



OFFICE OF THE STATE CORONER

FINDINGS OF INQUEST

CITATION: **Inquest into the death of Natarsha CHARLESWORTH**

TITLE OF COURT: Coroner's Court

JURISDICTION: Cairns

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FINDINGS OF: Kevin Priestly, Coroner

CATCHWORDS: CORONERS: Inquest – Adventure tourism – white water rafting – Tully River – 8 person rafts – capsize and entrapment with prolonged period of immersion – drowning – adequacy of safety risk management

REPRESENTATION:

Counsel Assisting:

Ms Dean Morzone

For Raging Thunder Pty Ltd

Mr PL Feely, Barrister, instructed by
McInnes-Wilson Lawyers

Background

Natasha Charlesworth was 22 years. She had a strong academic background and a social conscience having worked with youth and senior groups over two years, between graduating from high school and commencing tertiary education. Ms Charlesworth was studying education at James Cook University, having initially commenced her studies at University of Tasmania. Her boyfriend, Mr Andrew Hislop, was a physiotherapist in Townsville. They met and started a relationship in Tasmania in January 2005. The relationship had developed to the point where Mr Hislop was intending to propose to Ms Charlesworth.

Ms Charlesworth was a strong swimmer from being active in her local swimming club during high school years.

Raging Thunder Pty Ltd conducts white water rafting trips on the Tully River. The present management took over control of the business in 1991. The operation has grown considerably since then to involve over 150 staff and 40 rafts. The company conducts rafting tours on the Tully River near Tully and Barron River near Cairns. The Tully River operation involves busing passengers from Cairns and Townsville regions to Tully. Independent travellers, participants with their own transport, travel to Tully and meet at the Raging Thunder Cafe on the Bruce Highway at Tully.

Some of the water from the Tully River catchment finds its way to Koombuloomba Dam in the Cardwell Range, which has a capacity of 180,000 megalitres. Water is released into the Tully River from Koombuloomba Dam and flows 13 kilometres to the Tully Falls Weir, situated above the Tully Falls. The Kareeya Hydro Electric Power Station, owned by Stanwell Corporation, is located 2kms below the falls. Stanwell has a commercial agreement with Raging Thunder that provides for release of water for rafting. The river level is dependent on how much water the power station releases. On this day, there was a 19M release at 7am and then a further release of 19MW at 10am making a total release of 38MW. This amount is the minimum required for rafting. Rafting normally commences at the top pool between 10.30 and 11am. Most of Tully Gorge is comprised of granite formations and boulders.

The rafting trip begins at the top of the Tully Gorge Road at Kareeya Power Station and usually ends at 'Ski Ramp' track. There are 16 access points in between where the river may be accessed by tracks leading from Tully Gorge Road. The access points are marked by posts on the side of the road and painted on the road adjacent to the tracks.

Narrative

At about 5.15am on 6 October 2007 Mr Hislop and Ms Charlesworth departed Townsville. They arrived in Tully at the Raging Thunder Cafe at about 8.15am. On going to the counter, they made their presence known and were asked to complete a questionnaire and waiver. They then boarded a small bus that took them to the starting point of the days rafting. During the bus ride, there was a briefing.

On arrival at the top of the Tully Gorge Road, Ms Charlesworth and Mr Hislop were allocated to an eight person inflatable raft, number 068 along with 5 other guests. Their guide was Mr Matthew Clarkson. Their group comprised Mr Brenton Tresize, who was holidaying in Cairns from Adelaide with his family. He was joined by his son and daughter as well as his cousin Mr Peter Bettridge. There was also Ms Simar, a 29 yr old French national on a working holiday in Australia. None had any rafting experience.

Each rafter was provided with a paddle, a safety helmet and a life jacket. They were shown how to fit the helmet and jacket. The fitting of the helmet and life jacket on each rafter was

checked by Mr Clarkson. There was a further briefing with instruction on land as well as on water in readiness for the descent. The guides were fitted out with more extensive equipment including throw bags containing ropes.

The flotilla had rafted a number of rapids before approaching 'The Theatre'. On approach to Theatre, Ms Charlesworth was seated in the third position on the right side of the raft, directly behind Mr Hislop.

A sketch plan of sections of the river known as The Theatre and Full Stop Drop were tendered into evidence and frequently referred to by witnesses to indicate relevant locations. Each of these sections of the river has a number of identified rapids within them. The plans are not to scale and came with a grid overlay. Copies are attached and have been marked by me for the purpose of indicating features that are significant to my findings. It is also important to note that throughout my findings I have adopted the practice of the river guides to refer to river left or river right being directions from the perspective of a person facing downstream.

On approach to The Theatre, raft 068 was in the middle of the flotilla. After rafting the drop at Robins Nest, the raft approached Scale Rock. River guide Dilli Sherma was situated in his raft adjacent to Scale Rock and river left, attached to a chain. His raft was acting as a 'bump boat', guiding rafts to river right. At higher water levels, the route is usually river left of Scale Rock. Raft 068 approached Scale Rock and grounded on a flat bench rock immediately in front of it. Mr Clarkson tried shifting the weight of the crew to dislodge the raft. He finally got out of the raft, stood on the rock and pushed the raft free. He resumed his position at the rear. The raft rounded Scale Rock to river right, entering a small chute. To river right of the chute there were a couple of protruding rocks. The raft gathered speed through the chute and the right side of the raft struck and lifted over these rocks. Although Mr Clarkson called 'over right' and the crew shifted its weight to the right, the raft continued to turn right over left, tipping the rafters into the water.

What followed was a very dynamic situation. Multiple events occurred at the same time.

