OFFICE OF THE STATE CORONER

FINDINGS OF INQUEST

CITATION:	**Inquest into the death of Michelle Maitland**
TITLE OF COURT:	Coroners Court
FILE NO:	2009/638
DELIVERED ON:	12 April 2013
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FINDINGS OF:	Coroner Kevin Priestly
CATCHWORDS:	Coroners, inquest, sporting club, gymnastics, fall, head injury, uncovered concrete floor, matting requirements, safety risk management, state and national association support.

REPRESENTATION:

Counsel Assisting:	Ms S Williams, i/b Northern Coroners Office
Mrs A Maitland:	Self represented
Office of Fair & Safe Work Qld:	Ms L McConnell i/b Office of Fair and Safe Work Queensland
Gymnastics Townsville:	Mr D Chaffey
Gymnastics Queensland:	Mr M De Waard i/b Michael Sing Lawyer
Gymnastics Australia:	Mr M Gynther i/b Landers & Rogers Lawyers

Introduction

It is important to understand the statutory role of Coroner as well as the powers and limitations that affect how the Coroner discharges that role.

A Coroner is required to make findings as to how a person died, when the person died, where the person died and what caused the person to die.

A Coroner is precluded from including in his findings any statement or comment that a person is or may be guilty of an offence or civilly liable for something (s.45(5) and s.46(3)).

A Coroner may, whenever appropriate, comment on anything connected with a death investigated at an inquest that relates to public health or safety and ways to prevent deaths from happening in similar circumstances in the future.

On evening of 18 June 2009 19-year-old Michelle Maitland was participating in an Adults Class at Gymnastics Townsville under the supervision of coach, Robert Crane. On completion of a sequence on an apparatus known as the Tumbl Trak, she fell and struck her head on the concrete floor. Ms Maitland died in Townsville Hospital the next morning from a severe head injury.

To understand the narrative, an introduction is needed about Ms Maitland, Gymnastics Townsville, the Tumbl Trak, the coach Mr Crane and the nature of an Adults Class.

Ms Maitland was formerly active as a gymnast with Gymnastics Townsville. Her previous membership was in 2002 when she was a level 6 Women's Artistic Gymnast. She returned to the club to participate in Adult Classes on 23 April 2009 and regularly attended, with a couple of exceptions, twice a week.

Gymnastics Townsville was established in December 1996 and is administered by an elected Management Committee. It was affiliated with Gymnastics Queensland and Gymnastics Australia. The gymnastics programs are managed through a hierarchy of accredited coaches. Graeme Brown was the Coaching Coordinator. Head Coaches are appointed to each discipline and report to the Coaching Coordinator. Reporting to each Head Coach are a number of level 2, level 1 and trainee coaches. The court heard evidence from Ms Moss, Secretary and Immediate Past President, and Mr Wolfe, Treasurer and Coach. Like most clubs of this nature, most positions are filled with volunteers, often parents supporting the club that supports their children's sporting interest.

Adult classes are non-competitive recreational class available to people aged 13 and over. There are no pre-requisites and often participants are returning former gymnasts who prefer not to pursue the competitive path. Clubs commonly offer this class. There is no formal structure to the classes. Participants are encouraged to progress at their own rate under the supervision of accredited coaches.

Mr Crane was assigned to the Adult Class 2 years earlier. He was a former Level 9 gymnast (level 10 being the highest) and a past national champion. He was a Men's Artistic Level 1 coach and held a Men's Level 3 judging accreditation. He had over 5 years experience as a coach. He had completed various training workshops.

During the course of evidence, the inquest heard from Mr Brown, Coordinating Coach, and coaches, Mr Wolf, Ms Gilboy and Ms Dargan. Most of the coaches are casual employees of the club. They qualify through training programs provided by Gymnsatics Qld.

The Tumble Trak is a 10m long and 2m wide trampoline bed that is suspended 60cm from the ground. It was purchased in early 2008 from Acromat, the manufacturer. It is a training device. The landing zone was set up at the end of the Trak with 2 crash mats, each 1.8m wide and 3.6m long and 30cm thick, stacked on top of each other. There was additional matting (scatter mats) along both sides of the crash mats 90cm wide and 1.8m long and 5cm thick filled with dense foam. There is an issue about the usual presence and need for an additional scatter mat at the end of the crash mat.

A photograph of the Tumble Trak is shown in the Appendix. The area of concrete floor where Ms Maitland fell and the configuration of the matting at the time of the fall are also depicted.

There are a number of distinct skills within the sequence that Ms Maitland performed. A pictorial representation of each skill is provided in the Appendix including a round off, a flic (or flic flac), and a backward layout. An additional skill involved incorporation of a full twist into the backward layout.

The Narrative

A critical part of the narrative is addressed separately. There is an issue of fact I must resolve about what sequence of skills Ms Maitland was performing at the time of her fall. The evidence relevant to that issue is fully explored in a separate section of my findings.

At about 7.30 pm on Thursday 18 June 2009 the Adults Class started at Gymnastics Townsville. Mr Crane was the coach supervising the class. Ms Maitland was a participant. There were about 10 participants in the class.

After marking the roll, Mr Crane had all participants complete two laps of the gymnasium and then start the group stretching on the back floor. While the group stretched, Mr Crane spoke with a new participant explaining the rules as well as the fact that the class was not structured and there was no set routine. The new participant was told he was free to use any equipment that was not being used and if he wanted to learn any skills or needed help with anything, to see him. Mr Crane was in the practice of always ensuring any newcomer was supervised. He watched what they do and closely monitored their activities to gauge their experience and ability. Some participants moved to strengthening work while others went off to their chosen activity. Mr Crane monitored their activities to ensure they did them within their ability and in a safe manner. Mr Crane spent further time with the new participant who asked

to be taught how to perform a front somersault. Mr Crane went to an area known as the half floor situated next to the main floor and started teaching this skill. Mr Crane said he remained vigilant, keeping an eye on other participants. Mr Crane spent about 15 minutes with this new participant. While doing so, he saw another participant doing an activity he had not seen him do before. Mr Crane stopped that activity, called over that participant and made him do progressive activities for that manoeuvre until it was safe to him to continue by himself. Mr Crane also recalls assisting another participant with cartwheels on the main floor. Mr Crane then moved to the beams where he checked on the two men doing strength activities.

At this time, about 8.10pm, Ms Maitland was practicing a gymnastic sequence on the Tumbl Trak. She was taking turns with Ms Tacinta Thorogood. Mr Crane was positioned a few metres away from the end of the Tumbl Trak near another apparatus, the beam.

At the end of a sequence, Ms Maitland dismounted the Tumbl Trak with a particular manoeuvre and did not land correctly. She travelled backwards and beyond the crash mat, striking her head on concrete floor. Ms Maitland remained unconscious on the floor. An ambulance was called and transferred her to Townsville Hospital where she was admitted to the Emergency Department.

