage of the Airmaxx by removing the back plate could not have been achieved by the screwdriver.

13.116. Mr Kym Miller failed to ask the anonymous caller for his name. He only identified the caller as male. He was unable to see the number on his office phone screen

[385] Transcript, pages 1856-1859
[386] Exhibit C84b
[387] Exhibit C84b, line 56
[388] Exhibit C84b, lines 59-60

because of the position of the sun at that time. No phone records from that phone line were produced concerning this phone call and there was never any follow-up from the caller.

13.117. Mr Kym Miller stated that his belief was that the '*audit and the anonymous phone call were two separate issues as no evidence to link the two became apparent. I did not take written notes of the events that occurred as I was not able to substantiate potential issues initiated from the anonymous phone call*'.[389] He had formed the view that Mr Munro had checked this situation during the annual inspection and found no problem.[390]

13.118. It was put to Mr Kym Miller that he had fabricated this whole event concerning the anonymous phone call and the follow-up. There is no support for his evidence on this topic at all by any other witness. On the other hand, he seemed to have had nothing to gain by fabricating this event. Even if it did occur as Mr Kym Miller claimed, I find the events he described would have had no connection to the cause or circumstances of Adelene's death.

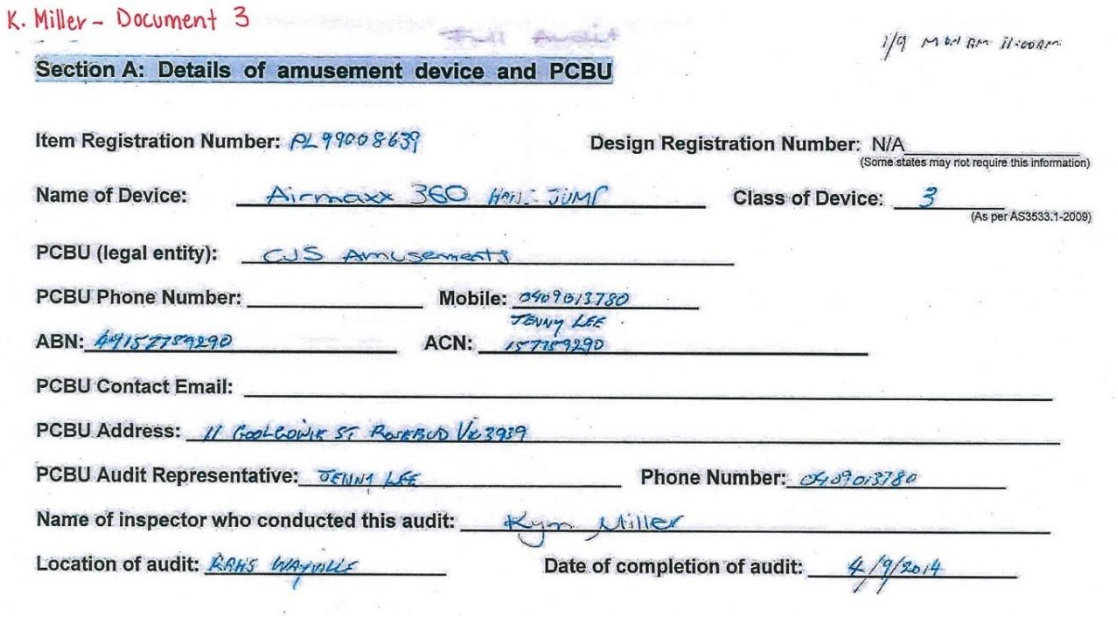
13.119. Mr Miller's delayed provision of this information, and the lack of recollection of important details surrounding this event, lead me to the conclusion that I cannot be satisfied on the basis of probability that this event occurred. However, I am satisfied that even if that event as described by Mr Miller did occur, it would have had no connection to the cause or circumstances of Adelene's death. I have made this decision on this aspect of Mr Kym Miller's evidence having regard to the consequences of such a finding.[391]

[389] Exhibit C84b
[390] Exhibit C84b
[391] Briginshaw v Briginshaw (1938)60 CLR 336 and in particular Dixen J at 361-362

13.120. NAT audit of Airmaxx, 1-3 September 2014 conducted by Mr Kym Miller

The audit was governed by the NAT. This document was part of an almost meaningless ritual of checking essential details of an amusement device that relied on the owner's diligence and honesty in maintaining the logbook properly for the device. I set out below the first two pages of the NAT that demonstrate the accuracy of my comments.

13.121. NAT title page



K. Miller - Document 3

Section A: Details of amusement device and PCBU

Item Registration Number: PL9900 8639 Design Registration Number: N/A
(Some states may not require this information)

Name of Device: Airmaxx 360 Mini Jump Class of Device: 3
(As per AS3533.1-2009)

PCBU (legal entity): CJS Amusements

PCBU Phone Number: _____ Mobile: 0409 013 780
Jenny Lee

ABN: 44 157 779 290 ACN: 157 779 290

PCBU Contact Email: _____

PCBU Address: 11 Goolgowi St Rosebud Vic 3939

PCBU Audit Representative: Jenny Lee Phone Number: 0409 013 780

Name of inspector who conducted this audit: Kym Miller

Location of audit: RAHS Wayville Date of completion of audit: 4/9/2014

13.122. Design verification details on NAT

Mr Kym Miller stated that the title page that had the space for the DRN had been prefilled as '*N/A*'. He therefore assumed that it was not necessary for the Airmaxx to have been given a DRN. That assumption was not correct. A DRN was needed for amusement rides and devices manufactured before 1996.[392]

13.123. Out of all the rides and devices he had to inspect that year at The Show, this was the only NAT that had the pre-printed '*N/A*'. '*N/A*' should only have ben pre-filled for amusement devices prior to 1996 where a DR was not required.[393] This '*N/A*' was in error and the DRN should have been obtained. This was another circumstance that side tracked any examination and discovery of the deception about obtaining a legitimate DRN.

[392] Transcript 1399

[393] Transcript, pages 1413-1414 - Ms De Musso, SafeWork Compliance and Public Events officer 2014

13.124. Section B of NAT – Logbook and Documents

	Section B. Logbook & Documents			Guidance Notes	Inspector's Comments
B1 B2	Design Registration: Does the device require design registration? Record design registration number in section A	Y	(N)	Devices requiring design registration are listed in the following location: • WHS Reg 2012 R243 - Schedule 5 Part 1	PRESSE VERIFIED ORIGINAL DOCUMENT SIGHTED - [illegible]
B3 B4	Plant Registration: Does the device require plant item registration? If YES record the plant registration number in section A and check it is current.	(Y)	N	Plant registration is only required in one jurisdiction. Devices requiring plant registration are listed in the following location: • WHS Reg 2012 R246 - Schedule 5 Part 2	PLP9003639
B5	Does the owner of the device have current public liability insurance and workers compensation policy?	(Y)	N		[illegible] COVERCLEE Pty Ltd [illegible]
B6	Notices in force: Does the device have any notices issued that are in force?	Y	(N)	Check log book, summary sheet and/or National register. (If the answer is yes, take appropriate action and note details of outstanding notices).	
B7 B8 B9 B10 B11 (C1)	Records: Are records for the device available for inspection? (This includes logbook, maintenance and operating manuals). Are the logbook, operating and maintenance manuals provided to the persons involved with the commissioning, installation, use, storage and testing, and the dismantling of the amusement device?	(Y)	N (I)	Check for records for tests, inspections, maintenance, commissioning, decommissioning and alterations. A form of recording system, e.g. in hard copy (logbook) or on computer, that includes up to date records of inspections, set ups, maintenance etc. Manuals and logbook must be available for persons erecting the device. Confirm logbook and manuals are available during the site audit. • WHS Reg 2012 R237(2), (4) & (5) • WHS Reg 2012 R242	
B12 (C2)	Is there a record of instruction and training for operators of the device?	(Y)	N (I)	• WHS Reg 2012 R238(1)	
B13 (C3) (C6)	Is there a record of daily checks and operation of the device without passengers? Does the checklist reflect the requirements detailed in the manuals?	(Y)	N (I)	Check there is records for previous set-ups and a procedure in place to be followed for the daily operation without passengers. • WHS Reg 2012 R238(2)(c)	
B14 (C4)	Annual Inspections: Has the device been inspected by a competent person (engineer) within the last 12 months?	(Y)	N (I)	Insert date from certificate or log book. • Required every 12 months (can extend up to 35 days) • WHS Reg 2012 R241	

Page WHS Regulators' National Audit tool V1-1 May 2013 Full Logbook Audit – (SA version) 2

STATE CORONER EXHIBIT

13.125. The beginning of Section B dealt with the logbook and documents. As is already evident, the logbook is the core document for inspectors and auditors needed to perform their duty. As Mr Ploenges said, the logbooks varied in providing a satisfactory record with the memorable phrase of being '*…the good, the bad and the ugly*'.[394]

13.126. The Airmaxx logbook had core documents that were misleading and/or showed inadequate compliance with record keeping as required. I have already commented on the use of both a purple and blue pen consistent with making entries that were not contemporaneous and in some instances, incorrect. Mr Kym Miller's comment on being '*light on documentation*' added to the argument it was a poorly maintained logbook. If forced to evaluate it in Mr Ploenges terms, I would say the Airmaxx logbook was '*ugly*'.

13.127. Mr Kym Miller, in completing Section B, was unaware of any notice issued by WorkSafe Victoria at the RM Show.[395] On a strict reading of the relevant Section B6, the WorkSafe Victoria notice was not in force. Even if he had seen the notice in the

[394] Transcript, page 749
[395] Exhibit C6

logbook the answer still could have been no. The first time Mr Kym Miller saw the notice was when he gave evidence.[396] Mr Kym Miller believed that had he seen this notice, he would have contacted the authors of the notice together with the Royal Agricultural Society of Victoria to further investigate.[397] That notice was part of the logbook when it was surrendered to authorities on the night of 12 September 2014.

13.128. As was apparent, the only thing he knew about the minimum height was from Mr Rode-Bramanis' Ride Restraint Document, Document Three, already set out in this Finding.[398] Therefore he too accepted the 120cm entry as accurate.

13.129. Mr Kym Miller described the requirements of Section B7 concerning '*Records*'. He said that the information that he saw in the Airmaxx logbook was '*a page or two pages from the extracts*'.[399] He did not recall asking for the full user manual.

13.130. I pause to note that formatting beginning at Section B7 and ending with Section B11 was confusing. This format was repeated in other sections of the NAT.[400] At the conclusion of the audit, which was stalled from 1 September 2014 when Mr Kym Miller noted that the annual inspection had not been completed, the NAT was taken to Mr Kym Miller's office on 4 September 2014 where it remained '*…until I take it up to the administration officer*'. He did not communicate any results to the Society and as he understood it, he was not obliged to do that.[401] He talked about a poor relationship with the Society at that time and outlined a previous instance when he was told to leave their office after he issued an improvement notice.[402]

13.131. <u>What happened to the National Audit Tool for the Airmaxx</u>

Mr Kym Miller delivered it to the administration officer. It remained there until the investigation began. It should not be forgotten that there were two other audits conducted in Queensland and New South Wales respectively prior to Mr Kym Miller's audit. Therefore the issues missed, particularly concerning the DR, happened not once but three times. The Airmaxx NAT simply sat in a drawer at SafeWork for closure and presumably to be archived in due course had there been no issue with the Airmaxx. That was not satisfactory. It should have had greater

396 Transcript, pages 1801-1803
397 Transcript, page 1803
398 This was a requirement under section C6 of NAT
399 Transcript, page 1805
400 Sections B21 and B23
401 Transcript, page 408
402 Transcript, page 1809

meaning than that. That is, at the very least, it should have been made part of information available on a national database. However, as is all too apparent, one did not exist.

13.132. Despite all the problems set out above, this should have been a powerful and meaningful document to expose the Airmaxx's problems. If Mr Kym Miller had been given the NAT that required the option for the DRN to be completed rather than stating '*N/A*', it may have caused him to investigate the presence of a DR certificate. Certainly evidence from his supervisor at that time, Mr Glen Farrell, stated that had he performed the audit on the Airmaxx he would have wanted to have seen the DR certificate. Apart from that, Mr Farrell supported the actions of Mr Kym Miller in accepting the logbooks' accuracy on many issues relevant for the NAT including, most importantly, the annual inspection certificate by Mr Munro once it was properly dated.[403]

13.133. It may be that if Mr Kym Miller had discovered the DRN in September 2014 via the PR certificate, nobody would have checked the number that he wrote down to see if it was valid or not.[404] Thankfully, the system has since changed to demand that the auditor must sight the DR certificate.[405]

13.134. Mr Kym Miller's audit was initially to be assisted by Mr Rynes on 1 September 2014.[406] As noted previously, at that date the ride was not operable and the content of the logbook was deficient. Mr Rynes simply stated that we '*…couldn't find anything in there*'.[407]

13.135. Despite these problems Mr Rynes never showed further interest in the audit of the Airmaxx prior to 12 September 2014. To be fair, Mr Rynes stated that his office was '*…short-staffed*'[408] and that he left it to '*…Inspector Miller to communicate back to me…if he felt there was something that he needed to discuss with me…*'.[409]

13.136. However, in the circumstances, I believe Mr Rynes could and should have been more proactive in inspecting this high energy, new ride, only a few days before it was due

[403] Transcript, pages 1940-1962
[404] Transcript, page 1942
[405] Transcript, page 1943
[406] Transcript, page 2107
[407] Transcript, page 2109
[408] Transcript, page 2113
[409] Transcript, page 2113

to open at The Show. It was clearly not in a good state, both operationally and with respect to compliance with compulsory record keeping in the logbook. His active participation at that point may well have uncovered many matters to be followed up, including the height issue and DR.