Mr Clarkson quickly climbed onto the upturned raft to identify the whereabouts of his crew and keep them in sight. Mr Hislop and Ms Simar found themselves under the upturned raft but were quickly washed from beneath and taken downstream through Full Stop Drop. Attempts to retrieve Mr Hislop with a throw rope at the bottom of the rapids failed. He was ultimately retrieved back onto the upturned raft with Mr Clarkson and then transferred ashore via a throw rope.

Crew members James Tresize and Peter Betteridge were flushed downstream and through Full Stop Drop before being retrieved to river left by guides using throw ropes. Ms Simar was similarly retrieved.

Mr Tresize found himself near his daughter Holly, both headed downstream through Full Stop Drop. Holly managed to get hold of a rock and cling to it. Mr Tresize grabbed her on passing and continued downstream through Full Stop Drop before they were retrieved with a throw rope.

It was the guides situated at or near the cover position at Full Stop Drop that retrieved most of the rafters.

All of the initial attention was focussed on retrieving those who could be seen. A count conducted shortly after Mr Clarkson climbed onto his upturned raft revealed a rafter was missing.

As soon as raft 068 capsized, guides elsewhere amongst the flotilla heard the whistle blasts, saw a waving of arms and or noticed urgent activity. They secured their own rafts and

passengers before converging on the location to assist. Some of the earlier arrivals assisted in retrieving the rafters from the bottom of the rapids. Others arriving moments later, became aware that a rafter was missing and commenced searching, including known entrapment locations.

Mr Lacey was searching near rocks above Full Stop Drop and noticed the handle of a paddle, to river left of Hanging Rock. Normally, a loose paddle would be flushed downstream. After providing a line to guides on the riverbank, Mr Lacey entered the water near the paddle. Visibility was very limited due to the degree of whitewater. He felt around the area below the paddle and felt Ms Charlesworth. Mr Lacey immediately lost contact when the force of the water flushed him downstream. He quickly returned to the position and with the assistance of another two guides to hold him in position, he felt how Ms Charlesworth was positioned. She was wrapped around the rock with her leg or foot entrapped. While Mr Lacey's group continued efforts to extricate Ms Charlesworth, other guides set up a rescue platform. A raft was lowered into position from upstream via lines from both sides of the bank, a standard rescue technique. Ms Charlesworth was freed and lifted into the raft. Mr Lacey boarded the raft, removed her helmet and life jacket before starting CPR. River guide Mr Anderson assisted. The raft was moved ashore and Ms Charlesworth was transferred to the river bank. Another guide, Mr Kinnersley, arrived with an Automated Electronic Defibrillator. At that point in time, it was estimated that Ms Charlesworth had been underwater for 8-10 minutes. Mr Kinnersley worked to remove clothing and to dry Ms Charlesworth, applying the Defibrillator pads to her body. The Defibrillator performed an analysis and reported no shockable rhythm. CPR was continued. Mr Kinnersley inserted a Laryngeal Mask Airway and connected the secure pod, air bag and oxygen. Shortly afterwards, Mr Ash, a guide and river paramedic with the other tour arrived on scene. During the course of these latter events, the need for emergency services was communicated with QAS and at 11.37, a QAS paramedic crew was dispatched from Tully. Efforts to revive Ms Charlesworth continued. QAS officers arrived at the general locality at 12.07pm and made their way to the scene. Dr Michael Law, an experienced white water enthusiast as well as a medical practitioner with Emergency Department experience, happened to be on the river that day. On hearing about the emergency, he went to the scene. He arrived about 12.15pm. QAS paramedics arrived shortly afterwards. Dr Law administered adrenaline. A slight pulse was detected.

During the administration of first aid, there was communication between the river guides and management of Raging Thunder as well as between management of Raging Thunder and emergency services, requesting a helicopter. Ultimately, an Emergency Services Qld helicopter was dispatched from Cairns and arrived at Tully Gorge at 1.52pm. Ms Charlesworth's condition was further stabilised in preparation for aerial evacuation. The helicopter departed at 2.24pm and arrived at Cairns Base Hospital at 2.54pm.

Initial medical assessment at Cairns Base Hospital demonstrated significant hypoxaemia despite intubation and 100% inspired oxygen. Ms Charlesworth also had hypotension and a Glasgow coma score of 3/15. Her pupils were fixed and dilated and she was hypothermic. She was initially managed in the Emergency Department before transfer to the Intensive Care Unit with escalating vasopressor support, warming and continued ventilation with 100% oxygen. Ms Charlesworth developed increasing hypoxaemia and refractory hypotension despite maximum vasopressor support. Her neurological state remained unchanged. At 12.10am, the blood pressure became unrecordable. Despite resuscitation, it was not possible to re-establish cardiac output. The ventilator and vasopressor support was withdrawn at 12.40am. Ms Charlesworth was pronounced deceased at 12.50am on 7 October 2007.

On 10 October, 2007 Dr Keith Davies, Pathologist, conducted an autopsy, including internal examination. He concluded that Ms Charlesworth died due to cardio-respiratory arrest as a consequence of drowning in freshwater. His findings included multiple skin and subcutaneous bruising consistent with blows from water and rocks whilst submerged; skin

and subcutaneous bruising over thorax consistent with CPR; fluid within the trachea and bronchi; bilateral hydro thorax; pericardial effusion and oedema of pericardium; perivascular oedema; intraperitoneal fluid; haemorrhages of left and right ventricles consistent with drowning; petechial haemorrhages of the fronto-parietal lobes of the brain; and multi- organs showing severe oedema.

I have carefully reviewed the findings and opinions of Dr Davies. His findings are entirely consistent with immersion, extrication and attempts to revive Ms Charlesworth. I accept his conclusion as to her cause of death.

Required Findings:

S.45 of the Coroners Act 2003 requires me to make findings at the conclusion of the investigation about the following matters:

- (a) who the deceased person is;
- (b) how the person died;
- (c) when the person died;
- (d) where the person died; and
- (e) what caused the person to die.