Dr Laurence Marshman was the on-call Consultant Neurosurgeon called to the Emergency Department in anticipation of her arrival. He arrived (8.50pm) shortly after Ms Maitland. He noted that she was intubated at the scene without sedation indicating she had no resistive brainstem reflexes. She remained intubated and ventilated on arrival and during his examination. Her Glasgow Coma Scale (level of consciousness 1-15 with 15 being highest) was assessed prior to intubation at 3, indicating no response to painful stimuli in terms of eye opening, motor response or verbalisation. She was in a deep coma with no observable brain function. Both pupils were dilated and did not react to light stimulus. There was significant bleeding from both ears. Blood pressure was difficult to maintain at satisfactory levels despite administering adrenaline. An urgent CT of the brain was performed shortly after 9pm. It showed widespread brain swelling and terminal brain herniation. Although there was a thin blood clot on the surface of the brain over the right convexity and small areas of bruising in the frontal regions, there was no mass lesion that could account for her condition nor amenable to surgical intervention. There were very significant base of skull fractures. An MRI was planned and arranged to confirm brain stem ischaemia. However, Ms Maitland was too unstable for the length of time required to perform that procedure. The MRI scanner was not a suitable environment to deliver critical care to an unstable patient. Ms Maitland was returned to the Emergency Department for stabilisation.

There were a number of consultants involved in treating Ms Maitland. Dr Geoffrey Gordon, Director of Intensive Care Medicine, was also called to assess Ms Maitland. He was present shortly after Ms Maitland's arrival. Both Dr Marshman and Dr Gordon independently concluded that Ms Maitland's prognosis was hopeless. An intracranial monitor was inserted, revealing

extremely high intracranial blood pressure resulting in almost no cerebral blood flow. The prognosis was extreme ischaemia leading to ischaemic necrosis of the brain.

Later that night, Ms Maitland was transferred to the Intensive Care Unit. Dr Gordon developed a clinical care plan that his Registrar and nursing staff implemented. The aim was to aggressively attempt to resuscitate Ms Maitland's brain. Dr Gordon remained on-call and available to his staff overnight.

Throughout the night there was deterioration in Ms Maitland's condition. There was an increasing need for haemodynamic support through increasing doses of noradrenalin. The swollen nature of the brain and consequent herniation prevented blood from entering the brain.

At 5.30am Dr Gordon reviewed Ms Maitland. He noted that the intracranial pressure remained consistent with death, despite their efforts; the pathology had 'relentlessly deteriorated'. Death was inevitable. Dr Gordon met with Mrs Maitland and discussed his assessment. Ms Maitland was pronounced deceased at 6.10am.

Post Mortem Findings

On 22 June 2009 Professor Williams conducted an autopsy and certified that Ms Maitland died due to head injury due to a gymnastics accident. He confirmed she sustained a significant and fatal head injury. Macroscopic inspection revealed the scalp had an extensive area of bruising. The skull was extensively fractured. The brain had about 27gm of associated subdural haemorrhage with some subarachnoid haemorrhage. Some of the subdural haemorrhage was around the brain stem. There were extensive contusions of the frontal and temporal poles bilaterally, more severe at the left side. Histology confirmed severe contusions at the frontal and temporal poles bilaterally.

Toxicological testing of blood samples taken at autopsy detected the presence of Delta 9 tetrahydrocannabinol (THC) at the level of 0.014mg/kg and 11 nor delta 9 tetrahydrocannabinol acid at the level of 0.034mg/kg. There was an anomaly in the toxicological testing of ante-mortem samples attributed to taking of the plasma sample in a tube containing Gel Coat that absorbs THC rendering the plasma negative for this active ingredient. The tube is designed and used in hospitals for clinical diagnostic purposes and not for testing for recreational drugs such as Cannabis.

Professor Williams concluded that Ms Maitland had used cannabis and the levels equate to mild intoxication.

In a statement prepared to assist Workplace Health and Safety in its understanding of his conclusion about intoxication, Professor Williams reported:

- Cannabis contains a number of substances that have psychoactive effects, the predominant one being delta-9-tetrahydrocannabinol (THC).

- Although Cannabis is taken for its relaxation promoting euphoric properties, the accompanying effects include altered time and distance perception, decreased concentration and impaired learning. These effects are relevant to a person performing gymnastics.

- Studies of the effects of THC on drivers show increased tendency to be distracted, poorer judgement, and difficulty concentrating. However, some drivers actually improved in performance after the cannabis dose. Some subjects had improved ability to focus concentration on tasks for short periods of time and perform quite well.

- The blood level of THC can be converted to other units for comparison with known levels that affect impairment. A level of 0.014 mg/kg equates to 14 micrograms per litre, which equates to 14 nanograms per millilitre. It is recognised that a level of THC of <1 nannogram per millilitre does not cause impairment; and about 9-10 nanograms per millilitre equates to the degree of impairment produced in the range 0.05 to 0.08 blood alcohol concentration. Therefore, Ms Maitland had a level of cannabis equating to being intoxicated at the wheel of a car and the level of that intoxication equates to 'mildly intoxicated'.

Dr Fisher is a Forensic Medical Officer who routinely provides reports to assist police officers and courts to understand and interpret drug levels and their likely effects. Dr Fisher reviewed the autopsy report including toxicological information and the medical records of Ms Maitland.

Dr Fisher explained the relationship between THC and 11-nor delta 9 tetrahydrocannabinol-9-carboxylic acid (THCCOOH). THC is the active constituent of Cannabis. THCCOOH is produced through the break down of THC and serves only as a marker of past cannabis consumption.

Dr Fisher then reported:

- The level of THC found in Ms Maitland's samples were too high to be attributed to passive smoking.

- THC levels in blood can increase after death and this is more noticeable if the blood is collected from the chest cavity as opposed to a blood vessel in the leg (as was the case with Ms Maitland).

- Ms Maitland died in hospital and her body was transferred to the mortuary where she remained until the time of autopsy and blood collection. Any potential increase would not be great and unlikely to exceed a doubling. Therefore, the THC level at the time of her death was unlikely to be lower than .007mg/kg.

- At the time of her fall, Ms Maitland had a high blood level of THC and would most likely have been adversely affected in terms of her psychomotor function.

- Studies demonstrate that about 35% of tests of psychomotor performance and cognition will show a performance decline at THC levels of 0.005mg/kg. Levels of THC at 0.007mg/kg and above are associated with maximal deterioration of performance testing.

- While research is mostly focussed on the psychomotor skills required to drive a car, the findings can be extrapolated to gymnastics because the psychomotor skills needed to perform gymnastics manoeuvres are of a higher order and therefore, more sensitive to deterioration from any cause be it tiredness, illness and drugs.

Dr Fisher concludes that at the time of the fall Ms Maitland had a high level of THC that would have been sufficient to interfere with her judgement and cause a deterioration in her psychomotor skills necessary for safe completion of complex movements with small margins of error.

Although the evidence of the witnesses that saw Ms Maitland performing his sequences did not notice any behaviour, movement or other signs of impaired function, I must conclude that Ms Maitland was at a greater risk of an error of judgement and less precision and coordination in her finer physical movements. To an unquantifiable degree, her intoxication likely contributed to the failure to properly execute the sequence she was performing.