13.137. Mr Glen Farrell - SafeWork

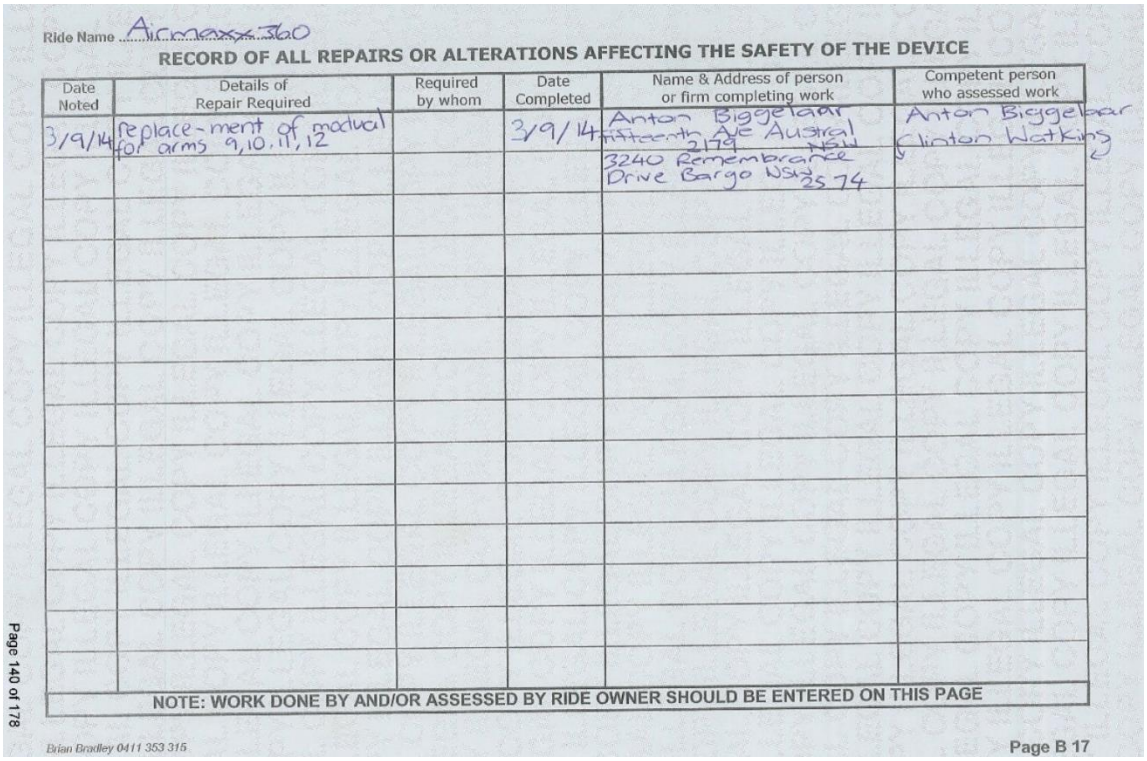
Mr Farrell was the Director of Compliance and Enforcement at SafeWork SA. He has worked for SafeWork since January 2004 where he began as a field inspector before progressing to a position of manager of the Workplace Support Team in July 2014. In that position he managed two principal inspectors and ten to twelve field inspectors. He was the direct reporting manager of Mr Kym Miller. Mr Farrell himself had had experience in auditing amusement devices between 2005 and 2009, in particular for The Show.

13.138. He was shown through the Airmaxx NAT in his evidence.[410] He stated that although the document did not require it, he would always demand to see the DR certificate from the owner in order to obtain the DRN. He said it was the owner's duty to make it available upon request. This simple demand would have exposed the DR issue. There was no certificate.

13.139. He was taken to the original copy of the logbook and agreed that Mr Munro's certificate would cause him concern if it was made before seeing the ride in operation.[411]

13.140. Another area of concern was the maintenance done by Mr Anton Biggelaar.[412] The record of his work is shown in the extract below. Mr Biggelaar did not specify what sort of qualifications he had in order to '*carry out the replace-ment of modual (sic) for arms 9, 10, 11, 12*' on 3 September 2014. I also note that Mr Biggelaar's contact number was not available or recorded on this sheet although it seemed not mandatory to do so.

[410] Exhibit C84
[411] Exhibit C61d
[412] Exhibit C61d, page 140



Ride Name Airmaxx 360

RECORD OF ALL REPAIRS OR ALTERATIONS AFFECTING THE SAFETY OF THE DEVICE

Date Noted	Details of Repair Required	Required by whom	Date Completed	Name & Address of person or firm completing work	Competent person who assessed work
3/9/14	Replace-ment of modual for arms 9,10,11,12		3/9/14	Anton Biggelaar Fifteenth Ave Austral 2179 NSW 3240 Remembrance Drive Bargo NSW 2574	Anton Biggelaar Clinton Watkins

NOTE: WORK DONE BY AND/OR ASSESSED BY RIDE OWNER SHOULD BE ENTERED ON THIS PAGE

Page 140 of 178

Brian Bradley 0411 353 315

Page B 17

Mr Farrell agreed it was concerning that two pens were used to complete the date references. I also note that the '*3*' in the dates appears to be different to the '*3*' in the address reference of '*3240*'. This indicated to me that a different person completed the date with a different pen after the original entry.

13.141. He was then taken to Document Three, the Ride Restraint and Load Plan Assessment authored by Mr Rode-Bramanis on 6 May 2013.[413] He agreed it was an area of concern that the minimum size of the rider in that document was not specified or clarified other than by the letters '*TBA*'.

13.142. He conceded that no review of the Airmaxx NAT took place until the file closure by SafeWork.[414] This usually occurred after The Show had completed.[415]

13.143. When referred to the WorkSafe Victoria report in the logbook[416] regarding the height requirement be raised to 130cm at the RM Show, he agreed that that report revealed

[413] Exhibit C61d, page 177 - As seen at paragraph 8.41 of this Finding
[414] Exhibit C84
[415] Transcript, pages 1746 and 1773-1774
[416] Exhibit C61d

'*discrepancies in relation to the height requirement, yes, so some important information there*'.[417]

13.144. He was asked to interpret the Safeco user manual at page 19. He struggled with the terminology for the height requirements.[418] If he had seen these as an inspector he would have sought clarification on this important topic before allowing the ride to be presented to the public.

13.145. He confirmed in 2015 SafeWork engaged independent engineers for the following three years for pre-show audits as '*extra reassurance*' to assist '*our inspectors in undertaking these audits, not only for amusement devices but for other industries*'.[419] This was at SafeWork's expense. It ceased after that time period it seems, due to budget restraints and he was not aware if The Show was made privy to the decision or the reason for it.

14. Issue 8 - Approval to operate at The Royal Adelaide Show 2014

14.1. Judith Noble

Ms Noble was a long-time employee of the Society from 1996 until 2017 when she retired. She was appointed project manager for Carnival and Rural Features from 2001 until her retirement. She was the Society's most senior officer that dealt with the immediate issues concerning amusement devices and their applications to operate at The Show. She provided an extensive affidavit and gave oral evidence of the Society's procedures in general and in particular about 2014 concerning amusement devices and rides operating at The Show.

14.2. As expected, the Society had a number of important documents concerning the operation of amusement devices and rides at The Show. Officially, the Society granted a '*licence*' to an operator for a successful application.[420]

[417] Transcript, page 1975
[418] Exhibit C22(c)
[419] Transcript, pages 1986-1987
[420] Exhibit C81, Affidavit of Ms Noble dated 23 February 2021, paragraph 5

14.3. Ms Noble explained the '*Expressions of Interest*'[421] could be sent out to operators in the December preceding each Show.

14.4. On 3 January 2014, Ms Sullivan submitted a completed EOI giving CJS' details.[422] I repeat the basic features of the completed EOI included the minimum height being 120cm and the registration details. The completed EOI for the Airmaxx gave the PRN issued in Victoria, but stated it was from '*NSW*'. As Ms Noble explained to SafeWork on 12 November 2014[423], she seemed satisfied that although the '*registration*' was given as '*NSW… the registration was from Victoria but the actual registration number matched that on the expression of interest form*'.[424] I remind myself that the Society had highlighted that '*VIC & WA Registrations are NOT valid for SA*'. The nomination of '*NSW*' by Ms Sullivan as the State issuing the registration was suggested to be a deliberate, deceitful decision rather than an error. The registration details were never challenged nor verified by the Society. They had no access to any database to do so. No request was made to SafeWork for verification.

14.5. On 6 March 2014, Ms Noble attended the Moomba festival in Melbourne. She saw the Airmaxx in operation on this day and spoke to Ms Sullivan concerning general administrative matters, but importantly on SafeWork's policy concerning PRs. Ms Noble also attended at The Royal Sydney Show on 16 April 2014. By that time she had sent out a site offer to CJS that had been signed and returned.[425] At that Show, Ms Noble spoke with Ms Sullivan and told her that the Victorian PRN was not valid in South Australia.[426] Legally that was not correct but was a requirement of the Society.[427]

14.6. On 15 May 2014, Ms Noble sent out a site licence agreement to be signed and returned by the owners together with an explanatory memorandum for '*commercial exhibitors*'.

14.7. This document was important as it made clear that any operator of an amusement device had to abide by the '*rules and regulations*' of The Show.[428]

---

[421] EOI
[422] Exhibit C81, Annexure JMN 1, page 9
[423] Exhibit C81, JMN 1, page 6 - Statement of Ms Noble given to SafeWork SA as seen in
[424] Exhibit C81, page 3
[425] Exhibit C59(4)
[426] Transcript, page 835
[427] Transcript, page 836
[428] Exhibit C61, JMN1 - See documents concerning conditions of occupancy, pages14-21 and clauses 24 and 26

14.8. The commitments imposed on CJS included reporting injuries or '*operational issues that cause the Amusement Device not to operate normally during the Royal Adelaide Show*'.[429] The licence also demanded compliance with the WHS Act.[430]

14.9. A further key document was necessary for the Airmaxx to enter The Showgrounds, namely the '*Safety documentation check list and reminders*'.[431] This document needed to be signed by both a competent person or engineer and the owners. This document covered all WHS requirements.[432]

14.10. It gave two key instructions which, when compared, are contradictory namely:

1) The document had to be returned to Ms Noble as soon as the ride was '*finally set up*'.

2) '*The document had to be completed prior to any… device entering the Adelaide Showground site*'.

14.11. Whatever the correct demand was, the safety checklist was never returned to The Show by the owners in 2014. This fact was not discovered until 13 September 2014, the day after Adelene's death. Mr John Rothwell, Chief Executive Officer of the Society gave evidence that if this document had not been completed or submitted, the ride should not have been allowed to operate.[433] Therefore, yet another basic requirement was not enforced against the Airmaxx.

15. Issue 9 - Setting the 'Minimum Height' for Airmaxx patrons at the Royal Adelaide Show

15.1. It is undisputed that the minimum height for patrons to be permitted unaccompanied on the Airmaxx at the Royal Adelaide Show was 120cm.

15.2. The ride was presented at the show with the minimum height board as depicted in the photograph below.

[429] Exhibit C61, page 19, clause 1.7
[430] Exhibit C61, page 21
[431] Safety checklist
[432] Exhibit C61, JMN 1, pages 65-67
[433] Transcript, page 2357

Table 2 Item 11

Figure 11 Airmaxx 360 Minimum height board (P1010275.JPG)

15.3. In order to understand the context in which the minimum height was set at 120cm for The Show, consideration must be given to each of the points in time prior to The Show when the appropriate minimum height for riders of the Airmaxx was considered by the manufacturers, the owners, experts and regulators.

15.4. There is no doubt that those involved in the amusement industry, including Ms Sullivan and Mr Watkins, were of the understanding that the minimum height of patrons permitted on a ride was set by the manufacturer of the ride. It was undoubtably prudent for CJS to have known the exact details of Safeco's recommendations about the minimum height of patrons.

15.5. Safeco's instructions on the height issue

Mr Watkins' evidence was that in 2012 he was told in Spain that the height limit was 120cm.[434] This evidence contradicted the written communication of Safeco to CJS and the owners in October 2012.