While the evidence is sufficient to enable me to make findings about each of these matters, the matter of 'how' Ms Charlesworth died requires further consideration in the context of the operator's management of the risk of entrapment.

Approach to Reviewing Management of the Risk of Entrapment

Leg entrapment is a well recognised hazard to which all participants are exposed during the course of whitewater rafting on the Tully River. There have been a number of entrapment fatalities on the Tully River before and after this incident.

There are two requirements for an entrapment.

Firstly, a flip over or other event that puts a rafter in the water while descending rapids. There are a number of considerations relevant to the prospect of a flip over; including

- The physical setting and dynamics of the rapids;
- The degree of guidance given by the operator as to the safest manner of rafting the rapid;
- The competency of the guide in navigating the rapid;
- The suitability and serviceability of the raft;
- The competency of the crew.

Secondly, the rafter must be exposed to potential entrapment points before recovery. There are a number of considerations relevant to this aspect, including:

- The physical setting and dynamics of the rapids;
- The number and degree of dispersal of rafters in the water across that setting;
- The existence of known or likely entrapment hazards;
- The prospect of rafters passing near to known or likely entrapment hazards from the point of flip over and before recovery;
- The number and strategic location of guides (cover positions) able to immediately assist in recovering the rafters.

There are opportunities for risk controls to intervene and influence some of these variables. For example, a reduction in the prospect of a flip over will reduce the risk of entrapment. Earlier recovery of a rafter from rapids before passing over known or likely entrapment hazards will reduce a rafter's exposure to entrapment.

Of the specific considerations listed above, there are only a few which an operator may influence with a view to reducing the risk of entrapment. They are:

1. Suitability and serviceability of the raft (which may influence the prospect of flip over);
2. Suitability and serviceability of the PFD (which may influence the prospect of immersion and entrapment);
3. Use of the whitewater float position (which may influence the proximity of lower limbs to entrapment points);
4. Competency of the crew to raft the rapid (which may influence the prospect of flip over);
5. Operator guidance as to safest manner of rafting the rapid (which may influence the prospect of flip over as well as prospect of entrapment depending on the location of entrapment points);
6. Competency of the guide in the manner of rafting the rapid (which may influence the prospect of flip over);
7. The system of cover provided at the rapid (which may influence the prospect of entrapment).

I will address points one to four separately.

Although the operator must accept the physical setting and hydrology of a particular set of rapids, a careful risk assessment should inform and underpin the safest manner of rafting a set of rapids and the placement of cover. The guides are then trained to follow the procedures that are developed from this process, supplementing them with their individual skill and judgement where necessary. Therefore, points 5, 6 and 7 will be addressed together under the heading Operator Guidance.

In the event that a rafter becomes entrapped, the goal becomes one of minimising harm.

It seems to me there are a number of components to harm minimisation. The first is recognition that the person is missing. The second is implementation of an effective search strategy. The third is the use of effective extrication techniques. The fourth is a capacity for immediate resuscitation and advanced medical assistance. Finally, there is medical evacuation to a hospital.

Consideration of the Risk Controls Relevant to Entrapment

The Raft

The raft was a KZ series raft manufactured by Ark Inflatables specifically for commercial white water rafting and running high volume grade 5 rapids. The Tully River rapids are considered grade 4 rapids. The raft was constructed in accordance with relevant Australian standards. Inspection of the raft failed to reveal any defects, let alone any defects that might have affected its serviceability, in particular, its stability.

The PFD

Ms Charlesworth was wearing a life jacket at the time she was extricated and no issue arises as to the suitability and serviceability of the life jacket that she was wearing. The coronial report of the Detective Sgt Moon contains a detailed examination of this issue. The safety vest worn was an Extrasport L-5936 model personal flotation device, red in colour and secured by buckles at the front which may be adjusted via horizontal stripes. Although the vest did not have a compliance label, the design and construction substantially complied with Australian Standard 1512. The vest was manufactured specifically for white water rafting. Sgt Moon considered modifications to personal flotation devices that might assist in quickly locating immersed rafters including a strobe light and a fluorescent streamer. Clearly, these

are matters of expert opinion, assuming the necessary research exists, and beyond the scope of this inquest to assess and determine.

I find that the PFD was suitable and serviceable for use in white water rafting on the Tully River.

The White Water Float Position

The use of the white water float position is critically important. The use of the position is reinforced in the briefings, demonstrated on land and the rafters practice the position in river pools shortly after commencing the trip. It is evident from the accounts given of the other participants in raft 068 that most immediately assumed the white water float position and maintained that position following flip over until they were retrieved. It appears the briefings and practice opportunities served their purpose on this occasion.

I find that the briefing and instruction given about assuming the white water position in the event a rafter enters the water was adequate.

Crew Competency

Another potential contributor to the risk of a flip over is the overall competency of the crew in responding to and carrying out the instructions of the river guide while negotiating the rapids.

The Raging Thunder policy and procedures manual sets out in detail the nature and extent of instruction to be given by the guides to the customers. Mr Clarkson has detailed in his statement the nature and extent of the instruction that he gave to the crew of raft 068. It is evident that most of the rafters accompanying Mr Clarkson had some recollection of some of the matters addressed in his statement. It is understandable that these witnesses may not recall each and every aspect of the instructional session. However, the cumulative effect of their evidence is to confirm that most, if not all, of the matters that Mr Clarkson canvassed in his statement were covered. The instructional session was comprehensive. In addition to an instructional session, the rafters were provided an opportunity to practice some of these newly learnt skills in the calm of the top pool before commencing the descent.

The evidence from the other rafters on raft 068 suggests that they were comfortable with the level of instruction provided and achieved a basic level of competency in following his instructions and commands.

When raft 068 was navigating the chute adjacent to Scales Rock and before it flipped over, there is no evidence of confusion or inadequate response amongst the rafters to the commands of Mr Clarkson.