The Sequence Performed

There is a conflict on the evidence as to the sequence of skills that Maitland performed at the time of the fall. It is important to determine the sequence to better understand how the incident occurred to inform any investigation of the hazards and risks associated with that sequence and the adequacy of the control measures used to mitigate those risks.

Ms Tacinta Thorogood was a fellow participant in the Adult Class who was training alongside Ms Maitland that evening. She was 16 years of age and started gymnastics at aged 4. She continued in the sport since then with the exception of a two-year break that ended on resuming with Gymnastics Townsville in early 2008. She expressed an interest in coaching and started as a ‘buddy coach’, a prelude to achieving formal qualifications. Ms Thorogood started participating in adult classes in July 2008, becoming more regular in 2009 attending both Tuesday and Thursday classes.

Ms Thorogood was not available to give evidence at the inquest. However, she provided a number of statements. The first was to Gymnastics Townsville shortly after the event. It was a brief statement she prepared at the Clubs request. She later provided another statement after an interview with an insurance loss adjuster. She also participated in a recorded interview on 15 April 2010 with legal counsel for the Club in preparation for defending a workplace health and safety prosecution.

In her statement dated 20 May 2012, Ms Thorogood recalls Ms Maitland working on the Tumbl Trak, performing a round off, flick layout. Also, she stopped at the end of the Trak and did a standing full backward twist. Ms Thorogood recalls Mr Crane 'pulled her up' for leaning too far back during her take off and her arms were not in the right position when she twisted. When the fall happened, Ms Thorogood saw Ms Maitland perform a round off flick and then go straight into a full twist layout. She said that Ms Maitland had not previously connected the full twist and believes that she 'chucked it in'. Ms Thorogood said that she didn't do the twist with the correct technique as she was leaning too far back as she had done earlier in the night and went into the twist 'way too late'. As to the landing, Ms Thorogood saw Ms Maitland's feet connect just inside the yellow crash mat. She had so much momentum and speed she just went backwards on the concrete floor.

Ms Thorogood remembered the concrete floor was exposed earlier in the day. She recalled thinking before the fall whether or not she should put a mat down because she had performed a front somersault and over rotated, landing then stepping on the green floor on completion. She didn't think about it any further. The fact that Ms Thorogood went beyond the crash in performing a skill on the Tumbl Trak is significant.

Ms Thorogood has given consistent accounts of the earlier sequences and the final sequence. She is clear that Ms Maitland earlier performed one sequence involving a round off/flick/layout, stopping on the Trak, before moving to the end of the track to perform a full twist. It was only during the last sequence that she included the full twist layout on dismount.

Jessica Tubnor arrived early for cheerleader training to start at 8.30 so she sat and waited on the tiered seating. She was watching Ms Maitland 'because she was so talented'.

Ms Tubnor prepared a statement on 22 June 2009. She reviewed a further draft statement that was prepared based on an interview with an insurance loss adjuster. She made so modifications to that draft and accepted the modified statement as accurate. She gave evidence at the inquest.

Ms Tubnor recalls Mr Crane spending some time with Ms Maitland on the floor. She recalled Ms Maitland performing a number of runs on the Trak, performing similar tumbles or flips. She thought Ms Maitland was getting good height and 'pulling it off'. She never looked like she was struggling and always landed in the middle of the crash mat.

In her first brief statement, Ms Tubnor said that she saw Ms Maitland start at the end of the tumble track and perform three flips before launching from the end of the trampoline to complete her final flip which she described as more of a layout with a twist. She stated that Ms Maitland had developed a lot of momentum, sprung from the very end of the tramp and overshot her landing. Her feet landed on the large yellow mat about 50cm from the end but she had such momentum that they just touched enough to send her head toward the ground. She did not have time to put her hands down and landed directly on the right side of her head.

Ms Tubnor said Mr Crane was only a few metres away but she thought he had his back to Ms Maitland, instructing other participants on the floor. However, Ms Tubnor was unable to be positive and considered it possible he turned around when he heard Ms Maitland tumbling on the Trak.

In her more detailed later statement, Ms Tubnor expanded on what she saw during the final run. She said that Ms Maitland incorporated a 4th flip into the line of tumbles she was doing rather than just the 3.

"She started with a round off backhand spring. She then did what looked like another backhand spring, which by this time had taken her to the end of the tumbling trampoline. She did not stop or pause like she had done in the previous lines she was working on. She went straight into another backhand spring type flip with a bit of a twist in it. I am not sure what the precise gymnastics jargon is for it but it was like a twist but moving backwards. "

Ms Tubnor did not recall any of the earlier sequences connecting 3 flips culminating in her using the crash mat at all but was unable to be certain. Ms Tubnor did not recall Ms Maitland performing any twists in the earlier sequences. It was mainly round off backhand springs that she was connecting.

Robert Crane, a gymnastics coach, was supervising the Adult Class. On 22 June 2009, he gave a version of events to Inspector Ken Warren of Workplace Health and Safety. A statement was prepared and signed by Mr Crane. In that statement, Mr Crane gave this account of what happened:

> "23. The skill that Michelle did prior to the incident was a straight body back flip with a twist. She had done this type of manoeuvre previously that night. We discussed how good she performed this manoeuvre and how she could improve her technique.
>
> 24. I made sure all the other team members were okay and Mr HO was still doing his activity. I then turned back to watch Michelle. I do not recall exactly where Michelle was but I remember seeing her on the tumble track ready to go.
>
> 25. She was starting to do a Round Off Flick Backward Layout. She moved down the track and performed the first part of the sequence which is the Round Off flick. She completed this sequence with no problems. I watched her moving into the layout sequence and her takeoff was fine. Her body was fine and tightly controlled, as she has always done on previous occasions. As she reached the end of the sequence she landed on the matt where the skill is expected to end. Her landing position was over rotated resulting in her body position angled backward slightly. I would estimate this angle to be about 20 to 30 degrees. From this position I saw her rebound from the mat.
>
> 26. By rebound I mean a tight body push from the surface of the mat. This caused her to spring backwards through the air at about slightly lower then hip height or to term it another way about a meter from the surface of the mat. I saw that her body was curved in what I would term a dish shape which gymnasts including Michelle know is the

> strongest body control position. The rebound has caused her to land with the upper part of her body off the mat. When I say upper body I mean from the hip upwards. I saw the whole top of her body including her arms travel back with the upper part of her body.
>
> 27. I heard what sounded like a crumbling noise when her body came into contact with the concrete. I saw that once her upper body had hit the concrete flooring I watched her roll over her shoulders which resulted in a backward roll. I immediately went to her aid within 2 or 3 seconds. When I got to her she was lying on her right side in a type of coma position except she had her arms out in front of her.
>
> 28. When this event occurred I was standing at level 7 to 10 competition beam on the floor side which approximately 3 meters from the mat where Michelle first land."

Mr Crane explained that Ms Maitland had been attending his adult class for over two months and that she had performed this manoeuvre a minimum of 30 times under his direct supervision without difficulty. He said there was nothing he could see which made her do what she did when she rebounded. He had never seen her rebound in that manner; it was uncharacteristic and totally unexpected.