15.6. It is stated in the Safeco manual[435]:

> 'Although ride work is automated, its operator must be a suitable person to select speed, ride duration, working pressure, bouncing program etc. So, the operator must have a different performance according to riders' age and **reduce work pressure and speed if they are mostly children**.
>
> Because of the same reason, **it is not allowed**[436] **the use of the ride to people whose height is lower than 1,40 m.** (sic) **if not accompanied by somebody responsible and as tall as such height at least, and in any case to those persons whose height is lower than 1 m., even accompanied by somebody responsible and 1,40 m. tall or more.** Furthermore, it is necessary to watch the passengers at any time, even more if they are underage to stop the ride if circumstances require it.' [437]

15.7. As can be seen, the use of English is not perfect. Several witnesses found it difficult to interpret this instruction and came up with slightly different interpretations. My first reaction to the instruction was that '*1.40 m*' was the minimum height for an unaccompanied person. The owners however, properly sought clarification with Safeco and contacted them by email.

15.8. The emails on this topic between the owners and Safeco on 9 October 2012[438] make it unambiguous about Safeco's view on the height of unaccompanied patrons. Although the sender from CJS was identified as Mr Watkins, it was Ms Sullivan who was the author of this email.[439] Ms Sullivan wrote:

> Hi,I'm filling in application to work Sydney show can you help me with some
> information please?
> 1)Frontage/Length(m) 2)Depth/Width(m)
> 3)Arial space LxW. 4)minimum height without
> adult (m). 5)minimum height with adult (m). Could you PLEASE
> email us a copy of manual booklet any information on ride ,as we need
> anything on emergency evacuation plans ,procedures for aerial ride that list
> time frames against procedures!Are you able to send a picture of full design
> with our colours and wording as Airmaxx 360 so we can send it falward
> thankyou for your time we are after as much as we can get thanks
>
> Sent from my iPhone=
> <3D 461 completo Model (3).pdf>

[434] Transcript, page 290
[435] Originally printed in Spanish then translated to English, highlighted text in quote is reproduced from user manual
[436] My emphasis
[437] Exhibit C34, MD39, page 552 of 763
[438] Height issue emails
[439] Airmaxx@hotmail.com was the email address set up and used by the owners, primarily Ms Sullivan

15.9. The response from Safeco within hours was very plain and simple on the height issue, namely:

> On 09/10/2012, at 7:18 PM, Jose Ibargüen <comercial@safeco-rides.com> wrote:
>
> > I enclose a plane ride almost entirely of the maximum height is 7 mtrs
> > Minimum height 1.20 passenger accompanied
> > Minimum height of only 1.40 passenger
> > As I can sent you a manual and the emergency evacuation procedure
> >
> > -----Mensaje original-----
> > De: Clinton Watkins [mailto:airmaxx360@hotmail.com]
> > Enviado el: martes, 09 de octubre de 2012 3:47
> > Para: Jose Ibargüen
> > Asunto:

15.10. Ms Sullivan and Mr Watkins were taken to this email from Safeco in evidence. Ms Sullivan agreed that she would interpret that email to mean an unaccompanied patron should be a minimum height of 140cm.[440] Mr Watkins remarked '*I presume so*'.[441]

15.11. There was further proof that these instructions in the user manual and email were clearly understood by the owners. In the 2013 '*Sydney Show*' application form for the Airmaxx, submitted in the name of Clinton Watkins, the instructions from Safeco on the height issue were honoured. The application was completed by Ms Sullivan on 11 October 2012. The details on the height issue were set out in the application as shown over the page.

[440] Transcript, pages 234-236
[441] Transcript, page 299

2013 CARNIVAL RIDE

Application Form

CONTACT DETAILS

Title	First Name	Surname
Mr	Clinton	Watkins

Company Name	Trading As	ABN
C.J & Sons Amusements	C.J & Sons Amusements	54915775929 0

Street Address	Suburb	State	Postcode
11 Coolgawie St	Rosebud	Vic	3939

Postal Address
11 Coolgawie St Rosebud Vic 3939

Telephone	Mobile	Email
	0409013780	Airmaxx360@hotmail.com

Selection Criteria: An advisory committee will review your application which will be evaluated against five elements which make up the selection criteria. Incomplete applications will not be accepted.

SELECTION CRITERIA 1. DEVICE SPECIFICATIONS AND ADMISSION RATE

Amusement Device	Frontage/ Length (m)	Depth/ Width (m)	Arial space L x W	Minimum height without adult (m)	Minimum height with adult (m)	* Number of coupons required for admission
1 Airmaxx360	15m	18m	7m	1·4m	1·2m	8
2						
3						
4						
5						

* Number of coupons required for admission is the maximum number of coupons you will be permitted to request during the 2013 SRES.

15.12. I have referred to Safeco's comments in the manual and email about the '*1.40 m*' height as instructions. The user manual actually stated '*it is not allowed*'. Those words mean as far as Safeco was concerned, it was an operational prohibition for the Airmaxx.

15.13. Royal Melbourne Show 2013

In September 2013, Mr Gibney examined the Airmaxx in operation at the RM Show. He was contacted by the RM Show following the report of 22 injured patrons over the course of three days. This visit was separate to the visits of WorkSafe on 23 September 2013 and appeared to have preceded it.

15.14. His initial observation of the ride was that:

> '…small patrons didn't seem to be able to hold themselves effectively in the ride and as such were being buffeted about inside the over-shoulder restraint between the seat … top two bars of the over-shoulder restraint and the front bar as well. The distance between the back of the seat and the front bar was quite excessive so when the ride was elevating and the gondola[442] was spinning there was a significant opportunity for the children to be pushed against the front of the ride, I suppose.' [443]

15.15. Upon arrival he saw that the height indicator for the Airmaxx was 120cm. He felt that the height was '*inappropriate for the g-forces generated on that ride and also the restraint system*'.[444] He '*verbally recommended*' to Mr Brandon Miller that the height be raised to 140cm as the '*minimum ideal height*'.[445]

15.16. When telling Mr Brandon Miller of the need to '*increase the height to 140*' he considered it important '*…to look at the patrons' ability to fit within the confined space and make a value judgment when they push the harnesses down on the smaller patrons*'.[446]

15.17. As part of his examination he conducted a practical stationary test as well. He sat a child that matched the 120cm height requirement in a seat and looked how the child was positioned to help form his judgment as to an appropriate height for the Airmaxx. At that time he also observed that the ride '*seemed to very popular with tweenies and teenagers*'[447] and noted he did not '*...remember seeing many adults on it, but I do remember seeing a lot of kids on it*'.[448]

15.18. His further basic advice concerning the patrons was that if:

> '…they didn't fill or they were going to be thrown around that they shouldn't be riding on the ride'.[449]

He continued:

> '… a tall skinny kid is more likely to be thrown against the front of the ride whereas a child that met the … 140 requirement who was stockier wouldn't be as likely to be thrown against the front of the shoulder restraint but would still as likely to be lifted up in the air when the ride started its vertical acceleration.' [450]

---

[442] The seat
[443] Transcript, page 1431
[444] Transcript, page 1435
[445] Statement of Mr Gibney dated 12 May 2015
[446] Transcript, page 1432
[447] Transcript, page 1433
[448] Transcript, page 1433
[449] Transcript, page 1437
[450] Transcript, page 1437

15.19. Mr Gibney's memory was that Mr Peter O'Connor, a representative of the RM Show was present when he made these comments and recommendations and has a memory that the RM Show adopted them. Mr O'Connor provided statements that outlined a general memory consistent with Mr Gibney, but not about the specific recommendation of 140cm on the height issue.[451] His statements were taken in 2021 and he had no records to help his memory.

15.20. Mr Gibney was not aware of Safeco's recommendation of the height issue and made his own '*value judgment*'.[452] His recommendation was given not only to Mr O'Connor but also to Mr Brandon Miller. He did not liaise with WorkSafe Victoria, who made their own examination on 23 September 2013 and recommended the height be raised to 130cm. Inspector Ian Sandlant who conducted this inquiry was not told of Mr Gibney's recommendation of 140cm. It was a pity that a joint inspection involving WorkSafe Victoria and Mr Gibney was not organised by the RM Show.

15.21. It is logical that this recommendation from Mr Gibney should have been passed on to the owners by Mr Brandon Miller. If it was not, then Mr Brandon Miller has withheld information about a vital situation involving injured patrons and an expert recommendation to prevent future injuries to patrons reoccurring. If he did, then the owners have ignored expert advice that they knew was correct, given Safeco's email to them in 2012.

15.22. Mr Brandon Miller gave evidence that he did not recall this encounter with Mr Gibney nor any suggestion at the RM Show that the height limit should be raised to 140cm.[453] Even allowing for the passage of time between September 2013 and giving evidence in 2021 having a poor effect on his memory, I still have strong doubts about his stated lack of recollection on this topic. Conversely, I have no doubts about Mr Gibney's reliability and credibility concerning this evidence and in general.

15.23. <u>Royal Melbourne Show - 23 September 2013</u>

On 23 September 2013 at the RM Show, a nine-year-old girl went on the Airmaxx with the minimum height of 120cm. After the ride she reported a neck injury.[454] She was

[451] Exhibit C114 and Exhibit C114a
[452] Transcript, page 1434
[453] Transcript, pages 2206-2207
[454] Exhibit C112, statement of EA, the girls' mother

described as being of about 122-125cm in height.[455] She was also observed to be distressed after the ride.

15.24. WorkSafe Victoria attended and discussed and made a formal report that resulted in the following:

- Retraining the operator, Mr Brandon Miller, for four hours under the supervision of Ms Sullivan;
- The minimum height requirement for an unaccompanied person being lifted to 130cm. It is hard to think why they would set that new height had they seen the user manual talking about 140cm.

15.25. A puzzling aspect of this RM Show event was the emergence of a man called Mr Adam Hampton. He was recorded in the entry report as an employee.

15.26. In the Inquest, no one knew who Mr Adam Hampton was, including Ms Sullivan,[456] Mr Munro, the engineer who did the annual inspection in 2014,[457] Mr Gibney who was involved around the same time as WorkSafe at the RM Show[458] and Mr Brandon Miller who stated he did not have '*a clue*' about this person.[459] This situation was totally unsatisfactory and reflected poorly on the operation of the Airmaxx.

15.27. <u>Evidence of Jenny-Lee Sullivan and Clinton Watkins on the height issue</u>

I will set out a summary of their evidence on this topic as it is important to consider why they made a concession at the conclusion of the Inquest, '*that they did the wrong thing because they kept the ride height at 120cm. Now there's no arguing around the fact that prior to Adelaide they had knowledge that the ride height should have been higher*'.[460]

15.28. In June 2012, the owners flew out to the Safeco factory in Spain. Both Ms Sullivan and Mr Watkins gave evidence that they were told by a Safeco representative that the minimum height for an unaccompanied patron for the ride was 120cm.[461] If that is true then the Safeco representative was in error and did not follow the instruction of the company.

---

[455] Exhibit C61 and C61d, pages 160-163 - Entry report dated 24 September 2013
[456] Transcript, page 2293
[457] Transcript, page 1730
[458] Transcript, page 1433
[459] Transcript, page 2200
[460] Transcript, page 2591 - Submission by Ms Veale counsel for the owners and CJS
[461] Transcript, page 128 Ms Sullivan, page 290 Mr Watkins

15.29. Even accepting that evidence was reliable and credible, the error was corrected by Safeco in October 2012 and acted upon by CJS. Ms Sullivan admitted that the application to the Royal Sydney Show nominating the height at 140cm means she '*must have been aware*' that the height limit was 140cm. Consequently, someone less than that height should not ride the Airmaxx unaccompanied. The Safeco email of 9 October 2012 must have been the source of the information about height limits in that application.

15.30. I repeat that Mr Watkins agreed that Safeco's instructions meant that someone below 140cm should not be on the ride unaccompanied. Ms Sullivan's evidence was that she never read that part of the user manual[462] and further that she had '*never seen that before*'.[463] If that is true, she should have made efforts as the owner and a Director of CJS to understand Safeco's written instruction on this basic fact. She remedied this situation in any event by the height issue emails to Safeco in October 2012, but obviously chose not to follow the clear instructions.

15.31. The concession on the height issue made by the owners in closing submission has the corollary that the 120cm height limit was kept for the Airmaxx because of reasons that must have been financially driven to allow children between 120cm and 140cm to be eligible for the ride. This naturally increased the consumer base. It was a deliberately defiant position of the instructions from Safeco. There is no doubt that if Mr Gibney noticed the Airmaxx was popular with '*tweenies and teenagers*' in September 2013, then the owners must have as well. Ms Sullivan acknowledged that the higher the minimum height restriction, the less tickets could be sold.[464] After about 16 months of operation, this defiance finally proved to be fatal.