There will always be limitations on the opportunity and effectiveness of training of novices to white water rafting in preparation for a trip of this nature. There is no evidence to suggest that the level of basic competency achieved through the instructional and practice sessions was less than might reasonably be achieved.

Guide Competency

Mr Clarkson was the guide of raft 068 when the incident occurred. He was appropriately qualified and experienced to guide a commercial rafting operation. His qualifications include Professional River Outfitters Association of Alberta Training Certificate Class 3 / 4 and Swift Water Rescue II. He started as a river guide in 2004, working in Norway and Canada. Mr Clarkson trained with Raging Thunder from the 13 September and started work on 26 September, 2007. His training took the form of observation and familiarisation while accompanying senior guides. Mr Clarkson completed eight training trips during this period. Prior to 6 October, 2007, he had completed six commercial trips. The day of the incident was

the first occasion that Mr Clarkson had taken the river right route around Scale rock. There is evidence from rafters with Mr Clarkson, to suggest that he had a discussion with Mr Dilli about the manner of rafting the route to river right.

Given there are many variables involved in guiding a raft through this rapid and the limited experience of Mr Clarkson on this river, with no experience with this particular route, it would be inappropriate to make a finding about his competency. However, *I do find that Mr Clarkson did his best to safely navigate those rapids.*

Operator Guidance – Manner of Rafting and Providing Cover

The Raging Thunder Policies and Procedures Manual provide the following guidance about rafting Theatre when the water level is 36Mega.

Ninja Chute/Robins Nest/Scales of Justice/Full Stop. First two Guides are to secure their rafts in eddies before Ninja Chute to right of rapid and swim across to river left to cover Ninja Chute below the chute and cover Robins Nest on top of the large boulder adjacent Pivot Rock. The third Guide runs Ninja Chute eddies out at Ninja Chute securing raft and walks to Scales cover point. Where possible a Senior Guide should control the rapid. The fourth Guide runs Ninja Chute and Robins Nest and secures raft to Scales chain. This raft becomes a bump boat. The Guide standing on Scales cover rock now walks to Full Stop cover point on rocks adjacent Lemon Squeeze. The fifth Guide runs rapid to Scales drags across front to cover point river right and secures raft in the eddy out of the way. That Guide walks down to cover point below Nipple Rock and controls Full Stop.

A senior Guide, preferably EG2, runs rapid to Full Stop securing raft in eddy. Two Guides cover Full Stop, senior Guide controls area. Guests need to vacate the raft in case it is needed to be used as a rescue platform. System is now complete and all Guides may run rapid. Cover shall be replaced at TL's discretion.

The Manual includes the sketch plans with grid overlays of Theatre and Full Stop Drop. The procedure contemplates a guide at the cover point below Nipple Rock (A4 – Full Stop Map) and two guides including a Senior Guide at cover at Full Stop Drop 7E-G – Full Stop Map).

Under the heading 'Theatre: 54-80megas' appears the following note:

Note: This section of rapid is potentially very dangerous and should be directed by senior Guides, preferably being located at Scales and Full Stop. There is a noted foot entrapment area above 60 megs at Robins Nest. A graded Guide with a noted accurate throw should be located here to prevent rafts going right as this can result in flips and wraps at Scales. There have also been serious incidents in the Full Stop area.

Trip Leader may choose to run hard river right at any level.

At this water level, the preferred route is river left of Scales Rock. It is not clear whether the fact that the notation appears at a higher water level suggests, by implication, the risks of flips and entrapment are considered less or negligible.

It is interesting to note that under the heading 'Throw Bag Procedure at Robins Nest', a set of rapids before Scales Rock, and in reference to cover at that location, it is stated,

"Cover is located so that swimmers can be pulled into these eddies in order to prevent them from going down the river right of Scales and swimming over Full Stop Drop".

Another acknowledgement of the desirability of preventing swimmers going over Full Stop Drop.

There are also references in the Raging Thunder procedures that acknowledge an increased level of risk such as the amendment requiring the guide acting as River Medic to take up the role of bump boat at Scales Rock, presumably to ensure he or she is accessible. Similarly, the reference to guests vacating a raft in case it is required as a rescue platform. Some of

these references appear in that section of the procedures for The Theatre when the river level is between 54-80mgs.

The Theatre featured in past entrapments and fatalities. There is also the evidence of the initial search response of guides. When asked why they went and looked for Ms Charlesworth where they did, they responded to the effect that they were known potential entrapment points or where a rafter might be washed.

There was certainly considerable evidence from guides to the effect that parts of The Theatre, particularly below Full Stop Drop were notorious for the risk of entrapment.

There were three guides in the immediate vicinity of raft 068 when it flipped over. Mr Dilli Sherma was the Trip Leader. He had rafted to Scales Rock and used a chain attached to Scales rock to secure his raft to river left. His raft then acted as the 'bump boat', gently stopping rafts exiting Robins Nest. Mr Sherma stated his role was to assist guides to walk the raft across the flat rock before the guide reboards the raft and descends the chute at river right of Scales Rock. Mr Sherma stated he would provide general direction to guides. Mr Sherma assisted Mr Clarkson in this fashion. Although he did not see the flip over, he heard the call that there was a flip over and went to assist.

Mr Edward Kinnersly had parked his raft upstream at Robins Nest, assumed the cover position at Full Stop Drop, while the raft guided by Mr Haraki completed that section of the rapids. Mr Haraki then took over cover at the Full Stop Drop and Mr Kinnersly was walking upstream to his raft, almost abeam of raft 068 when he saw it flip over.

Both guides immediately went to the assistance of those in the water.

Therefore, the cover arrangements below Scales Rock were one guide at Full Stop Drop cover position. There was no guide on cover below Nipple Rock (A4 – Full Stop Drop Map).