Later, a draft statement was prepared for Mr Crane based on an interview with an insurance loss adjuster. At the inquest, Mr Crane adopted the contents of that statement as true and correct.

In that statement, Mr Crane said Ms Maitland was working on a round off flick back layout. He said he 'had his eyes on her' when she started about 1m from the start of the Trak, took a couple of steps, performed a round off and then a flick without any difficulty. When she took off into the back layout, he said she was fractionally above standard height and had a tight body. On landing about the middle of the crash mat, she over rotated and rebounded backwards. Her hip area landed on the far edge of the crash mat. Her head and upper body hit the concrete floor. Mr Crane said Ms Maitland did not perform a twist in this sequence of tumbles. In this statement, he focussed on her over rotation and rebounding with a straight body as the cause of the fall beyond the crash mat. He expressed the opinion that Ms Maitland should have collapsed her legs and rolled backwards as she was trained to do.

Mr Crane recalls Ms Maitland did some twists earlier in the evening and he instructed her on how to keep a tight body and focus on twisting. He recalls she was not completing neat twists. He also recalled she did some twisting in previous weeks but was not as competent at twisting as she was with other elements.

In evidence during the inquest, Mr Crane said he recalled Ms Maitland was performing a round off flick backward layout sequence as well as a standing backward layout with full twist[1]. He made it clear that she had not earlier connected the round off flic layout sequence with a full twist[2]. Ms Maitland

[1] T 1-22
[2] T 1-31

had earlier practiced the standing layout full twist from a standing start near the end of the Trak with a few bounces to gain height whereas the round off flic layout sequence was performed from the start of the Trak. Mr Crane told the court that he recalled Ms Maitland performed each skill set about 2 or 3 times. The last skill performed before her final run was a standing layout full twist. However, Mr Crane was adamant that the last sequence she performed did not involve a full twist in the layout[3].

The evidence of Mr Crane and Ms Thorogood give about the earlier sequences are consistent. Ms Maitland was alternating between a round off flic backward layout and a standing backward layout with full twist. However, the evidence of each witness differs materially about the last sequence. Ms Thorogood describes a connecting of both of the practised sequences resulting in a round off flic backward layout with full twist. She also reports Ms Maitland not achieving the required position, having too much speed and momentum, landing late on the crash mat and falling backwards. Ms Tubnor's observations corroborate those of Ms Thorogood. Mr Crane denies any element of twist in the final sequence.

I find the version of Ms Thorogood more reliable. Her observations are more detailed and plausible. Her observation that Ms Maitland was 'leaning too far back as she had done earlier in the night and went into the twist way too late' offers an explanation for late landing was well as the greater speed and momentum. Ms Maitland was attempting to incorporate the full twist into the layout.

Mr Crane was supervising a number of participants at the same time. His attention was necessarily fractured and dispersed. His account is more consistent with a reconstruction based on a recollection of parts of the sequence combined with the expectation that Ms Maitland was performing and performed the same sequence as earlier. His interpretation of her landing was also coloured by these considerations.

While Mr Crane was more experienced at gymnastics, Ms Thorogood is sufficiently experienced to know what Ms Maitland was doing and to report it accurately. She had no other responsibilities to distract or dissipate her attention.

Therefore, I find that the final sequence Ms Maitland performed was a round off flic backward layout with full twist. Her speed and momentum carried her beyond the middle of the crash mat. Although her feet made contact with the crash mat, it was more in passing rather than a landing. She fell backwards and struck her head.

Management of Safety in the Use of the Tumbl Trak

Mr Wolfe was involved in the working bee during which the Tumbl Trak was set up. He recalled there was some general discussion about rules regarding its use such as only one person on the Trak at a time.

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[3] T 1-38

Ms Gilboy was not present when the Trak was installed and did not recall any later group discussion amongst the coaches about how it was to be used. She said it was a like a trampoline, a common apparatus in a gymnastics centre. The rules were the same. Ms Gilboy was asked whether coaching staff were given any induction about how to use the Trak. She replied no. She was never told about any restriction on who could use it nor given any instruction about correct matting placement.

Mr Crane participated in the working bee when the Tumble Trak was set up. He did not recall any discussion about the hazards associated with its use, rules to be followed or matting arrangements.

Whatever the discussions, a risk assessment was not conducted to identify hazards, assess the associated risks and consider what control measures might be used, in particular, the matting requirements and coaches position. There was no attempt to develop and document safety procedures showing matting requirements and coaches' positions for incorporation into lesson plans. As will become evident, this was not an approach to safety management typically taken in gymnastic clubs. There was general reliance on the skills and knowledge base of accredited coaches. In other words, it was left to the coaches' individual experience and judgement.

Before Ms Maitland's fall, another gymnast at Gymnastics Townsville suffered a fall at the end of the Tumbl Trak.

Zoe Kaesehagen was 18 years of age when she fell. She provided a statement to police, which was admitted into evidence. She was not required for examination at the inquest. There was no issue about the fact of this incident. Ms Kaesehagen had a long history of involvement in gymnastics as a child. Keen to continue her sport in her adulthood, Ms Kaesehagen participated in adult classes at Townsville Gymnastics. In early 2009, she was using the Tumbl Trak during an adult class. Through previous experience with the Tumbl Trak, she was familiar with arrangement of mats. There was normally a crash mat at the end of the Trak. Ms Kaesehagen started to do 3-4 backflips and on reaching the end of the Trak, realised that there was no crash mat to break her fall. She landed heavily, falling backwards and striking her head. She felt pins and needles down her arms and through her body. Mr Crane was nearby and came to her assistance, giving her some ice for her head. She recalls Mr Crane commenting that she should have checked that the mat was there. He completed an incident report. She developed an 'egg' on the back of her head and experienced a headache till the next morning. Ms Kaesehagen reported that the mat had been moved by girls for use elsewhere. She doesn't say how she came to know this.

This incident is significant. Although it involves the absence of the critical crash mat as opposed to the additional matting beyond the crash mat, it does raise an issue about the need for control over movement of mats and the need for permanent matting.

How did the Club respond to this opportunity to extract and explore lessons to be learnt?

Mr Crane remembers the incident and writing up an incident report. However, Mr Crane did not recall whether there was an investigation into the incident or any feedback to the coaching staff in terms of lessons to be learnt.

In evidence, Ms Gilboy said she was unaware of this incident.

Mr Brown was the Coaching Co-ordinator from early 2009. He was aware of the incident and said it was discussed at Committee level as well as with the coach involved. However, Mr Brown said the incident was not discussed with other coaching staff. In hindsight, Mr Brown conceded that other coaches might have benefited from knowing about the incident and the lessons learnt. He did not recall the Committee requiring any follow up action on his part. [4]

Prior to Ms Maitland's fall, the coaching staff did not seem to consider there was a particular safety need for matting beyond the crash mat. During evidence and in their statements, comments and opinions were expressed about the need for the additional matting.