15.32. The other consequence of this admission was that their early evidence in the Inquest of a belief of the 120cm height limit being consistent with the recommended operation of the Airmaxx was hollow and misleading. The height issue emails could not have been forgotten by them. The height limits are a basic term of trade much like licensed premises are forbidden to sell alcohol to minors. Their operator, Mr Brandon Miller, believed the height limit for the Airmaxx was '*the most important consideration*'.[465]

---

[462] Transcript, page 146
[463] Transcript, page 350 and 352
[464] Transcript, page 2264
[465] Transcript, page 480

15.33. I should also mention at this point the absence of evidence of inspectors and competent persons of seeing the relevant Safeco instructions about the height issue at page 19 of the Safeco manual. A copy of this very important page was never located in the primary business record of operation for the Airmaxx, namely '*the logbook*'.[466] This was significant as it affected the roles of the inspectors and regulators in being able to quickly and easily verify the minimum height by the usual and simple means by reference to the logbook. This holds all vital registration, operational and instruction documents. After Adelene's death, this page turned up separately in triplicate in a separate green folder and was surrendered to the authorities the next day.[467] The green folder belonged to Ms Sullivan's and Mr Watkins's son, Dylan.[468] Neither of the owners could assist as to how this vital instruction ended up in that folder. It is peculiar to say the least.

15.34. Mr Kym Miller gave evidence that he had never seen that folder before.[469] Ms Sullivan gave evidence that the user manual and the logbook always stayed together.[470] In her words '*The manual and the logbook were always together in the control box, in the drawer for anyone, any expert to view. Nothing has been deliberately left out*'.[471]

15.35. This answer has to be compared with the WorkSafe Victoria report that Mr Brandon Miller was asked to check with the manufacturer as to what the correct height was for an unaccompanied patron.[472] That would seem odd if the user manual was next to the logbook and could have easily been examined by WorkSafe Victoria itself. Inspectors Michael Nathan[473] and Ian Sandlant[474] recorded being given a document called an S-2000 user manual ,but cannot confirm page 19 was in the manual when they saw it. However, Mr Nathan stated that if page 19 was present then he would not have asked Brandon Miller to contact Safeco to '*seek that information'*. Mr Munro stated he never saw that page[475] and Mr Rode-Bramanis only saw a manual in Spanish[476].

[466] Exhibit C61 and C61d (paginated)
[467] Exhibit C90
[468] Transcript, page 2295 and 2318
[469] Transcript, page 1911
[470] Transcript, page 150
[471] Transcript, page 150
[472] Exhibit C61d, pages 160-163
[473] Exhibit C63 and C63a
[474] Exhibit C76
[475] Transcript 1695
[476] Transcript 1265

15.36. The peculiarity of this situation with the green folder was not assisted by the explanations of the owners. I cannot accept that neither of them had anything to do or knew nothing of how the instructions regarding height ended up in triplicate without a copy being placed in the logbook which carried other extracts from the user manual.[477] The green folder belonged to their son, Dylan. In light of the absence of sighting of this page and folder by any regulator or inspector prior to 12 September 2014, I find page 19 was deliberately not made available to inspectors and regulators with the obvious motive that the owners did not want them to easily discover Safeco's view on this topic.

15.37. Adelene's height

Adelene's height at her post-mortem examination was 137cm. She weighed 45kg and had an average build.[478] Measurements from a CT Scan described her stature as 136cm. This is a measurement from her heel to her fourth cervical vertebra and from that point to her crown.[479]

15.38. The importance of her height measurements cannot be underestimated. Adelene was wearing boots on the ride which were measured by SAPOL.[480] The height of the heel ranged between 29mm[481] to 31mm[482] and 15mm from the sole. This in theory elevated Adelene's height from 137cm to a maximum height of 140.1cm with her boots on.

15.39. Even accepting that, the usual measurement for height for amusement rides is conducted without shoes. In a very troubling assessment, Mr Gibney described video footage of Adelene walking up the access stairs and across the deck of the Airmaxx to her seat as '*though she was walking on stilts*'.[483] In further cross-examination by counsel assisting, Ms Giles, he expanded his position concerning shoes with respect to the height issue as follows:

> 'Q. So, in your mind, is the issue of whether somebody is or is not wearing shoes relevant to the height assessment.
>
> A. It is relevant. If they're wearing high-heel shoes, or very high shoes, that gives a false implication of their height, and associated with that their physical capacity to sit within the ride.

[477] Exhibit C61d, page 92 as an example
[478] Exhibit 3b, BMI 24
[479] Exhibit 3b, supplementary report from Dr Langlois
[480] Exhibit C71, Affidavit of Detective Gledhill
[481] At rear
[482] On side
[483] Transcript, page 1497

Q. Is it correct that when you later viewed footage of Adelene before she got on the ride, you were of the opinion that she looked as though she was walking on stilts.

A. That's correct. From memory, she was quite unstable walking up the steps, and when she got onto the deck, as if she was wearing shoes with very high-heels...' [484]

15.40. Ms Giles raised this issue with Mr Brandon Miller, an employee of CJS who was the main operator of the Airmaxx and in charge of Adelene's ride:

'Q. So if you had somebody that was sort of exactly on the cusp of the height requirement what would you do then.

A. Depending on their shoes?

Q. Yes, so if you assume you measure them without their shoes on and they're sort of on the cusp of the height requirement what would you do there.

A. As long as they're of height they're allowed to ride.

Q. So as long as they had reached the minimum height without their shoes on you'd let them get on the ride.

A. Yes.' [485]

15.41. Based on the evidence of Mr Gibney's assessment of Adelene's boots and Mr Brandon Miller's routine of dealing with height measurements without shoes on, Adelene did not qualify to be eligible to ride on the Airmaxx on the standard set by its manufacturer. There was no evidence of whether she was measured before the ride. If she was not, this was hardly surprising given that the advertised and operating minimum height was the usual 120cm.

15.42. It cannot be ignored that, according to the prohibition warning from Safeco, Adelene was not allowed on that ride. The owner's decision to ignore the terms of that important safety warning for patrons of the Airmaxx worked against a claim of making the operation of the ride truly as safe as possible.

16. Opening day of The Show - Friday, 5 September 2014

16.1. When considering the financial position of CJS in 2014, the Royal Adelaide Show must have been an extremely important event for them. The Show was open to the public from Friday, 5 September 2014 until Sunday, 14 September 2014. The Show was

[484] Transcript, page 1497
[485] Transcript, page 446

convened over two weekends to celebrate the 175th anniversary of the Society, its convenor.

16.2. Patron experience of the Airmaxx, 5-11 September 2014

The experience of some patrons of the Airmaxx in the preceding days to Adelene's ride is useful to review. This was provided to investigators after 12 September 2014. This summary will show that problems with the Airmaxx emerged immediately in terms of its operation at The Show.

16.3. When necessary I will include the age, weight and build of patrons to emphasise a general comment that small children experienced great unease during the ride. However, I have decided to protect the identity of these patrons by reference only to their initials.

16.4. 5 September 2014 - CF

13-year-old CF had three consecutive rides on the Airmaxx in the afternoon. The restraint was not touching his shoulders on any of the rides. On the second ride, the Airmaxx stopped suddenly causing each arm to lower automatically to the starting position. CF saw one man from the control booth go to the centre turret with a '*big shifter*' in his hand.[486]

16.5. This theme of a man heading mid-ride to the centre turret underlined many of the experiences of the patrons during that week. The SG video was a seminal example of this pattern.

16.6. 6 September 2014 - AR, 162cm and 52kg

14-year-old AR also had three rides on the Airmaxx from about 11am to midday with her friend. On her first ride the arm which she was attached to did not move up and down unlike the other arms of the Airmaxx. She said an attendant came over and '*kicked the main centre part of the ride, she then flicked and lifted something before waving at the control box and the ride resumed*'. Despite this she felt '*reasonably safe*', even though '*when the carriage shifted from side to side it felt like you would slip out*'.[487]

[486] Exhibit C77, Statement of KF, 9 November 2014
[487] Exhibit C77, Statement of AR, 3 October 2014

16.7. 6 September 2014 - RC

RC had two rides that afternoon and was lining up for a third ride when he saw that the Airmaxx had '*broken down*'.[488] He saw four or five people attending with two toolboxes around the centre of the ride.

16.8. He left and returned a couple of hours later to have his third ride. He noticed it was faster than the previous ones and had the experience of hitting his head against the side of the harness.

16.9. 6 September 2014 - KC

KC, five-year-old daughter C, was approximately 123cm and 26kg when she rode on the Airmaxx. KC had concerns with the adequacy of the restraint system and '*continually questioned*' Airmaxx operating staff if C was '*physically big enough*'. The staff replied the '*bar going over her legs will stop her from falling out*'.[489]

16.10. KC became greatly concerned for her daughter when she noticed '*violent… jerky and sudden aggressive moves*'. Subsequently she noticed C go limp and being thrown like a '*rag doll*' for approximately 30 seconds before she could hold onto the restraint again. C reported to her the ride was '*soooo scary*' and there was no way she would go on it again.

16.11. 6 September 2014 - '*SG video*'

This video was produced to the Court[490] together with SG's statement.[491] This video became an important item of evidence that many witnesses were asked to view in Court. Mr Kroon was one of those and described the scene of someone being present in the centre turret during the course of the ride as '*concerning behaviour*'.[492] That area contained the air tank hoses that connect to the arms as well as the electrical panels, two core systems of the Airmaxx. I remind myself those air tanks were supposed to have DR but did not. They were not suitable as they failed to reach AS and needed to be replaced. This issue was highlighted in correspondence between CJS and IBA and also between Mr Bradley and Mr Anderson.

[488] Exhibit C77, Statement of RC, 13 November 2014
[489] Exhibit C6
[490] Exhibit C75
[491] Exhibit C75a
[492] Transcript, page 1076

16.12. SG's six minute video taken on his mobile phone, was '…*just in case something happened*'[493] because he had noticed problems with the ride prior to his wife and niece getting on. He described the ride as '*…a little erratic and stopped and started twice…for about a minute or two each time*'.[494]

16.13. I have viewed this video in Court and many times out of Court. His general description is accurate. I shall now highlight some of the features in brief, namely:

1) Thirty seconds to one minute, Mr Brandon Miller moves to the centre turret before returning to the control box.

2) One minute and eighteen seconds, the ride resumed before stopping at two minutes and two seconds.

3) Two minutes and thirty two seconds, Mr Watkins is seen at the centre turret. He must have been there since the video began.

4) Two minutes and forty five seconds, Mr Watkins leaves the centre turret.

5) Three minutes and five seconds, the ride resumed until three minutes and fifty three seconds when it begins rotating at the low level.

6) Four minutes and nine seconds, the ride stops then resumes in an anti-clockwise direction.

7) Five minutes and three seconds, the ride stops and reverts to rotating in a clockwise direction before stopping at six minutes and fourteen seconds.

16.14. In general the scene was chaotic and was a microcosm of the issues concerning the Airmaxx. Mr Kroon found the behaviour of Mr Watkins being in the centre turret during the ride '*quite a concerning behaviour*'.[495] He believed it was unsafe for anyone to be in that area whilst the ride was operating.

16.15. To me, this video accentuated the desperate nature of their trading and the continual dealing with issues as they arise rather than the ride being appropriately maintained. It was indicative of the significant problems of how the Airmaxx was being operated. It is hard to divorce the behaviour of the owners and operator from considering what was happening to the maintenance of the restraints.

[493] Exhibit C75a, page 3
[494] Exhibit C75a, page 3
[495] Transcript, page 1076

16.16. 6 September 2014 - TS

Between 2pm and 3pm, TS, SG's wife, lined up for a ticket with her niece C as they watched the previous ride finish and the patrons depart.[496] The Airmaxx then ran for ten minutes without patrons which caused annoyance generally with the awaiting crowd.

16.17. TS went to the ticket booth and received a refund for her tickets. Just after that the ride resumed and she repurchased tickets. She and C boarded the ride which TS remembers as being full. It started and after a short time it stopped. She saw one of the operators go to the centre of the ride, open a panel and look inside. The ride then resumed, and the same situation was repeated. TS's ride was videoed by her husband SG.

16.18. 6 September 2014 - SH, 164cm and 45kg

SH rode alongside her friend SL-W. She attempted to purchase tickets for the Airmaxx but was told that the ride was down for maintenance. Twenty minutes later she asked if they could '*go on the ride yet*' to which staff replied the arm of the ride is not getting pressure but should be able to be ridden in one hour. SH purchased tickets and while waiting noticed that the power went out on the preceding ride for approximately ten seconds before coming back on and the ride finishing.

16.19. Upon SH's ride beginning she stated '*she slipped down in her seat, where her buttock was at the end of her seat and her back was where her buttock should be*'.[497]

16.20. 6 September 2014 - SL-W

SL-W attended The Show. At about 2pm he tried to get tickets to ride the Airmaxx but was told at the ticket booth that the ride had broken down. On that occasion he noticed strange behaviour in the booth and believed that the attendant who served him had a '*real vacant look on her face, it was like she was spaced out or something*'.[498] A sign was put up saying that the Airmaxx was '*closed for repairs*'. When this issue was raised with Ms Brooks[499] she denied that sign ever went up during The Show. SL-W noticed at that time work being done on one of the arms of the Airmaxx.