As to the safest manner of rafting The Theatre, Raging Thunder relies on the competency of the guide as reflected in his or her qualifications supplemented with on-river training and familiarisation. It will be recalled that Mr Clarkson had completed only 8 training trips and 6 commercial trips. He had not previously had the experience of going river right at Scales, only the river left route.

A number of witnesses gave evidence about the on river training and familiarisation given to new guides who come qualified and experienced from other commercial operations. It was suggested it was usually obvious early in the familiarisation training whether a prospective new guide had sufficient technical skill and knowledge to qualify as a Tully River guide. However, I was unable to find any documented and *rapid specific* criteria against which the competency of a prospective new river guide was measured. The assessment of prospective new guides was entirely reliant on the judgement of the accompanying senior guide. While I do not doubt the high level of skill and knowledge the senior river guides possess, I am left questioning the consistency and comprehensiveness of the assessment process in the absence of criteria specific to particular rapids.

I acknowledge it is unlikely that any of familiarisation and training program over a period of a week or two is going to expose new guides to every experience on the River. Conditions can change from day to day, month to month and season to season. With these changes come different routes through the rapids. It is not suggested that a new guide must be exposed to every possible experience which they might encounter in a commercial operation before becoming operational. However, they should be exposed to experiences and opportunities to develop skills that are critical to the risk of entrapment on particular rapids.

Further, it is not possible to determine whether, if Mr Clarkson had been exposed to this route before the day of the incident, his technical ability at guiding a raft through this rapid

would have been enhanced so as to reduce the risk of a flip over. There are too many variables to say whether or not the outcome would likely be different. It is possible to say that the risk of a flip over would be reduced.

Harm Minimization

Initialisation of a search for Ms Charlesworth was quick. Mr Clarkson immediately boarded the upturned raft and simultaneously raised the alarm while initially locating his crew and maintaining contact with those that he could see. Mr Clarkson was able to account for all guests with two below the raft and sighting others heading downstream. Mr Kinnersley and Mr Haraki went to the immediate assistance of those rafters that were accessible. Mr Haraki saw four rafters heading downstream towards Full Stop Drop. Mr Kinnersley had moved into position above Full Stop Drop and threw two throw bags (rope lines) in an attempt to recover the first two guests. Although his line reached them, they were unable to maintain hold of it. Mr Kinnersley reported seeing three go over Full Stop Drop via river left of Hanging Rock while another two or three went over the main drop, river right of Hanging Rock. He then entered the water and headed downstream to assist Mr Haraki.

Mr Haraki saw four rafters go over Full Stop Drop and was eventually able to recover four back to shore, using two throw bags and recovering them close to his cover position. It is impossible to measure the passage of time when so much is happening, simultaneously at different locations. Rafters in the water moved in and out of view of different guides throughout the incident. It is sufficient to note that those guides present immediately assisted those that they could and as more guides arrived on scene, they immediately went to the assistance of those rafters' still requiring help. It was inevitable that there would be a passage of time until it was realised a rafter was missing but I don't consider the period inordinate however critical it was. As Mr Clarkson was washed downstream on the upturned raft he assisted in recovering crew while continuing his efforts to account for the others.

I find that the fact that Ms Charlesworth was missing was established within a reasonable period having regard to the number and location of guides on cover and their workload. If there had been more guides in cover positions, there workload might not have been as high and there would have been an increased prospect of an earlier realisation a person was missing. The quality of cover is discussed in more detail later in my findings.

When it was realised that Ms Charlesworth was missing, a search was commenced. Mr Clarkson continued downstream on his raft, searching for Ms Charlesworth. The initial focus of the search efforts was in the area of Lemon Squeeze, a known entrapment area. Guide Ben Anderson held a line to Mr Haraki while he entered the water and searched that area. Other guides started searching upstream of this position. Guide Mick Lacey was searching in the area of Full Stop Drop. While standing on a rock upstream of Full Stop Drop he noticed the handle of a paddle protruding from the water, river left of Hanging Rock. Guide Marty Coates had also noticed the T grip of the paddle. While Mr Coates held a safety line, Mr Lacey explored around the rock and found Ms Charlesworth. She was entrapped, pinned underwater to the rock.

The efforts to locate Ms Charlesworth were excellent. During the course of evidence from the guides about their arrival on scene and first reactions as to where to search, I gained an impression there was no immediate co-ordination of their efforts. However, each guide appeared to assess the situation, including where others were already searching and intuitively know where to focus their efforts. Although I am not critical of that approach, it would be more prudent to have the most senior guide present assume a command and co-ordinating role.

The challenges faced in extricating Ms Charlesworth are best depicted by the photograph of the scene (attachment B). Three guides made every effort to extricate her. While their efforts continued, other guides rigged up a rescue platform using a raft and lowered it into position

from upstream. Ms Charlesworth was then extricated and recovered into the raft. The helmet and jacket were removed and resuscitation efforts immediately started. The efforts to extricate necessarily meant that the guides in the water exposed themselves to serious risk but didn't hesitate in their endeavours. Hearing the detail about their co-ordinated efforts and the thought that went into each attempt, the guides are commended for their action. The skill and knowledge necessary to perform at such a high level demonstrates the quality of training undertaken in extrication techniques.

No issue arose during evidence about the quality of the first aid administered to Ms Charlesworth. When Dr Law arrived on scene, he had the opportunity to observe the quality of the first aid administered and spoke highly of the skill of those involved.

There were communications difficulties between those on scene and others who had a co-ordinating role whether that be in the company office or emergency response communications. There are significant communications limitations due to the terrain surrounding the location. I am satisfied that the best efforts were used to relay essential communications via the available resources, an amalgam of phone, satellite phone, different radio frequencies and so forth. There is no easy technology solution to the limitations at present and the subject is under constant review by the operators and emergency services.