Ms Gilboy, a level 1 coach of Women's Artist Gymnastics, described the mat beyond the crash mat as 'like a floating mat' to be used where needed and that it was constantly moved around the gym. She said there was not a set spot for it. There were no rules about ensuring it was returned to the area near the crash mat. Ms Gilboy reported that there now was permanent matting in the area extending beyond the crash mat and there was no need for such a rule.

Ms Gilboy said that she had never required the extra mat beyond the crash mat. Her gymnasts had never landed beyond the middle of the crash mat and never had any fears or concerns about them going over the end. When asked about any difficulties experienced with gymnasts on the Tumble Trak, Ms Gilboy reported none. When asked specifically about gymnasts connecting skills, going 'too long' and missing a dismount; Ms Gilboy reported no difficulties as she would place herself at the end of the Tumble Trak in a position to grab them in the event that they have too much height or the like. [5] I note that Ms Gilboy trained mostly gymnasts aged between 10 and 15 years.

Mr Brown expressed the opinion that two crash mats (on top of each other) at the end of the Tumble Trak was sufficient. He had never seen anyone overshoot the crash mats. Although he qualified the opportunity to make such observations by noting that it was a relatively new piece of equipment as at 2009.

Mr Wolfe addressed this issue in a statement, stating there were no official standards for landing zones for this particular apparatus. There were standards for competitive apparatus. Mr Wolfe compared it to the competitive tumble track (not trampoline) that is 25m long with a 30cm high sprung/foam/rod floor and a 10m dedicated run up area. This configuration

[4] T 3/38

[5] T 1/82 line 30-40

allowed gymnasts to generate substantial speed, height and rotation. The requirement for a 6m by 3m landing area catered for that speed and momentum. Mr Wolfe said that the Tumble Trak is not designed to generate nor accommodate those levels of speed and momentum.

Mr Wolfe stated he had used the Tumble Trak in the past with a class while the area beyond the crash mats was uncovered. The 3.6m crash mats were always sufficient. However, if someone was a powerful tumbler or doing multiple saultos or twists where they are likely to continue rolling or go off line, then an additional mat was needed.

Mr Wolfe stated the matting set up was reasonable for what Ms Maitland was doing. However, in his statement dated 8 March 2010, Mr Wolfe said if Ms Maitland was performing multiple saultos, or elements with multiple twists he would have considered additional matting.

It is significant that Mr Wolfe qualifies his opinion about no need for additional matting by reference to what I describe as sequences that give rise to greater speed and momentum.

Investigation immediately after the fall revealed that the matting that previously covered the concrete surface where Ms Maitland struck her head was moved during an earlier class. Ms Gilboy, a Level 1 Coach of Women's Artist Gymnastics, was in the office at the time of Ms Maitland's fall. She responded when she heard Mr Crane calling for an ambulance. Ms Gilboy saw Ms Maitland lying on the concrete floor. During her evidence she described the mat previously in that position as 'like a floating mat' to be used where needed and that it was constantly moved around the gym. Ms Gilboy told the court that her class had used that mat earlier in the evening with the Tumble Trak and her 'girls' moved it to use as part of the set up for the vault.

As a consequence of Ms Maitland's fall, Workplace Health and Safety (WHS) issued a prohibition notice stopping any further use of the Tumbl Trak until a risk assessment was completed. A risk assessment was undertaken and as a consequence, further matting was placed around the Trak including permanent matting on the area beyond the crash mat where Ms Maitland struck her head.

Mr Brown reported that since Ms Maitland's fall there is a clearer demarcation between mobile mats that may be moved and permanent matting that is fixed in place with Velcro, making movement difficult even if someone tried.

I gained the distinct impression from hearing the evidence of the coaching staff that some remain of the view that the risk of a gymnast travelling beyond the crash mat is very remote. Others seem to take the view that however remote that possibility, additional matting is necessary.

I suspect the mixed views are due to excessive reliance on personal experience, a degree of denial and an absence of any understanding of the safety risk management process.

Mr Crane reported that none of his training as a coach included risk management. He was taken through the risk management process from hazard identification, selection of control measures, implementation and then review. He did not recall any such training. He had not had the experience of conducting a risk assessment on a Tumble Trak and had not been present when others had discussed hazards associated with any particular apparatus and what control measures might be used to mitigate the associated risk. However, he did recall attending state squad clinics where there was discussion about skills being performed, the riskier areas of the skills and where mats were needed. [6]

Mr Brown admitted he had never conducted a risk assessment on an apparatus and did not know how to go about conducting a risk assessment.

The evidence from the other coaches was to the same effect.

Mr Wolfe told the court that there were no procedures about the safe use of apparatus as it was expected an accredited coach had that knowledge base. (T 3/58) He also stated the degree of detail in lesson plans depended on the discretion and experience of the coach and the normally did not state the supervision and matting requirements. However, lessons plans are now required to show where the supervisor is to be positioned relative to the gymnast and the apparatus.

Notwithstanding the fact that risk assessments were subsequently done on each apparatus and shown to WHS, no member of the coaching staff had completed any training in conducting risk assessments. I have reviewed the risk assessment in the form of a 'Risk Management Plan'. The opportunity for improvement is clearly evident.

What sources of information were available about safe use of the Tumbl Trak other than personal experience or knowledge gained through training as a coach and coaching?

The Tumbl Trak Owners Manual from the manufacturer was admitted in evidence. It provided instructions on assembly of the apparatus. Additionally, under the heading Maintenance Checks, it set out periodic inspections required of the apparatus on a daily and weekly basis. There is also a section headed Safety Suggestions for Use of the Tumbl Trak. Paragraph 4 of that section read:

> Explain to all new participants that the Tumbl Trak TM has more "spring" than most other tumbling surfaces, and that it should be approached with care. For example, it is very easy to over-rotate skills on the Tumbl Trak TM. Tumblers may barely be able to perform these skills on another surface. Over-rotating tumbling skills on or off of the Tumbl Trak TM can be risky and dangerous. A shorter and easier approach to a tumbling pass (rather than a hard run) will usually be more than sufficient on

[6] T 1/60

> the Tumbl Trak TM. Tumbling with 1.25" or 2" mats (such as panel mats or carpet-bonded foam) is an excellent way to slow down the tumblers and allow them to feel as if they are tumbling on a more traditional surface.

Paragraph 8 then states:

> Because of the additional inherent risk, it is not recommended that anyone over the age of 18 should use this equipment.

Then the following appears in bold italics:

> ***Skipping steps in the progressions suggested above may be dangerous, because the participant may not be mentally or physically prepared to perform the skill safely. Neither the Tumbl TrakTM, spotters, nor mats are any substitute for proper training. Coaches should never assume that any of these can take the place of proper training. For proper technique please refer to the enclosed DVD or visit our Training Tips at www.tumbltrak.com.***

This material emphasizes the possibility of over-rotating and the need for progressive skill development under supervision. These aspects are well known to coaches. Although Ms Maitland was 19 years of age, the imposition of an age limit of 18 in the context of 'additional inherent risk' should not be interpreted as some arbitrary rule. However, it serves as a warning against gymnasts of increased weight and strength using the apparatus because of the implications for speed and momentum.