[496] Exhibit C77, Statement of TS, 11 November 2014
[497] Exhibit C6
[498] Exhibit C77, Statement of Mr L-W, 13 November 2014
[499] Transcript, page 586

16.21. When he returned sometime later he saw the Airmaxx was operating and he and his companions bought tickets.

16.22. SL-W was a tall man of 6ft 5ins and weighed 65kg. He described his ride as '*really bumpy*' and believed that the harness he was using '*didn't really hold you right back in the seat, like there was a gap between my body and the harness at the front*'.[500]

16.23. 6 September 2014 - TK

TK was 14 years old at the time, approximately 162cm and weighed between 60-70kg. She noted no one was paying attention to height limits and much smaller children were boarding the Airmaxx including her brother C, who was 10cm shorter than herself.

16.24. During her ride she noticed her brother's harness and another young girl's harness raised up to the limit of the seatbelt. TK started shouting to the attendant who gestured to the control booth and the arms of the Airmaxx were lowered. An attendant pushed C's harness down and repeated this for the young girl. The ride then resumed. TK stated both she and C were being '*thrown violently up and down*' and thought they were going to be thrown out of their seats. This description is totally consistent with all the engineers assessments of the danger created by '*harness creep*'.

16.25. 7 September 2014 - CJ

CJ rode on the Airmaxx this day with her 13-year-old daughter. Her ride was interrupted twice and she described the ride as '*very rough*'. On the first stoppage she saw a staff member with a large tool move to the centre turret area and were '*tightening up things*' consistent with '*winching nuts*'.[501] At the second stoppage she saw a staff member again go to the centre turret with a tool. Her memory of her harness was it was '*quite high, in that if you weren't tall there would be a lot of room between your shoulders and the top of the harness*'.[502] She also could '*feel myself slide when I was on it and I had to keep holding hard onto the bar to stop myself from sliding down*'.[503]

16.26. 8 September 2014 - DW

DW described taking his 10-year-old son on the ride. He believed '*the seats and*

[500] Exhibit C77, Statement of Mr L-W, 13 November 2014, page 4
[501] Exhibit C77, Statement of CJ, 14 November 2014
[502] Exhibit C77, Statement of CJ, 14 November 2014, page 4
[503] Exhibit C77, Statement of CJ, 14 November 2014, page 4

harnesses were made for adults and not small children because the seat was generally loose fitting for my son'.

16.27. At the beginning of the ride, he saw the operator go to a jammed hydraulic piston for the arm he was on and '*hit the piston very hard with his forearm*'. This caused the piston to slip back into place. The ride then started and he was constantly checking on Isaiah and grabbed hold of him. He thought his son's harness could have been made tighter '*if the operator had pulled on it harder*'.[504]

16.28. 9 September 2014 - GM

On this day, GM purchased two tickets for the Airmaxx, one for herself and one for KP. GM and KP took their seats on the Airmaxx and recalled '*pulling the harness down over my shoulders but it didn't seem to lock in at all, it was loose and unsecure*'.[505] Approximately a minute later, an attendant walked over to their carriage and helped clip the seat belts into the bottom of the harness. GM recalled thinking they were going to start the ride without being secured into her seat. KP called out and tried to get the attention of an attendant. A lady approached and motioned with one of her hands toward the person in the control booth. After she had made this motion, GM pulled on her harness and it suddenly locked into place.

16.29. As the ride began, all of the arms started to rise and rotate in an anti-clockwise direction except for the one that GM and KP's carriage was on. Approximately five seconds later their arm shot up into the air really fast, '*much faster than the other arms*'.

16.30. GM stated she was moving in her seat, was being flung around, her bottom was coming off of the seat and she was moving side to side a fair bit all while the ride was in motion.

16.31. 10 September 2014 - NS, 167cm and 62kg

NS was 14 years old at the time she rode the Airmaxx. She rode the Airmaxx multiple times over the course of The Show. However, on her last ride she noticed that some of the ride operators were doing something underneath the middle part of the ride. It appeared they were '*fixing something*' with a spanner. One operator had some blue hose in his hand which looked to be connected to something.

[504] Exhibit C77, Statement of DW, 20 October 2014
[505] Exhibit C77, Statement of GM, 2 October 2014

16.32. NS explained that this ride was much shorter than her previous rides on the Airmaxx and on this occasion she did not feel as secure. Her harness felt as if it was looser and she was slipping in her seat. She described the harness as moving up and down by about 5cm to 10cm and added she felt scared and nervous like '*…I was going to fling out*'.[506]

16.33. 11 September 2014 - NM

NM and her 13-year-old daughter A, approached the Airmaxx and watched it in operation. Having rotated anti-clockwise for approximately 20 to 30 seconds, the Airmaxx suddenly stopped. She witnessed a female staff member walk to the centre of the carousel and grab hold of a metal lever. She pulled it down and then pushed it back up and continued to walk along the arm of the ride to a carriage and checked the harness. Following this the attendant turned around and shrugged her shoulders to the person in the control booth. The Airmaxx then continued. NM and her daughter decided that they did not want to ride the Airmaxx anymore.

16.34. 11 September 2014 - EM-L, 155cm and 48kg

EM-L was onboard the Airmaxx when the ride began to slow down and the arms dropped and spun slowly until the ride came to a halt. She was told by an attendant that the ride had broken down. Having waited 30 minutes in her seat, the Airmaxx started up again. It had only been going for a short amount of time before it stopped again. EM-L stated it only took a few minutes to fix this time before it was up and working again. This time the ride ran the whole duration without any issues.

16.35. 11 September 2014 - DS

DS witnessed his girlfriend and a friend ride the Airmaxx. After operating for a couple of minutes the Airmaxx stopped. DS said '*…it was as if the valves kept giving way and it could not maintain the pressure required for the ride*'.[507] Shortly thereafter the Airmaxx commenced its operation before a similar incident occurred and the ride again stopped. A male operator approached the underneath of the ride with what appeared to be a can of WD40. DS heard a couple of spraying type noises.

16.36. 11 September 2014 - BS

Although BS did not ride the Airmaxx, she witnessed a female attendant near the middle

[506] Exhibit C77, statement of NS, 21 November 2014
[507] Exhibit C77, statement of DS, dated 29 September 2014

of the ride. It appeared she had a panel open which had wires behind it and she was doing something inside the panel. The panel was located between an arm of the Airmaxx that had not been working and an arm that was working. BS overhead another patron ask if the ride was safe to which the attendant replied '*It should be; we've fixed it now*'.[508]

16.37. 11 September 2014 - JS

JS rode the Airmaxx with her friend B. As they began their ride they noticed that two or three of the arms were not lifting up. Suddenly the lights on the Airmaxx went out and the arms began to lower as if '*the ride lost power*'.[509] This entire process was repeated approximately five times during JS' ride. She described that each time the Airmaxx restarted, the ride became rougher and she felt as though she was being thrown around.

16.38. On her second to last ride, the harness of both girls '*unclicked*' and started to raise. JS explained they were still quite high at the time and did not feel secure in their seat.

17. Adelene's ride - 12 September 2014 at approximately 12pm

17.1. It is now the Court's difficult duty to describe the final hours of Adelene's life. She arrived at The Show at about 10am with her mother. Adelene, like most children, was keen to go on a number of rides. Her mother took a number of photos that showed her happily posing for photographs and taking part on a number of rides including '*Sky Flyer*' and a bungie ride.[510] At about 12pm, having eaten, she told her mother she wanted to go on the Airmaxx. The video footage[511] showed Adelene and her mother around the area of the Airmaxx at about 12:01pm.[512] Adelene's mother was wearing a white top with dark pants, just like Adelene. Adelene looked excited and both moved from right to left of the video and out of screen. This was consistent with moving towards the ticket booth to buy a ticket. The Airmaxx was operating with one of the arms not moving and at a low level.

17.2. At about 12:03pm, Adelene moved back into the video and was pacing up and down the empty waiting line for the Airmaxx. A few seconds later the Airmaxx stopped and

[508] Exhibit C77, statement of BS, dated 20 November 2014
[509] Exhibit C77, statement of JS, dated 22 December 2014
[510] Exhibited in C1a
[511] Exhibit C71b, CCTV
[512] The time and date stamp on the video is half an hour behind actual time as noted in the SAPOL report, Exhibit C34a

the patrons dismounted from their seats. Adelene was at the steps to go onto the deck at the front of the queue with four adult patrons who had just joined her. Adelene was first on and moved to Arm 8, Seat 15. She was the only patron in the dual seat carriage. Adelene's mother moved to a position near Adelene's seat, but they were both obscured in the video. At about 12:09pm Ms Minniken was spoken to by Adelene's mother.

17.3. Adelene's mother had noticed that the latching seatbelt '…*didn't look right*'.[513] Adelene had also told her '…*that the buckle was not in properly*'.[514] Ms Minniken responded by moving to Adelene's seat. By that time four more patrons had got on making a total of nine patrons including Adelene for the ride. In addition, Adelene's mother witnessed Mr Brandon Miller looking around the ride and going to the control box.

17.4. Adelene's mother took a photo of her just after the ride started. This photo became an important exhibit[515] when considering evidence on the effectiveness of her restraint.[516]

17.5. I return to the sequence of the ride. On the video it was hard to see Adelene at the normal speed until she was in that distressed state of hanging by her left foot. The video was analysed by police and slowed to 15% speed to enable concentration on Adelene. She was also visually highlighted as much as possible.[517]

17.6. The ride began at 12:11:35pm. It was completing one clockwise cycle every six seconds. This was confirmation that the revolution speed for the ride was 10 per minute. I have viewed each cycle carefully given the above limitations. Adelene looked like she was sitting conventionally in her seat until the dreadful sight of her on the eleventh cycle hanging by her foot.[518] The video does not capture her being flung out due to the position of the CCTV camera, but it must have happened only a moment after we see her leave to the left of the screen on that cycle. Only seconds later the video showed the sign of civilians reacting. Numerous of them moved across the screen from right to left towards where Adelene was lying.[519]

---

[513] Exhibit C1a, page 3
[514] Exhibit C1a, page 3
[515] Exhibit C1a
[516] See photo in paragraph 17.12 - 17.14 of this Finding
[517] Exhibit C71c
[518] 12:12:54pm
[519] Begins at 12:13:06pm

17.7. At 12:13:30pm the ride had stopped and the patrons got out of their seats. Unfortunately, by this time Adelene was on the ground, fatally injured having been ejected at a minimum of 100 kilometres per hour.

17.8. The recommended speed setting by Safeco was 8.5. In the inspection at The Show by Mr Kroon after this tragedy, the dial was set at 10. Therefore, Adelene was subject to the full rotational forces capable of being created by the Airmaxx. A CCTV video of Adelene's ride confirmed the setting must have been set at 10.[520]

17.9. On the most '*conservative*' calculations performed by Mr Kroon, based on his viewing of the video of Adelene on the ride, the minimum speed she was ejected was 100 kilometres per hour. Conversely, if all the assumptions about speed were taken to the '*…far end, then it was probably around 230 – something km/hour. But 100 km/hr was based on the minimum counts that we did*'.[521]

17.10. Description of Adelene's ride by civilians - 12 September 2014

As expected, a lot of civilians who were around the Airmaxx during Adelene's ride had only a brief chance to make their observations.[522] Thirty-four people reported what they saw to the authorities. Their observations are summarised in the SAPOL report.[523] These observations varied from very little to extensive detail.

17.11. What was common from those statements that were able to be detailed, was that they reported seeing Adelene being ejected from the Airmaxx as a result of the arm moving upwards. This caused her to travel a significant distance in the air. A common description was '*flung*' or as one witness observed '*catapulted*'.[524] The most common observation of these people was the terrible aftermath of Adelene coming to rest on the ground.

[520] Exhibit C71b
[521] Transcript, page 1065
[522] Exhibit C34
[523] Exhibit C34a
[524] Exhibit C14

17.12. From those 34 witnesses I wish to highlight two in particular. Before doing so I will insert Adelene's mother's photograph taken just after the ride started. This will help crystalise the descriptions, particularly with respect to Adelene's position in her seat and the state of the harness. I will then set out the analysis of this photo by Mr Kroon.

17.13. I have magnified Adelene's position in this photo as seen immediately below.

17.14. I will now rotate the magnified photo in paragraph 17.13 by 90 degrees to the left which allows an easier comparison regarding her restraint and empty seat next to her.

17.15. In evidence Mr Kroon made reference to this original photo,[525] namely:

> 'Q. What suggests to you about that; that that harness is not properly locked.
>
> A. The angle of the handles appears to be too much - seems to be too much angle on that handle. So even when you compare it to the seat next to her, which is obviously lowered. There's a significant difference in the angles. And I'd say that, from what I

[525] He was not shown the magnified photos as set out

remember of that ride, and looking at that photo, that appears to be too far up for it to have been fully down.

Q. Based on what you can see in that photo, is it possible for you to determine whether the secondary lock is engaged.

A. No. I couldn't tell you whether we're far enough to engage the secondary lock. But it looks like we're not where I would expect to see the harness, if it is, had been secured on her properly.