There was a delay in the dispatching of the QES helicopter to recover Ms Charlesworth. However, I accept that the competing demands for use of the emergency helicopter means that those responsible for clinical coordination and prioritising must act on the assessment of paramedics rather than first aid providers.

Ultimate Findings

1. *Natasha Charlesworth died on 7 October 2007 at Cairns Base Hospital due to cardio-respiratory arrest as a consequence of drowning.*
2. *On 6 October 2007 Ms Charlesworth was participating in a white water rafting tour with Raging Thunder on the Tully River when the raft that she was crewing, flipped while descending The Theatre rapids. She was washed downstream and became entrapped underwater. Ms Charlesworth was extricated after a prolonged period of immersion and CPR commenced. She was evacuated to Cairns Base Hospital where she later died.*
3. *The design and serviceability of the raft was adequate and did not contribute to the incident.*
4. *The PFD worn by Ms Charlesworth was suitable and serviceable for use in white water rafting on the Tully River.*
5. *The briefing and instruction given to her about assuming the white water float position in the event of entering the water was adequate.*
6. *The river guide on her raft, Mr Clarkson, did his best to safely navigate those rapids.*

Preventative Recommendations

Section 46 (2) of the Coroners Act empowers a Coroner, whenever appropriate, to comment on any thing connected with a death investigated at an inquest that relates to public health and safety as well as ways to prevent death from happening in similar circumstances in the future.

Before offering my comments, there are a number of important matters that must be acknowledged.

Firstly, every participant in white water rafting is interested in the thrill of rafting. That thrill comes from the perception of risk. The challenge for adventure tourism operators is to maximise the *perception* of risk within the boundaries of what most tourists are willing to take while minimising the *actual* risk.

Secondly, whitewater rafting started as a recreational pursuit and has developed into a major commercial venture. Its collective approach to the management of safety has progressed markedly over that period. Some of the early participants are now Senior Guides with over 20 years experience. They are highly skilled and have a wealth of experience on this and other rivers. Most appear to have travelled with their career in pursuit of experience.

Thirdly, the operators and guides are dealing with the vagaries of nature which are susceptible to change without much notice and this presents a challenge to planning.

In light of these matters, my comments are based on opportunities for improvement and should not be interpreted as deficiencies in the operator's management of safety.

I return to the two of the considerations listed earlier as opportunities for intervention and risk control available to an operator, namely:

- Operator guidance as to safest manner of rafting the rapid, which may influence the prospect of flip over as well as prospect of entrapment depending on the location of entrapment points; and
- The system of cover provided at the rapid which may influence the prospect of entrapment.

I also return to my observation that a careful risk assessment should inform and underpin the safest manner of rafting a set of rapids and the placement of cover. I then noted that guides can be trained to follow the procedures that are developed from that process, supplemented by the individual skill and judgement of guides where departure might be necessary.

I am of the view that there exists an opportunity to apply a formal and documented risk management approach to rafting of specific rapids. This is best illustrated by a conceptual outline of a process that might be used and refined by an operator with contributions from senior guides.

The first stage is the process of hazard identification which would identify all potential sieves and like dangers to rafters. Unlike other rivers, the guides on the Tully River have the opportunity to walk and survey the river when the water is shut off after rafting operations are concluded for the day. The hazard identification and relevant hydrology should be documented by way of mapping with explanatory notes to assist in training guides and demonstrating the application of the following steps.

The second stage is considering the potential locations for flip overs and the prospect of flip over at those locations. It would be relatively easy to capture data about each of these aspects. There is probably a reasonably good body of information based on the experience of the senior guides about flip over locations and rates.

The third stage is the likely path of the rafters in the event of a flip over at a particular location and the prospect of them passing near entrapment points.

The fourth stage is to consider the opportunity to place cover at locations that might mitigate the prospect of rafters passing near entrapment points. If a particular location is notorious for dislodging a rafter or two during a rough section of rapids and a single cover might be able to retrieve them before they likely pass known entrapment points, the level of risk will be substantially mitigated, perhaps to an acceptable level.

The fifth stage is to consider, in the absence of adequate cover (i.e. mitigation of risk to a definable and acceptable level), alternative strategies that might achieve the same outcome. For example, guide and crew competency might play a greater role. If there are rapids where the opportunity for cover to retrieve rafters before they pass entrapment points is limited due to the terrain (for example, Wet n Moisty), a higher level of skill and knowledge might be

required of the guide. This feeds back into the induction/familiarisation program. Such rapids are earmarked as requiring a higher level of technical proficiency. The particular skills required can be identified and the inductee assessed against those skills and the level of proficiency attained. Further, crew competency should be taken into consideration. If a guide has a crew that is performing poorly and a particular rapid is assessed as requiring a high level of skill on the part of the guide, together with moderate level of skill on the part of the crew, failure of the crew to achieve that level may result in the crew walking that set of rapids.

The outcome of this process should be a map showing:

- preferred paths through the rapids that minimise the risk of flip overs or persons overboard;
- locations where there exists a risk of flip over and accompanying notes setting out strategies for mitigating that possibility;
- the likely paths of rafters in the event of flip over;
- the location of known entrapment points;
- the locations of cover positions;
- accompanying notes that discuss alternative strategies for mitigating risk to an acceptable level and identifying factors such as poor crew work that might heighten risk beyond an acceptable level.

How might this process reduce the risk of entrapment in similar situations to that involving Ms Charlesworth?