Mr Wolfe, who co-ordinated the working bee responsible for erecting the Tumbl Trak, denied seeing this material with the installation instructions.

Ms Moss was unable to say whether the Club kept manufacturers instructions for each apparatus but if it did, they were likely kept in a filing cabinet in the office. She was unaware of whether that material was accessed by coaches. She also reported that there was no documented way to set out matting, which was left to the discretion of the individual coaches.

It was not established what information the manufacturer provided with the Tumbl Trak or was accessible via its website at the time of installation. There was confirmation that the Tumbl Trak depicted in this information was the same as that installed.

Again, coaches were overly reliant on personal experience and did not access safety information available from the manufacturer.

The Role of Coach as Safety Manager

The Coach is pivotal to management of safety in gymnastics. In addition to fully understanding the hazards and control measures associated with a

particular apparatus, the coach needs to consider how best to manage the safety of groups or individuals in the use of the apparatus. He is the only member of the club to receive training in aspects of safety. There are a number of aspects to coaching relevant to this incident. I will address:

- The qualifications and experience of Mr Crane;
- Supervision of the Adults Class; and
- Supervision of Ms Maitland.

Qualifications and Experience of Mr Crane

Mr Crane was 23 years of age and had worked as a casual employee for Gymnastics Townsville since 2001. Mr Crane was also undertaking university studies.
He had been involved with the club for 14 years, starting as a competitive gymnast and progressing to the coaching and judging accreditation. He gained his assistant coach accreditation at 14 years of age and became a fully accredited coach at 16 years of age. Mr Crane holds a level one Men's artistic gymnastics coaching accreditation, which is the second highest level of attainment. He also holds a General Gym and Kindy Gym gymnastic level I coaching accreditation. He had completed a Saulto course workshop. Mr Crane was the current in the accrual of professional development points via coaching and judging competitions to maintain his coaching accreditation.

The evidence of Mr Brown, Co-ordinating Coach for the Club, and Mr Wolfe, another Coach and Treasurer of the Club, was that Mr Crane was qualified and experienced to take this class and to supervise the sequences that Ms Maitland was performing.

Adult Classes

Mr Crane was experienced in coaching adult gymnastic classes. He first coached an adult's class while in grade 11. He explained that the adult class is essentially a social class for people who want to come and try out gymnastics for recreational purposes. No specific direction or instruction was provided to him on how to run the adult class. He picked it up from in-class training and experience alongside other coaches. The adult class is a casual class where the participants are free to learn how to use any of the equipment they like although they first needed the coaches permission.

Other coaches made similar observations about management of the adult classes.

Mr Crane accepted that the adult class was different from other classes. In the latter, a group of gymnasts about the same age and level are taken through the same sequence or skills training. The supervision is constant. Adult classes depend on who attends and what they want to do. Stretching and strengthening sessions do not require full supervision, periodic checks are sufficient. Skill training did require direct supervision. Mr Crane reported some reliance on the fact that the participants in the adult class were mature

and independent. It was assumed that they would take reasonable care for their own safety. [7]

Mr Gilboy demonstrated the difference between adult classes and other classes in describing her approach to use of the Tumbl Trak in the context of a class structured to a particular level of gymnast.

Ms Gilboy explained that different level gymnasts required different levels of assistance. For a level 4 gymnast, she would position herself on the Tumble Trak and spot (offer physical contact) them through the skill whereas for level 7 gymnasts, she stood directly beside the Trak and wouldn't touch the gymnast through the skill. When to spot and how to spot are skills taught to coaches during accreditation. Ms Gilboy also explained the progressive nature of skills development in gymnastics. [8] If gymnasts were doing skills for the first time, Ms Gilboy said she would be 'right on them' with her hands the whole time. [9] Ms Gilboy explained that when she took her class from one apparatus to another, there was a check to ensure that the set up was correct, mats in the right places, for the particular drills to be practised.

Although lesson plans were used in the structure classes, lesson plans were not used in adult classes.

It becomes immediately apparent that adult classes present an additional challenge to coaches in supervising activities. In adult classes, the participants pursue different interests at different levels of skill at different locations across the gymnasium at the same time. Other classes are structured and involve participants of the same level of skill at the same location or apparatus. Normally, the riskier skills are performed under the direct supervision of the coach, one at a time while the balance of the group waits alongside.

It is interesting to note that the report from WHS about its state-wide assessment referred to the issue of supervision and observed that Gymnastics classes were well supervised and participants were behaving in a controlled manner during inspections. However, the report then stated[10]:

> One class, observed during the inspection, was not adequately supervised and an improvement notice was issued. The class was an adult gymnastics class. There was no lesson plan available and participants selected their own apparatus. The inspector observed participants using apparatus in an unsupervised manner. The club made a decision to cancel this class on the ground of difficulty in getting participants to follow instruction, the loss of one of three coaches taking this class and the high-risk nature of adults using gymnastics equipment unsupervised.

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[7] T 1/61-63
[8] T 1/79-80
[9] T 1/81 line 30-40
[10] at page 20 of 25

Adult classes do present a challenge to gymnastic clubs in managing safety at an acceptable level.

Supervision of Ms Maitland

It will be recalled Mr Crane gave evidence that Ms Maitland practised the round off flic backward layout as well as a standing backward layout with full twist. He also gave evidence that she was struggling with the twist. It would be reasonable to expect that at some point in the future Ms Maitland was going to incorporate the full twist into the backward layout as part of the longer sequence. It was Ms Maitland's decision to incorporate the full twist and that decision was not made in discussion with Mr Crane. Indeed, it was Ms Thorogood's impression that Ms Maitland decided to 'chuck it in' suggesting an impulsive decision. The absence of any such discussion on this point between Ms Maitland and Mr Crane seems entirely consistent with the way in which the adult classes were conducted. It is not clear from Mr Crane's evidence what Ms Maitland was planning to achieve during the Adult Classes in terms of connecting skills into sequences. It is impossible to do otherwise than speculate on what might have been the outcome of any discussion between Ms Maitland and Mr Crane about attempting to incorporate the full twist into the layout. Mr Crane might have reflected on the skills progression to date and considered it less than satisfactory, suggesting further skills development was required before making the attempt. He might have agreed and relocated to a position to assist in execution and recovery on landing. He might also have considered the adequacy of the arrangements of the matting.

Workplace Health and Safety Qld (WHS)

In response to this death, the Minister for Industrial Relations asked WHS to assess the adequacy of safety associated with gymnastic activities in Qld. WHS developed an assessment process in consultation with Gymnastics Qld and Gymnastics Australia. The Terms of Reference specified the matters that were to be assessed, including:

- The level of awareness of relevant health and safety obligations;
- Risk identification and assessment strategies used to manage safety risks;
- Assessment of participants skill level and ability;
- Supervision arrangements;
- Competency of staff and coaches; and
- Safety associated with usage of equipment during gymnastics.