Q. So when you say 'If it had been secured', you're talking about if the primary lock was properly secured on her.

A. If the primary lock was holding the harness against their body. So if the harness was pushed against their body and the primary lock was holding, then I would have expected to see the handles far more vertically than that.

Q. Would you expect to see them at the same level as the ones in the seat next to her, or further back. Are you able to give any indication of that.

A. I guess I'm looking also at the arm of the carousel behind, not necessarily just the seat next to her. So trying to get an orientation for vertical. I don't know whether I'd necessarily see them as the same angle as the one next to her seat, but I'd certainly expect to see her more in line with the one next to her. And I wouldn't expect such an angle between what I'm seeing of that handle versus what I'm seeing at the carousel, like the vertical holder of the carousel.' [526]

Mr Kroon went on to say that he could not ascertain whether Adelene's harness appeared to be extended as far as it could go with the latching crotch belt. Mr Kroon noted the interlock for her harness did not activate to stop the ride even after she was ejected. It may have been compromised due to exposed electrical connections being exposed and wet which results in '*inconsistent behaviour'*[527]. Her harness did have the additional problems of contamination of the hydraulic fluid in the PL cylinder as well as four exposed threads in the connection as already set out in this Finding that could have caused the raised harness position as seen above.[528]

17.16. MM-B

This 17-year-old girl was lining up to go on the Airmaxx after Adelene's ride. She had ridden the Airmaxx on 10 September 2014, when similarly to what I have described in SG's video, the ride broke down halfway through.

17.17. On 12 September 2014, she described seeing '*…a little girl on the ride that looked like she was slipping out of the harness… it didn't look like she was strapped in properly*'.

[526] Transcript, pages 1066-1067
[527] Exhibit C83 page 100-101
[528] Exhibit C83 page 100-101

She believed Adelene *'…was too little and it looked like her harness wasn't clicked in properly*'.[529] This was consistent with '*harness creep*' described by Mr Kroon in evidence. Her statement was not challenged and she was not the subject of any application to have her called to give evidence in Court.

17.18. She described Adelene holding the front of the harness. The harness on the chair next to her looked as if it was '*more down than hers*'. She described that Adelene '*seemed to be slipping around in the chair*'.[530]

17.19. MM-B did not see the final moments of Adelene on the ride. She gave a logical reason for that in she had '…*got back on my phone*'.[531] The other obvious reason is the short time period of only a few seconds that Adelene was out of the harness before being ejected.

17.20. MM-B left the area when her friend came as she was '…*starting to feel sick from what I saw*' of Adelene on the ground. When she discovered Adelene had died on the news, she contacted Crime Stoppers.

17.21. The description of Adelene by MM-B gels in my mind from what can be seen in the photos above.

17.22. The basic acknowledgement by Mr Watkins in evidence of the dangers that Adelene was in in these photos was also an important moment in this Inquest. He agreed that the photo showed her harness was not locked properly.[532]

17.23. As was seen in the expert observations of Mr Kroon above, it leads towards the conclusion that a civilian, Mr Watkins and an expert all came to, namely the harness was not operating to make Adelene safe as she was entitled to be on that high energy ride.

17.24. <u>JM</u>

JM was 13 years old at the time and was in the area of the Airmaxx with friends when she saw Adelene on her ride. She described Adelene's left leg as '*on an angle and diagonal*'.[533] It appeared to her that Adelene's '*shoe*' was stuck in the seat. That was correct. Her left boot was found jammed in the footwell of the seat when the ride stopped. She stated she saw her trying to reach out towards the shoe through the middle

[529] Exhibit C12, page 4
[530] Exhibit C12, page 4
[531] Exhibit C12, page 4
[532] Transcript, page 413
[533] Exhibit C11, page 2

of the harness before leaning forward and reaching down towards the shoe with both of her hands. At that time the arm of the Airmaxx moved down, forcing her downwards. When the arm went up, she believes that was when she got '*flung up in the air*'.

17.25. Delay of SAAS reaching Adelene

The first responders were notified promptly concerning Adelene, but their arrival to assist her was not ideal. As expressed in the Inquest, although the medical evidence was that Adelene could not be saved at all, had any delay prevented her life being saved, it would have been an even more harrowing situation. Intensive Care Paramedic Simon Walter of SAAS was dispatched to The Show to help Adelene. He arrived at The Showgrounds via the southern entrance of Leader Street. Whilst en route SAAS also dispatched two other emergency ambulances and a further paramedic unit.

17.26. Mr Walter arrived at the Leader Street entrance at 12:20pm. He was met by The Show's security personnel who were unaware of Adelene's situation. This caused a one to two minute delay. The security officers were unable to get any further clarification to assist Mr Walter so he proceeded unescorted to the sideshow area.

17.27. He had to progress slowly through the heavy pedestrian traffic on this narrow access. He arrived at Adelene at 12:25pm or 12:26pm, the same time as the volunteer St John Ambulance officer who was stationed within The Showgrounds.

17.28. He and the St John's officer immediately assisted her. The additional SAAS crews arrived at 12:31pm and 12:33pm respectively.

17.29. Despite two requests by Mr Walter, Medstar could not attend due to unavailability.[534]

17.30. Following intensive CPR, Adelene was placed in the ambulance at 12:42pm and arrived at the WCH at 12:57pm. The WCH had been informed of the urgency of the situation and prepared for her appropriately.

17.31. WCH medical staff did all they could to sustain Adelene's life, however her life was declared extinct at 1:42pm.

18. Prosecution of CJS and owners

18.1. Investigations by SafeWork and SAPOL began immediately after Adelene was taken from The Showgrounds by ambulance.

[534] South Australia's single emergency medical retrieval service, often involving the use of a helicopter

18.2. As already mentioned, CJS, Ms Sullivan and Mr Watkins were prosecuted in the South Australian Industrial Relations Court. This was after SAPOL had referred all the material obtained in their investigation with SafeWork to the Office of the Director of Public Prosecutions[535] to consider whether a charge of manslaughter should be pursued against the owners and/or any competent person over Adelene's death.

18.3. In April 2016, the DPP decided not to pursue charges against any person for Adelene's death.

18.4. On 13 July 2017, Ms Sullivan and CJS were sentenced by Deputy President Ardlie of the Industrial Relations Court of South Australia for two breaches each of the WHS Act namely:

1) Failing to comply with a duty; and
2) Operating the Airmaxx without DR.

18.5. The charges had been laid by SafeWork including against Mr Watkins. His charges were discontinued in May 2017.

18.6. The sentencing remarks[536] and statement of agreed facts for sentence[537] were tendered. The remarks were carefully constructed and reflected the agreed basis of facts for the purpose of sentence.[538] This is a common practice in Courts for sentencing submissions and sentence. A sentencing Court is not bound to accept agreed facts, but routinely does so as occurred on this occasion. I raised this issue with counsel at the Inquest. I indicated that the agreed facts would not bind me in my duties to make a finding for this Inquest.[539] Indeed, some of the agreed facts contradicted uncontested evidence at the Inquest particularly concerning the height issue.

18.7. Ms Sullivan and CJS were sentenced on the basis that:

> 'There was no clarification sought by the defendants as to what really is the safe height for patrons.' [540]

That was simply not true as has been revealed in this Inquest through the email of 9 October 2012 to Safeco clarifying the height issue.

---

[535] DPP
[536] Exhibit C68
[537] Exhibit C67
[538] Exhibit C68
[539] Transcript, pages 542-543 and 2605, referring to issue estoppel R v McGee and McGee (2008) 102 SASR 318
[540] Exhibit C68, paragraph 36

18.8. Secondly, as expressed earlier, the DR issue was not as simple as stated in the agreed facts.[541] The agreed facts attributed the DR issues solely to Mr Bradley and that he '*gave CJS the DRN Q21673*' pending the completion of the DR. It was agreed he advised CJS that this was the DRN for a different device.

18.9. This issue has been discussed extensively in this Finding. The evidence does not allow me to make an unequivocal finding consistent with the agreed facts. In fact, many aspects of the evidence gave an indication that Mr Bradley was not the source of that DRN.

18.10. Ms Sullivan and CJS were convicted, but due to the finding that they were unable to pay financial penalties, no fine was imposed. Similarly, no compensation was awarded.[542] This was the last involvement of the Courts in relation to the Airmaxx as far as I am aware.

19. Assessment of owners' evidence

19.1. Jenny-Lee Sullivan

I have carefully considered Ms Sullivan's extensive evidence. I have made allowances for the passage of time between relevant events dating back to 2012 and her evidence of uncertainty and lack of recollection on some issues.

19.2. Ms Sullivan's evidence covered many important issues of interest in this Inquest. I repeat that the Court '*must not make any finding or suggestion of criminal or civil liability*'.[543]

19.3. As Nyland J noted in her analysis of the word '*suggestion*' in this context:

> 'The mere recital of relevant facts cannot truly be said, of itself, to hint at criminal or civil liability. Even though some acts may not seem to be legally justifiable, they may often turn out to be just that.' [544]

Her Honour also noted:

> 'A finding by the Coroner… might lead to a subsequent determination of criminal or civil liability … does not preclude the coroner from making the particular finding of fact.' [545]

---

[541] Exhibit C67, paragraphs 16 - 25
[542] Exhibit C68, paragraph 83
[543] Section 24(3) of the Act
[544] Perre v Chivell 2000 77 SASR 222 at paragraph 57
[545] Perre v Chivell 2000 77 SASR 222 at paragraph 55

19.4. Ms Sullivan's evidence covers critical issues in this Inquest and I therefore am mindful that an adverse finding on one or more of those issues may have serious consequences.

19.5. I am mindful of the importance of procedural fairness for both the owners and that I must consider each of their evidence separately and make separate decisions accordingly.

19.6. Ms Sullivan claimed that she could not literally '*cross the road*' due to Adelene's death. This has to be assessed in conjunction with her application[546] below, to the New South Wales Society dated 26 September 2014 for the Airmaxx to operate at the Royal Sydney Show.

SELECTION CRITERIA 3.

RISK, SAFETY, MAINTENANCE AND CROWD MANAGEMENT

1. Have there been any improvement notices issued by the relevant Statutory Authorities relating to the amusement devices contained in this application over the last 12 months?

no

2. Have there been any major incidents/hospitalisations to any persons or staff as a result of the amusement devices over the last 12 months?

~~no~~ We have just had an incident at Adelaide Show there has been no fault on Ride or operaters behalf will keep you informed of outcome!

3. When was the last time your emergency evacuation procedures were practiced?

every set up of the ride!

NOTE: Please include a copy of your emergency evacuation plans and procedures for all aerial rides that list time frames against procedures

4. Does the amusement devices detailed in this application have a Risk Management/Safety System in place which is compliant with AS/NZS ISO 31000:2009

Yes it does

5. Which risk management system are you using?

Paper work provided

6. Have the amusement devices detailed in this application been maintained and operated in accordance with the manufactures specifications

Yes it has!

7. Will adequate crowd control barriers will be in place during normal operations and special promotions

Yes we have them!

SELECTION CRITERIA 4.

PRESENTATION

Please supply the following in support of your application:

- ✓ Current photo of each amusement device is the minimum requirement.
- ✓ Current photo of staff uniform

[546] Exhibit C34 Mr Davey 90, page 38

19.7. As seen, just 14 days after Adelene died she claimed, '*we have just had an incident at the Adelaide show. There has been no fault on the ride or operators behalf*'. This form was signed in the name of Mr Watkins but was written by Ms Sullivan.[547]

19.8. Further, the application revealed that the owners still claimed the 120cm limit height for unaccompanied patrons. Even Adelene's death did not cause her to review and increase the minimum height to what Safeco had instructed. I also note she exonerated herself and Mr Watkins from any liability concerning the incident. When questioned about completing this application she stated:

> 'I was - we applied for Sydney Show previous and I would say we were granted. Clint and I, when it happened, we were told from everybody to keep going with the ride. Like keep your head up and keep going. Like - and we were just numb and then we just come to the realisation that we could not do it. We could not do it … Clint was not good after it. We both were not good. So I don't know if that was through guidance of people around us helping us get through it to recommend us to do this or not but we were never working this ride again.' [548]

19.9. I find that Ms Sullivan's evidence was not credible and that she desperately, but unsuccessfully, tried to shield the true nature of operation of the Airmaxx. The evidence showed it was operated to maximise any opportunity to make money even to the extent of ignoring fundamental safety issues and proper registration procedures being observed for it and for the air tanks. Although I cannot be satisfied she obtained the DRN from sources within the amusement ride and device industry, I will not exclude that is what occurred.

19.10. I reject that the proposed Sydney Show application was made on the advice of others.[549] I do not believe the advice Safeco gave about the height issue revealed to her in 2012 ever escaped her memory.

19.11. I found she was not a credible witness on key issues, in particular the height issue in light of contradicting evidence from Safeco in their October 2012 email and the first application to the Royal Sydney Show.