A proactive application of the basic risk management process to The Theatre might result in the following conclusions or queries:

- There exists a small prospect of a flip over while rafting river right adjacent to Scales Rock;
- In the event of a flip over there will likely be 8 persons midstream and headed towards Full Stop Drop;
- There exist entrapment points at and beyond Full Stop Drop;
- There is an opportunity to recover possibly 2 rafters from the cover point below Nipple Rock;
- PFD and white water float position will mitigate a degree of risk of entrapment at Full Stop Drop and beyond;
- The guides at Full Stop Drop cover will not be able to retrieve rafters until after they have passed near entrapment points;
- Are there any other potentially effective cover positions?
- The only risk control left is reduction of the risk of flip over with greater guidance from the operator about how to raft the rapids (drawing on the collective wisdom or corporate knowledge of its senior guides) and greater technical competency of the guide in following and supplementing that guidance.

At the moment, this approach is not reflected in the operational documents. There is no way of knowing, in the absence of documented procedures of the type that I am suggesting, whether the operator appreciated the critical need for higher levels of skill and knowledge on the part of the guide in navigating river right of Scales. Similarly, the critical need for more effective cover above Full Stop Drop.

The capture and documentation of this information using the concept outlined above can then form the basis of training programs and periodic performance reviews of the competency of guides. It also creates a documented base level of understanding which can be reviewed and modified in light of new experiences. Basic internal investigation of flip overs is an opportunity to extract lessons to be learnt and facilitate a review of the documented procedures, challenging or confirming their merits. Periodic auditing would also be facilitated by documented standards.

The present approach of minimal operator guidance places a heavy reliance on the judgement of the individual guides and misses the opportunity to cumulatively capture and build a body of corporate technical knowledge. The industry has grown sufficiently, whatever the economic climate, to develop and implement a more mature and systemic approach to safety risk management.

My recommendations for improvement are conceptual only. To progress them, commercial operators like Raging Thunder will need the assistance of persons with structural and process expertise in safety risk management, to facilitate the development of rapid specific safe operating procedures. With time, the senior guides will gain the necessary expertise and continue the development process.

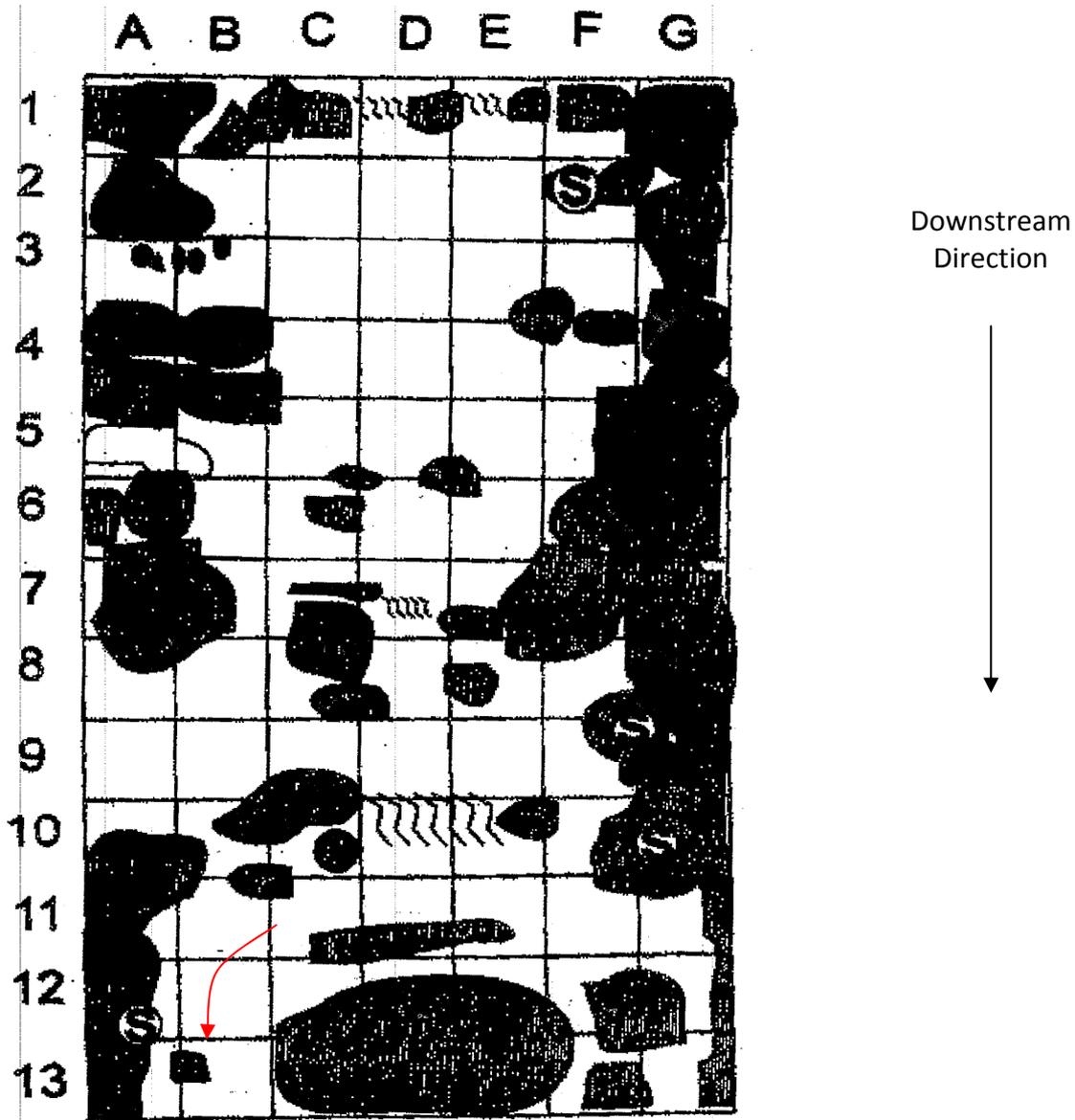
I recommend that Raging Thunder review its operational procedures by conducting formal risk assessments of each set of rapids, identifying all hazards, selecting control measures appropriate to the unique attributes of each set of rapids that mitigates the risk to a defined acceptable level, and then periodically reviewing the control measures for their effectiveness. The hazards, risks and workings of the control measures should be shown as an overlay on current maps of the rapids. Explanatory notes about relevant strategies should accompany the maps. Safety critical strategies should be highlighted. These documented procedures should be incorporated into training and auditing programs.