25% of the 104 Clubs in Qld were selected for assessment in a manner that allowed for a representative sampling. Assessments were conducted from 23 March to 19 May 2011. There were two parts. The first was a desktop assessment reviewing documented procedures and the second, an inspection while classes were conducted. An assessment checklist was developed in consultation with GQ and GA as an information-gathering tool and as a benchmark for compliance. Inspectors conducted 62 site visits to 26 facilities. 36 improvement notices were issued in the process; the most common related to the potential for contact with hard surfaces.

There were a number of findings relevant to the present matter:

- Less than half (42%) of clubs had conducted risk assessments to identify any risk of injury due to layout of equipment;
- Only 31% of lesson plans stated the level of supervision or coach's positioning.
- Less than half the clubs outlined safety considerations in the layout of equipment in lesson plans and even less clubs consulted manufacturers instructions (23%) or equipment suppliers (38%) for advice on equipment layout;
- The focus of most lesson plans was skills development and progress;
- The risk of contact with all hard surfaces (unprotected components of apparatus) was not controlled in most clubs (only 8% compliant);
- Most clubs (77%) had appropriate matting in designated areas and on areas surrounding these landing areas;
- Only about 15% of clubs had a risk register identifying risks of injury due to layout of equipment.

Nearly all clubs assessed were affiliated with Gymnastics Australia through the Club 10 Program. This is a quality assurance program that addresses service delivery, organisation, financial management and safety. Clubs move through five levels of accreditation through self-assessment, external assessment and endorsement. The levels are rated through a star system; star 1 to 5 where 5 is the highest. All levels must meet the basic National Affiliation Standards. To reach higher star ratings, clubs must demonstrate compliance with higher standards. However, the results of the audit did not demonstrate that clubs with higher star ratings had better safety management.

A number of recommendations were made following the state-wide assessment. I have summarised the key recommendations of relevance to this inquest as follows:

- Risk assessments should be conducted on each apparatus and for each level of use to identify hazards, to assess risk and to select key control measures to mitigate that risk;
- The risk assessments should inform lesson plans including decisions about level of supervision required, progressive skills development, physical layout of apparatus and matting, positioning of coaches and other key safety controls;
- The lesson plans should be fully documented so as to demonstrate to the club the adequacy of safety management and for the education of trainee coaches;
- GA consider how it might assist clubs develop the expertise to conduct risk assessments and review its template lesson plan to include these features;

The WHS report concluded:

> Safety during gymnastics activities is being managed through a combination of the commitment of club coaches, volunteers and industry associations. Gymnastics clubs have a strong awareness of workplace health and safety and emergency

> management and incident recording. There is room for improvement in the areas of lesson plans, risk management, equipment maintenance, manual tasks and documenting skill progression.
>
> Gymnastics Australia enjoys a strong membership in Queensland and delivers a comprehensive quality assurance program called Club 10. Club 10 is a valuable program that has ensured gymnastics clubs have a strong foundation to implement workplace health and safety systems. This program should be reviewed to ensure that it better meets the safety requirements of clubs and focuses more on implementation rather than documentation.
>
> Sport and Recreation Services provide funding and non-financial support to GQ and gymnastics clubs. These services provide another opportunity to assist clubs to improve their safety systems.

In response to the WHS state-wide assessment Gymnastics Australia conducted a review of the Club 10 program. Bianca South led that review. She has tertiary qualifications and experience in management consulting having worked with major organisations in her career. She also holds qualifications in gymnastics coaching. Ms South prepared a report clarifying aspects of the review and the likely changes to be implemented. She also attended and was examined during the inquest.

She reported that GA accepted the findings of the WHS assessment and considered the recommendations fair and reasonable. She reported that redevelopment of the coach education program was underway.

She was able to report that GA had engaged safety consultants to assist in reviewing the strategies as well as actions underpinning the safety modules in the Club 10 program. A risk register template has been developed.

Similarly, Gymnastics Queensland provided a report in response to the WHS assessment. It also accepted the findings and recommendations. It worked with GA in reviewing the Club 10 Program and undertook to work with GA in implementing and delivering a revised program due early this year. GQ has conducted a course presenter update to ensure all presenters are delivering the safety module and lesson plan module in Level 1 Coach Accreditation course with appropriate emphasis on positioning of mats and coaches during gymnastic classes. GQ reported it had revised and distributed new lesson templates that emphasise and encourage coaches to consider their positioning during classes. Another course presenter update issued to presenters delivering the Salto Bridging Workshop focusing on matting and safe coaching practices, spotting techniques and technical information for progressive drills. In 2011 and 2012, the number of level 1 courses doubled to increase the use of accredited coaches. Finally GQ has developed a risk assessment template for use by clubs hosting championship events.

Katherine Cannon from GQ attended the inquest and spoke to the report GQ provided the inquest. She reported that GQ was now reviewing incident reports that come to GQ due to a concern or complaint. GQ reviews the appropriateness of the remedial action, if any is required. However, at the moment, the process is triggered by an external concern and any lessons learnt are not disseminated back to the clubs. The mechanisms to support those processes have not been developed as yet.

It is important to understand that GA is responsible for establishing standards and the affiliated state bodies are responsible for implementation. GQ is principally responsible for processing and monitoring compliance with the requirements for accreditation within the Club 10 program for clubs rated 1 star to 3 stars. These services are offered in the spirit of fostering the sport of gymnastics. Neither association directly involves itself at an operational level within the clubs.

Findings required by s.45 of Coroners Act

Who died: The deceased is Michelle Maitland.

When she died: Ms Maitland died on 19 June 2009.

Where she died: Ms Maitland died at Townsville Hospital.

What caused her death: Ms Maitland died due to a severe head injury due to a fall during gymnastics.

How she died:

1. On 18 June 2009 Ms Maitland was performing a gymnastic sequence on the Tumbl Trak at Gymnastics Townsville when she overshot the crash mat on dismount and fell, striking her head on an uncovered concrete floor. She suffered a severe head injury from which she died the next day.

2. Ms Maitland was participating in an Adult Class under the supervision of Coach Robert Crane. Prior to her fall, Ms Maitland was practising a round off followed by a flic followed by a backward layout. She also practised, as a separate activity, a standing backward layout with full twist from the end of the Tumbl Trak landing on the crash mat.

3. Mr Crane was positioned within a few metres of the end of the Tumbl Trak and near a beam. He was supervising Ms Maitland and Ms Thorogood on the Tumbl Trak. He was also supervising two male participants doing strengthening work near the beam. There were other participants in the class.

4. Mr Crane gave advice to Ms Maitland at various times regarding her standing backward layout with full twist. She was experiencing difficulty with the full twist.

5. On the occasion of her fall, Ms Maitland attempted a round off, flic and backward layout with a full twist. She generated extra speed and momentum, sprung off the very end of the Trak and was 'too late' into the twist; causing her to overshoot the middle of crash mat.

6. Ms Maitland was mildly intoxicated from cannabis consumption that adversely affected her psychomotor function creating a greater risk of an error of judgement and less precision and coordination in her physical movements.

7. The attempted incorporation of the full twist was a decision made without discussion with Mr Crane. However, the Adult Class was unstructured in comparison with other classes and the same degree of coaching control over skills progression was not exercised.