19.12. I cannot accept her evidence where it contradicted the evidence of others on important topics. These topics included Mr Anderson with the air tanks, the height issue, the strange situation of Safeco's written instructions on the height issue not being

[547] Transcript, pages 258-259
[548] Transcript, pages 258-259
[549] Transcript, page 259

discovered by any regulator or competent person until that very page appearing in triplicate in her son's folder[550] produced to SafeWork on 13 September 2014 on behalf of CJS and the owners. Ms Sullivan claims no knowledge about the instructions in triplicate.

19.13. In considering all the evidence about the height issue and Ms Sullivan's concession through counsel that she and Mr Watkins '*did the wrong thing because they kept the ride height at 120cm*' and '*that prior to Adelaide they had knowledge that the ride height should have been higher*',[551] I cannot accept that safety of the public was given the priority it needed above the need to make money.

19.14. I found Ms Sullivan was not a truthful witness. I was aware of the principles involved before making such an important adverse finding and applied them.[552]

19.15. Clinton Watkins

I have thought carefully about Mr Watkins and his evidence. He was continually patching up the Airmaxx during its public use. The SG video from 6 September 2014 was a prime example of how desperate he had become in maintaining the ride to ensure it kept operating for revenue.[553] Mr Kroon believed Mr Watkins had put himself in danger in the SG video. This reflected the desperation of Mr Watkins about the Airmaxx. He had to first assemble it only with the help of emails from Safeco.

19.16. Harness creep / hydraulic oil contamination

Mr Watkins denied he used the pump to put hydraulic oil into the hydraulic cylinders. The evidence of the hydraulic pump found in the control booth leads me to conclude that the hydraulic restraint system for the seats were subject to regular injections of hydraulic fluid which increased the risk of dangerous malfunction.[554]

19.17. However, the expert evidence outlined suggested that the contaminants found in various PL cylinders had two sources, namely from Safeco's manufacturing and the use of the pump.

19.18. Adelene's seat was severely affected by contaminated hydraulic fluid as already discussed. This made her seat vulnerable to the harness rising which is what I believe

[550] Exhibit C90
[551] Transcript, page 2591
[552] Briginshaw v Briginshaw (1938)60 CLR 336 and in particular Dixon J at 361-362
[553] See analysis of SG video in paragraph 16.11
[554] Exhibit C86h, photos 28-32 and 35-37

can be seen in Adelene's mother's photo in the early stage of Adelene's ride.[555] Mr Watkins acknowledged it was not safe for Adelene at that early stage of her ride.

19.19. Mr Watkins' denial of the use of the hydraulic pump did not convince me. The evidence of the site where the pump was found, his continued role in maintaining the Airmaxx and the scientific evidence of the extensive contamination of the hydraulic fluid for Adelene's seat, satisfy me that hydraulic fluid was regularly injected into the Airmaxx PL cylinders.

19.20. I should also note that despite this practice being denied, it was consistent with Safeco's instruction in the user manual. How such fundamentally incorrect instructions[556] were given by Safeco is another issue.[557]

19.21. Mr Watkins must also take his share of responsibility about the height issue. He should have sought out and discovered the height issue specifications. He was a very experienced amusement ride/device operator and this basic issue was a crucial factor of operation. He certainly was proactive in dealing with Safeco about the set-up which suggested to me he would not let himself be ignorant of the height issue. I therefore believe he was aware of the content of Safeco's email from October 2012. Ultimately, his counsel admitted that he did know about this issue, or at least at the time of arriving in Adelaide for The Show.[558]

19.22. There is no doubt in my mind that the financial pressure was a heavy burden and motivation to maintain the Airmaxx so it could operate, even if not in perfect working order. Indeed, Adelene's ride had the feature of one arm not operating.

20. Findings

20.1. At the end of the evidence I heard oral submissions and received written submissions concerning the correct assessment of the evidence and what findings and recommendations are appropriate from interested parties, namely SafeWork, Mr Munro, the Society and CJS and the owners. All submissions of interested parties were made in response to assisting counsel's submissions. All final submissions were

[555] Exhibit C1a
[556] Exhibit C86b and C86c
[557] Safeco Manual, page 23
[558] Transcript, page 2591

an important part of the Inquest. I gave them careful consideration before making any decision about the evidence and in deciding my findings and recommendations.

20.2. I refer again to the obligation of an Inquest to '*inquire into all the facts which may have operated to cause the death of the deceased as well as to inquire into the wider circumstances surrounding the death of the deceased*'.[559] With that guidance, I now turn to make the following findings of fact concerning the cause and circumstances of Adelene's death.

1) The funding that was granted by IBA to the owners and CJS to purchase the Airmaxx was based on a flawed and unrealistic business plan presented to them.

2) The amount of the loan in excess of $1,000,000 placed an enormous financial burden and stress upon the owners and CJS. At the time of Adelene's death, CJS had breached the terms of the loan on numerous occasions. The owners and CJS were aware of the extent of their significant financial difficulties concerning the service of the loan due to constant correspondence from IBA.

3) By the time the Airmaxx arrived in Australia, CJS and the owners had already drawn down the vast majority of the loan and needed to put the Airmaxx into operation as a matter of urgency. The time gap between payment to Safeco and its arrival was approximately 10 months.

4) Mr Watkins essentially assembled the Airmaxx without the assistance in-person from Safeco as promised.

5) In May 2013, the '*Commissioning Inspection*' by Mr Rode-Bramanis failed to satisfy the requirements of that crucial inspection. He made false assumptions and did no or poor research of the information provided to him by the owners, to verify its accuracy. There was the unsatisfactory completion of vital Documents One, Two and Three as set out in this Finding. This all culminated in the Airmaxx being operated against basic safety considerations, in particular concerning the eligibility of patrons to ride the Airmaxx unaccompanied and the incorrect classification of the restraints. The contents of these Documents were basically accepted as accurate until after Adelene died.

6) The vital facts about the height issue were not discovered as false until after Adelene's death on 12 September 2014. This meant that annual inspections

[559] WRB Transport and others v Chivell [1998] SASC 7002 at paragraph 31 per Lander J

in September 2013 and September 2014, only days before Adelene's death, failed to identify that the correct minimum height as specified by Safeco for an unaccompanied patron was 140cm. In addition, three audits by regulators in Queensland on 15 May 2013, New South Wales on 6 November 2013 and SafeWork on 1 to 4 September 2014 all failed to discover Safeco's instructions and recommendations about the height issue.[560]

7) The owners were aware of Safeco's instruction by email of 9 October 2012 that the minimum height for an unaccompanied patron was 140cm. Despite this instruction they continuously failed to inform any competent person, inspector or auditor about this information.

8) I am satisfied that the owners deliberately concealed this information from all the relevant authorities for the purpose of expanding the eligibility of patrons to ride on the Airmaxx. I find this was done for commercial and financial reasons which were prioritised well ahead of this fundamental and crucial safety issue.

9) The concealment of this information on the height issue involved ensuring the absence of scrutiny of the relevant documented information from Safeco. It was never available for an inspection or audit. This Finding is based on the evidence that no witness who inspected or audited the Airmaxx ever saw the relevant instruction. It is implausible every auditor and inspector failed to discover the truth about the height issue had the information from Safeco been properly made available by the owners. It was also a failing that no one actively demanded to see this instruction during an inspection or audit.

10) The operation and maintenance of the Airmaxx was set at the maximum rotational force. No allowance was made for Adelene's young age in that ride. Safeco had instructed that an '*operator*' reduce speed for a ride if they are mostly children.[561] Although Adelene was the only child on this ride, I believe the speed of the Airmaxx should not have remained at the maximum rotational force.

11) The maintenance of the Airmaxx was predominantly performed by Mr Watkins. This maintenance included injecting excessive hydraulic fluids into the hydraulic restraint system of the harness for the seats. This was consistent with the

[560] Exhibit C61d, record of inspections, page 119
[561] Exhibit C22c, page 19

instruction of Safeco, but was incorrect according to Ihber, the manufacturers of the hydraulic lock cylinder.[562] Ihber did not recommend any cylinder refilling.

12) The hydraulic oil used to refill the hydraulic lock cylinder was not the correct type of oil for the restraints. It contaminated the primary lock cylinder for the restraints, including the restraint system for Adelene's seat, which was the most heavily contaminated. Some of the contamination was consistent with contamination by Safeco during manufacture.

13) The effect of contamination was that it prevented valves within the PLC from closing off fully, thus causing internal oil leaks. This was the cause of a restraint to rise from a closed position.

14) By 12 September 2014, the restraint for Adelene's seat was badly compromised by the severely high level of hydraulic fluid contamination.

15) Adelene's seat was observed after 12 September 2014 to consistently rise when in a locked status.

16) Adelene's mother's photo showed Adelene's harness was in a position that put her in danger at the beginning of her ride.[563]

17) The restraints for the Airmaxx were not appropriate and should have been at the highest level, a Type 5 restraint. This fundamental safety error stemmed from Mr Rode-Bramanis' calculations as documented in the logbook when he inspected the Airmaxx on 6 May 2013.

18) The minimum height of 140cm recommended by Safeco was not supported as appropriate for the restraints installed.[564]

19) The Airmaxx's rotational speed of 10 cycles per minute was too fast for Adelene's ride compared with Safeco's recommended speed of 8.5 cycles per minute.[565] Safeco's instructions in the user manual were inadequate as it did not specifically nominate any recommended speed for operation.[566]

20) The Airmaxx should not have been operating on 12 September 2014 due to:

    (i) It not having a legitimate Design Registration Number;

[562] Exhibit C86(b) - Response by Ihber
[563] Exhibit C1a
[564] Exhibit C31a, Mr Nery
[565] Exhibit C83, page 96
[566] Transcript, pages 1408-1409

(ii) The false DRN was created by deceptive conduct and thereby avoided all the important safeguards for the public that are necessary for a DR to be granted. The evidence left open who was responsible for the deception, the late Mr Bradley or the owners. It was not possible to resolve this question without denying procedural fairness to the owners. I was not prepared to proceed to a more definite conclusion due to that situation;

(iii) The air tanks did not have a Design Registration as required;

(iv) The restraints for patrons were not appropriate;

(v) The safety of the Airmaxx was poor, in particular with respect to the locking mechanisms of the patron's restraints;

(vi) The Airmaxx was operating at an inappropriately low level of eligibility for unaccompanied patrons of 120cm rather than the 140cm limit set by Safeco;

(vii) The owners had not complied with terms of the licence granted to them by the Society;

(viii) The record keeping by the owners in the logbook was poor;

(ix) The poor compliance by the owners with respect to their legal obligations in operating the Airmaxx were not detected by inspectors or regulators. This was due in part to the Airmaxx bypassing the system of DR;

(x) The systems for enforcement and regulation for each jurisdiction were continually compromised or bypassed due to a lack of a cohesive regime between jurisdictions to ensure all relevant information was easily obtainable based on a national data base.

20.3. Adelene's ride

Adelene's ride was operated against the basic recommendation of its manufacturer namely:

1) The rotational speed was set at a maximum of 10 revolutions per minute instead of 8.5 revolutions per minute;

2) The height for unaccompanied patrons was 120cm rather than 140cm;

3) Adelene's height without her boots on was 137cm. This is the relevant measure of height to decide her eligibility. Therefore, by Safeco's standard, she was not eligible to ride the Airmaxx unaccompanied;

4) The restraint for Adelene's seat was in a dangerous condition due to the high level of contamination within the hydraulic lock cylinder;

5) The contamination was consistent with two sources, namely at manufacturing stage and, secondly, due to subsequent injection of hydraulic fluid by the owners and operators of the Airmaxx at intermittent stages;

6) As depicted, Adelene was not sufficiently secured by her harness almost immediately after the commencement of her ride. There are a number of plausible explanations for this situation based on the faults identified by Mr Kroon in his evidence as summarised in this Finding. The sensor for her seat, although properly positioned within her restraint, failed to activate to bring the ride to an immediate stop.[567]

20.4. Adelene's ejection from her seat

It is unclear exactly how Adelene came into difficulty that led her to her position of hanging by her left foot just prior to being ejected. I find that she did not contribute to her own death in any way whatsoever. No one at this Inquest suggested otherwise.

20.5. There are three factors that may have caused Adelene to get into distress, namely:

1) She was inappropriately small for the restraint and/or;

2) The harness was not secured properly at the start of the ride and/or;

3) Her harness had risen significantly soon after the ride commenced due to the contaminants in the hydraulic fluid within the hydraulic lock cylinder, a key component of the PLS.

20.6. The possibility that she lost consciousness during the ride as a result of the acceleration forces generated by the ride, and as a result slumped forward to the point that she was able to slip under the shoulder restraint and be thrown free of the ride, has been excluded.[568]

[567] Exhibit C83 pages 100-101
[568] Exhibit C32

20.7. Adelene's death

Adelene was in severe danger the moment she was unrestrained in her seat during the ride, whether by a restraint malfunction or inappropriate restraints that failed to keep her restrained during the ride.