This is the first inquest in a series of four inquests dealing with five deaths (two deaths occurred in the same rafting incident) during whitewater rafting in North Queensland. I directed that the hearings proceed separately for the purpose of determining the circumstances of each incident and considering each operator's management of the risk of entrapment. I directed that a joint hearing be convened on conclusion of the separate hearings, to address the common issue of adequacy of current standards and regulations.

Therefore, in this matter, I defer considering recommendations relating to the adequacy of current standards and regulations of the whitewater rafting industry pending delivery of findings from the other hearings and the convening of the joint hearing.

Attachment A

The Theatre

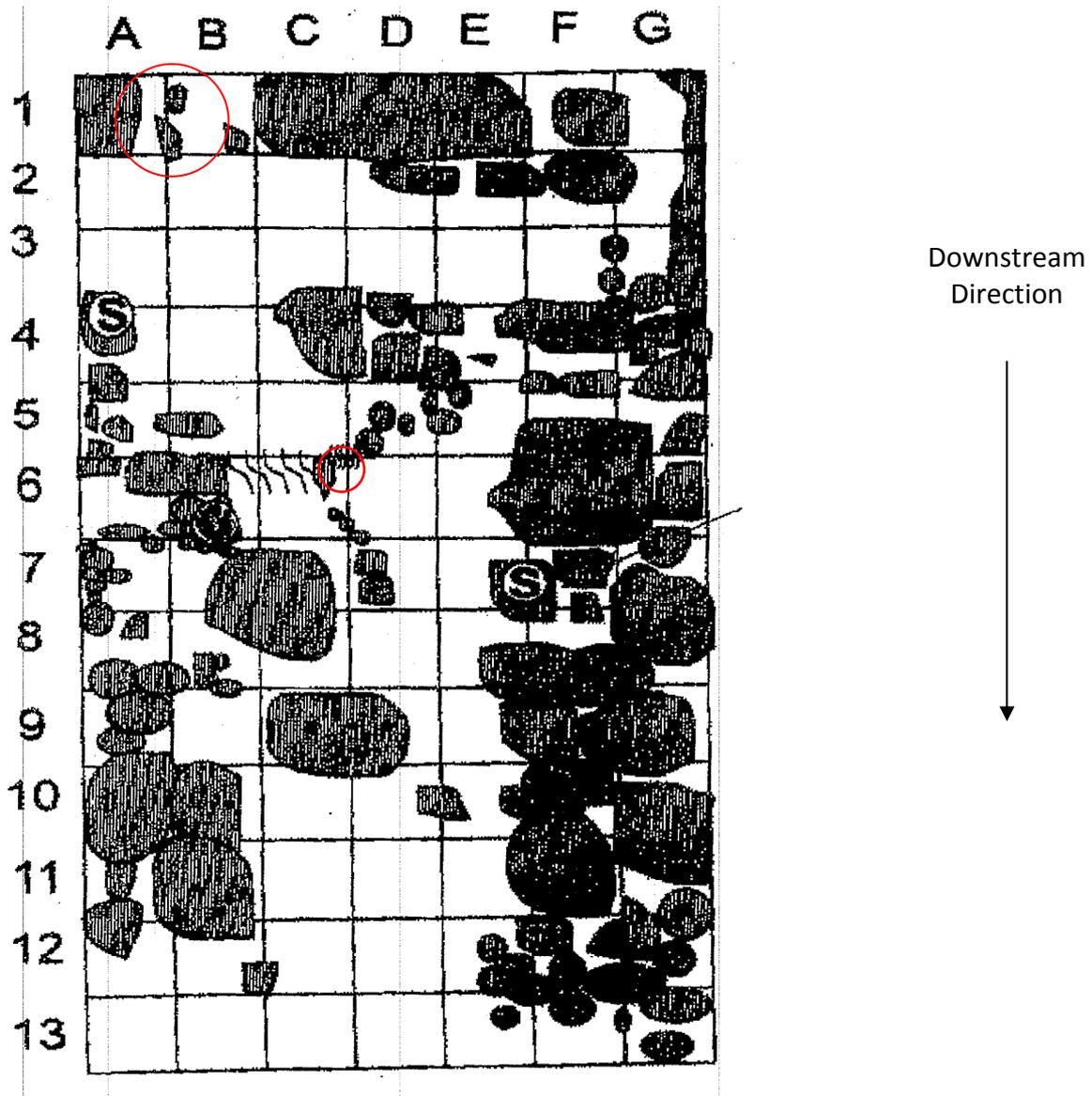


Key Features:

- 1A Ninja Chute
 - 2F Cover Position Ninja Chute
 - 8D Robins Nest
 - 8/9 F/G Cover Position
 - 10/G Cover Position
 - 12/13 C/E Scales of Justice or Scale Rock
 - 12 A Cover position
- Approximate Entry Path of Raft



Full Stop Drop



Key Features:

- | | |
|--------------|---------------------------------|
| 1 C/E | Scales of Justice / Scales Rock |
| 1 A/B | Flip over point |
| 4 A | Cover position |
| 6 C/D | Entrapment Point |
| 6 B/C | Full Stop Drop |
| 6 C | Hanging Rock |
| 7 E/F | Cover Position Full Stop Drop |
| 8 C | Lemon Squeeze |

Attachment B



Photograph of scene during extrication efforts. The group of guides in the centre of the picture, in the water and in front of the boulder are attempting extrication.