8. Gymnastics Townsville did not properly assess the hazards associated with adults using the Tumbl Trak and the risk of adults overshooting the crash mat. As a consequence, Gymnastics Townsville permitted scatter mats normally positioned beyond the crash mat and covering the concrete area where Ms Maitland struck her head, to be moved about the gymnasium when and where required.

9. There was (and remains to a lesser degree) a need for a better understanding and application of formal safety risk management processes and structures in coach's management of gymnasts on apparatus. Each apparatus should be comprehensively risk assessed and any control measures selected to mitigate the risk should be adapted for the level of the particular gymnast (s) and incorporated into lesson plans. Key controls will include tight control of skill progression, matting arrangements, coach positioning and good communication.

Recommendations

Gymnastic clubs like Gymnastics Townsville does not have the resources and cannot be expected to assume the burden of reviewing, incorporating and training its staff on formal safety risk management processes and structures. Like most sporting clubs, safety practices and procedures have evolved over time. The initial and recurrent training of coaches was the normal way of

passing on the wealth of past experience. However, as the community's expectation for safety outcomes has increased, management of safety has become more sophisticated. Where previously the focus was on the knowledge and experience of the individual coach, formal safety risk management structures and processes can be used to harness the collective knowledge and experience of the coaches and to provide a better platform for constant improvement. These structures and processes also allow for better governance at a club and association level.

For example, a risk assessment of the Tumbl Trak at installation might have considered the potential for adult use, led to a review of the manufacturer's literature as well as discussions with coaches at other clubs who already use that equipment, particularly given the limited experience of the Townsville coaches with it. That risk assessment might have revealed the possibility, based on the speed and momentum adults were capable of generating, of the need for a larger possible landing area with room for error. The control measures for an adult class might have included more extensive matting, tighter control of skills progression, and greater supervision with better communication. Lesson plans are an ideal vehicle for adaptation and implementation of the findings of risk assessments to address the different needs of different level of gymnasts. It is easy with the benefit of hindsight to apply the risk management process to an incident. However, the risk management process provides a structured, pro-active approach to managing risk. When an organisation progresses beyond merely documenting a risk assessment because 'it must be done' and embracing the opportunities for structured improvement, incident and accident rates do drop.

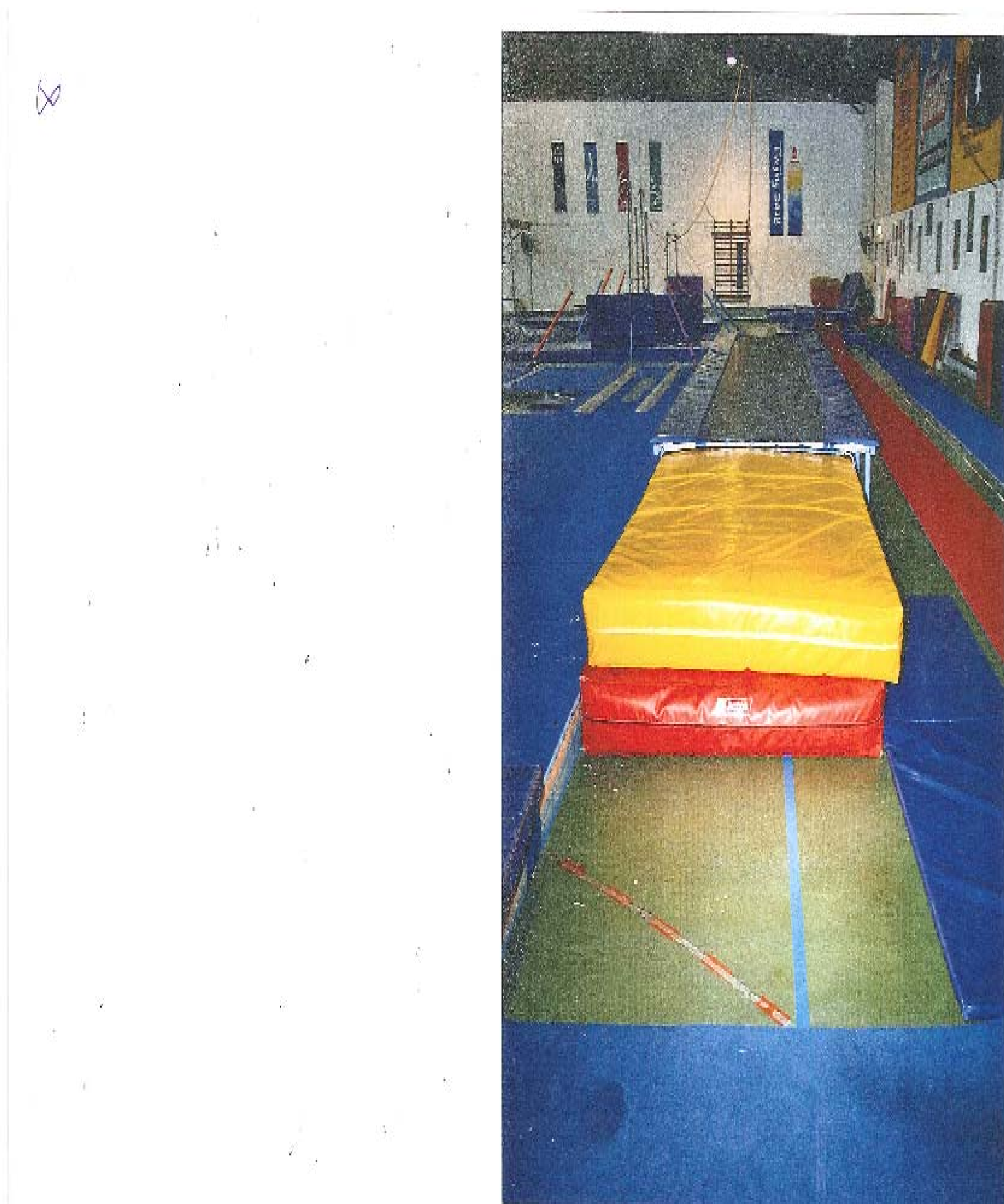
I am satisfied that Gymnastics Queensland and Gymnastics Australia appreciate the cultural change required to implement a formal safety risk management approach and its implications for the training of coaches and club management committees. Steps have been taken to support risk assessments of apparatus and activities. Templates have been developed to support translation of key control measures into lesson plans. These and other initiatives are likely to be incorporated into safety modules with the Club 10 quality assurance accreditation program, an enormous exercise.

I formally recommend that Gymnastics Queensland and Gymnastics Australia implement the recommendations arising from the review of the Club 10 program initiated in response to the Workplace Health and Safety Qld state-wide assessment of gymnastics safety.

I close the inquest.

Coroner Kevin Priestly

Appendix

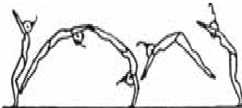


Photograph showing Tumbl Trak (centre background), crash mats (red and yellow) and green uncovered concrete floor (foreground)

Pictorial representations of the round off, flic and backward layout

3.106
Round-off

3.107
All flic-flac and gainer flic-flac variations, also with support of one arm



5.101
Salto bwd tucked, piked, or stretched