1) Her death was preventable had the owners followed Safeco's instruction with respect to the height issue;

2) The owners' financial situation must have been at least the substantiated cause for ignoring Safeco's instruction;

3) Her death would have been less likely had the Airmaxx been fitted with appropriate Type 5 restraints.

20.8. Safeco

1) Safeco fitted the Airmaxx with inappropriate restraints to meet Australian Standards. There was no evidence to say whether they were obliged to do so in the contract of sale with CJS and the owners;

2) The instruction for maintenance of the hydraulic lock systems was in error concerning the injection of hydraulic fluid into the hydraulic lock cylinders;

3) The air tanks for the Airmaxx were not compliant with Australian Standards.

20.9. CJS and the owners' duty as importers of the Airmaxx

Under WHS laws, CJS and the owners as the importers of the Airmaxx, took on the duties of the designer, manufacturer and importer under the WHSA. They were fully responsible for ensuring the Airmaxx was safe to operate and compliant with South Australian law in its operation at The Show.

20.10. The Society and SafeWork

The relationship between these two bodies was poor in 2014. There should have been a combined system of inspection and disclosure between them in 2014 as occurred from 2015-2017. If this system was in place in 2014 then the chances of detection of registration irregularities of the Airmaxx, including the absence of any registration for the air tanks, would have substantially increased.

20.11. The Society:

1) Failed to enforce its own sanction for non-compliance with the essential demands of their conditions of licence for the Airmaxx. The failure of the owners to return the safety checklist produced by the Society should have been detected promptly by the Society;

2) According to the sanctions on the safety checklist, a failure to complete and return it to the Society meant the Airmaxx should not have been allowed to operate at The Show in 2014.[569] The stricter sanction of a refusal to let the Airmaxx on site could also have been enforced;

3) The significance of the safety checklist for the Society was demonstrated when Mr Ploenges' requested to see it on 13 September 2014 in order to investigate Adelene's death on behalf of the Society. He considered it a core document for the investigation;

4) The brief inspection of the Airmaxx by Judith Noble in Melbourne in March 2014 was not a sufficient insight into the suitability of the Airmaxx to operate at The Show. Ms Noble needed expert advice from a competent person concerning operational and safety issues of the Airmaxx to allow the Society to make a more informed preliminary assessment;

5) The Society in 2014 had a poor liaison regime with interstate counterparts concerning gathering of as much information on exhibitors or proposed exhibitors such as the Airmaxx for The Show. The result of this situation was that the Society had very little, if any, information about the Airmaxx other than from the owners and their records prior to its operation at The Show;

6) This regime has been subsequently overhauled and improved since 2014.[570] However, there is still no formal protocol for information sharing between the Society and its counterparts;[571]

7) The Society safety officers either were not notified or failed to notice the numerous breakdowns of the Airmaxx that indicated the operational difficulties of the Airmaxx during The Show;

[569] Transcript, page 2357
[570] Exhibit C103, Affidavit of Mr Baker, Manager Work, Health and Safety (WH&S), Security and Carnival
[571] Exhibit C103, paragraph 40

8) Although not relevant to the cause or circumstance of Adelene's death, there was a failure of the Society to give immediate and easy access to the first ambulance to arrive to assist Adelene. I note the Society's undertaking to review the communication system and location of all emergency service personnel, including SAPOL, at The Showgrounds to provide the best response times and procedure for an emergency;

9) The Society was deceived by the owners in its application to operate at The Show in 2014 because the PRN for the Airmaxx was claimed to be obtained in New South Wales, therefore was valid according to the Society compared with a PRN obtained in Victoria. Unfortunately, no database existed to allow the Society to verify the accuracy of that claim;

10) The Society, as part of Agricultural Shows Australia[572] made submissions to the 2018 review of the Australian Model WHSA conducted by former Acting Chief Executive of SafeWork in 2014, Ms Marie Boland. It argued that '*irregularities between the States laws, results in a number of risk issues*' concerning amusement devices. The ASA recommended five matters for consideration namely:

    i) A national database to be shared by all jurisdictions that mandates and records notices or enforcement orders made by any State regulator on an amusement device;

    ii) A common regulatory system that produces a consistent uniformed requirement for DR and PR throughout Australia for '*high-risk plant*';

    iii) Mandatory major inspections of amusement devices that are nationally consistent and occur at prescribed intervals;

    iv) That there be national reporting of critical incidents and critical defects on amusement devices accessible by all regulators;

    v) A national educational framework regarding the competency of operators of amusement rides and devices that results in a satisfactory system of training and instruction.

11) The ASA submissions were subject of comment by Ms Boland in her report of the review. She recommended Regulation 242 of model WHSA '*be amended to*

[572] ASA

ensure that details and statutory notices issued by any WHS regulator are included in device's logbook'[573] as well as evidence of '*operator training and instruction*'.[574] She believed that these recommendations '*will ensure that third parties are provided with relevant information to assess whether a ride is safe and the operator is competent to operate it. This measure is particularly important to ensure the safety of amusement devices which move within and across jurisdictions*'.[575]

I find that the Boland review and the ASA submission highlight vital strategies of governance and record keeping that need to be implemented as a matter of urgency.

20.12. SafeWork

1) SafeWork, in administering compliance with the WHS Act, provided mutual recognition of PR of the Airmaxx due to the Victorian PRN of the Airmaxx as allowed;

2) An application for PR in South Australia was made on behalf of the Airmaxx on 14 May 2014. It was deficient as it failed to attach a DR certificate as required.[576] This application did not proceed as the Victorian PR of 8 May 2013 was recognised by SafeWork as valid for South Australia. Ms Sullivan was told this by SafeWork in a telephone call with SafeWork on 26 May 2014;[577]

3) If the application had been processed and the requirements were totally enforced, the DR issue could have been exposed as there was no DR certificate in existence;

4) Therefore, in the end, SafeWork was deceived as much as any other jurisdiction about DR issues;

5) SafeWork does not necessarily know when an amusement device is operated in South Australia;

6) SafeWork delegated the entire audit of the Airmaxx to Mr Kym Miller who had no qualifications as an engineer. Despite the attendance of SafeWork engineer

[573] Exhibit C80, extract of review by Ms Boland concerning amusement devices, pages 141-143
[574] Exhibit C80, page 143
[575] Exhibit C80, page 143 - See also recommendation 28
[576] Exhibit C48
[577] Exhibit C48, Statement of Areti Aloganis

Mr David Rynes on 1 September 2014, Mr Kym Miller did not seek any assistance from him after that point;

7) The NAT given to Mr Kym Miller for the Airmaxx was out of date and misleading, in particular about DR not being applicable for the audit. This stopped any further consideration of the DR with respect to the Airmaxx by SafeWork;

8) The NAT was poorly drafted and confusing. An upgraded version from 2014 is now used. The NAT was an ineffective document to identify serious issues with the Airmaxx;

9) SafeWork did not act on information from Queensland in 2013 that alleged concern over the competence of Mr Munro who was performing multiple inspections in 2014 at The Show, including the annual inspection for the Airmaxx.

20.13. Mr Munro

Mr Munro's inspection of the Airmaxx at The Show was not comprehensive and therefore not capable of identifying the multitude of concerns and faults revealed after 12 September 2014.

20.14. He relied on the accuracy of the entries in the poorly maintained logbook. This was consistent with every other inspector and auditor prior to 12 September 2014.

20.15. Although many disagree with his interpretation of his duties under the AS for an annual inspection, it cannot be established that this interpretation was outside the scope of possible interpretations of the AS.

20.16. His interpretation, however, did cause significant areas of concern of the Airmaxx to remain undetected.

20.17. Mr Munro's evidence must be assessed with the knowledge that the Airmaxx operated for one week after his inspection and that some faults may have developed during that period, particularly if excessive hydraulic oil was being put into the harness restraint system.

20.18. The above findings are all relevant to the cause and circumstance of Adelene's death.

20.19. The focus of this Finding therefore needs now to turn to recommendations that aim to stop something like this ever happening again in the future.

21. Aftermath

21.1. The aftermath of Adelene's death was the extreme pain and suffering of her wider family, but in particular, her mother. A good outcome was that the Airmaxx never operated again in Australia. Despite initial actions by the owners to resume operating the Airmaxx in January 2015, including re-engaging Mr Bradley to obtain DR[578], this was abandoned. It was not the best outcome however. The Airmaxx was sold to an operator in the United Kingdom in 2016 for approximately $180,000.[579] I heard brief evidence that in 2019 a woman fractured her skull at the Hull Show when she was ejected from the Airmaxx on to a patron from another ride.[580]

21.2. As SAPOL submitted:

> 'The failures of a number of people and processes compounded upon each other, leading to the situation whereby the Airmaxx 360 was allowed to operate in circumstances that were perilous.' [581]

I agree.

22. Recommendations

22.1. Pursuant to section 25(2) of the Coroners Act 2003 I am empowered to make recommendations that in the opinion of the Court might prevent, or reduce the likelihood of, a recurrence of an event similar to the event that was the subject of the inquest.

22.2. The following recommendations are directed to the Minister for Treasury and Finance. It is recommended that the Minister receive formal advice from the AIHS and SafeWork:

1) Concerning the urgent need for reform of the regulation and governance of amusement rides and devices in Australia;

[578] Exhibits C23j and C23k, email correspondence of Mr Bradley in January 2015
[579] Exhibit C34a, page 145 of SAPOL report
[580] Transcript, pages 1508 and 894-895
[581] Exhibit C34a, page 117

2) To urge the creation and implementation in all Australian jurisdictions of:

i) A nationwide regulatory process to verify and record design registrations for amusement devices and rides to ensure that every amusement device and ride in Australia is subject to the same process of design registration;

ii) A common application procedure for plant registration to ensure that every plant registration has met the same criteria, regardless of where it is registered in Australia;

iii) A law or regulation that plant registration will not be granted unless a design registration certificate has been endorsed and verified by the State or Territory regulator;

iv) A national database of design registration numbers and plant registration numbers that is accessible by regulators of all States and Territories;

v) A nationwide panel of qualified persons be established to assess, annually, the skills of competent persons inspecting amusement rides and devices to verify which aspects of expertise the competent person possesses;

vi) An annual assessment of the competent persons including a requirement of mandatory participation in a continuing education scheme;

vii) A mandatory national electronic logbook system for all amusement devices and rides in Australia that can be accessed by all authorised people necessary for inspections and audits in any jurisdiction;

viii) Laws to ensure the logbook for an amusement ride or device must include a design registration certificate, a plant registration certificate and a statement from the manufacturer of the device or ride confirming their criteria for eligibility of patrons to use the ride or device;

ix) Laws to enforce that a notice issued by a regulator in any jurisdiction concerning an amusement device or ride requiring improvements to safety, reports of injuries to patrons as well as any other critical safety issues be available for inspection in the logbook for that ride or device as well as on a national database.

22.3. The following recommendations are directed to the Royal Horticultural Society of South Australia. It is recommended that:

1) It initiates action with corresponding Society's in other jurisdictions to establish a database for the sharing of all relevant information concerning amusement devices or rides that operate at the Society's Shows;

2) A review concerning the configuration of the Venue Control Centre at The Showgrounds be conducted so that all emergency responders are easily accessible to each other and to the Society's safety inspectors to allow the quickest possible response to an emergency incident;

3) It ensures that a competent person is present on their behalf for any inspection or audit of an amusement ride or device conducted at The Show so that it has an immediate opportunity to be informed of, or identify any safety concern or issue for consideration and reaction.

22.4. The following recommendations are directed to Standards Australia. It is recommended that:

1) Standards Australia review AS3533 to give clear direction to a competent person as to what is required when an inspection is to be performed;

2) Standards Australia define the terms and criteria for the initial or commissioning inspection of an amusement ride or device;

3) It conducts a comprehensive review of the Australian Standards in relation to amusement devices and rides. This review should clarify in detail what is required at an inspection of an amusement device or ride by a competent person in every jurisdiction;

4) It urges all governments in the Australian jurisdiction that the Australian Standards have the same legal status in all jurisdictions as a rule of law rather than merely a code of practice;

5) A review of the definition of a competent person with respect to amusement devices and rides in the Australian Standards and relevant State and Territory legislation.

23. Final remarks

23.1. This Inquest has revealed the many times opportunities were missed to change Adelene's fate on 12 September 2014. The evidence of these missed opportunities is likely to produce understandable reactions of frustration and despair to the public. There needs to be a meaningful response to honour Adelene's short life. Her death must be a cause for fundamental change in the operation and governance of high energy rides in Australia. South Australia must be the leader in convincing all jurisdictions to agree and implement the necessary actions that will ensure that the wishes of Adelene's mother are honoured so that '…*such an event will not happen again*.' The submissions the AIHS provide are a great starting point for this task.

Key Words: Royal Adelaide Show; Show Ride; Airmaxx 360; Minimum Height

In witness whereof the said Coroner has hereunto set and subscribed his hand and Seal the 7th day of June, 2022.

Deputy State Coroner