OFFICE OF THE STATE CORONER

FINDINGS OF INQUEST

CITATION:	**Inquest into the deaths of** Ian DAVY Concetta DELL'ANGELO Takeshi SAKAI
TITLE OF COURT:	Coroner's Court
JURISDICTION:	Hervey Bay
FILE NO(s):	Various
DELIVERED ON:	23 April 2010
DELIVERED AT:	Hervey Bay
HEARING DATE(s):	28 May 2009, 29 December 2009, 22 January 2010, 19-22 April 2010
FINDINGS OF:	Mr Michael Barnes, State Coroner
CATCHWORDS:	Coroners: inquest, regulation of 4WD hire motor vehicles on Fraser Island

REPRESENTATION:

Counsel Assisting:	Mr Peter Johns

<u>DAVY and DELL'ANGELO Inquests</u>

James May:	Mr Adrian Braithwaite (Gilshenan & Luton Legal Group)

SAKAI Inquest

Takashi Nukutou:	Mr Cameron Browne (Potts Lawyers)
Other passengers:	Mr Seiji Iseki (MBA Lawyers)
Aussie Trax Pty Ltd:	Mr Rick Taylor (instructed by Geldard Sherrington Lawyers)

All Inquests

Department of Transport And Main Roads:	Ms Premika Prasad (Crown Law)
Department of Environment And Natural Resources:	Mr Paul Arthur

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The *Coroners Act 2003* provides in s45 that a coroner's written inquest findings must be given to the family of the person who died, each of the persons or organizations granted leave to appear at the inquest and to various officials with responsibility for the subject matter of any recommendations. These are my findings in relation to the deaths of Ian Davy, Concetta Dell'Angelo and Takeshi Sakai. They will be distributed in accordance with the requirements of the Act and posted on the website of the Office of the State Coroner.

Introduction

In April and December of 2009 three young foreign tourists lost their lives as a result of two separate motor vehicle accidents on the eastern beach of Fraser Island. In the lead up to their deaths all three had been passengers in four-wheel drive vehicles hired from operators in nearby Hervey Bay. At the time of the accidents each of the vehicles was being driven by a fellow tourist whom the deceased people had only recently met and who was driving on a beach for the first time.

In response to these accidents variations have been made (and others proposed) to the regulations and policies concerning the hiring and driving of vehicles on Fraser Island. Other changes are in the process of being implemented.

These findings:-

- Set out the matters required by s.45(2) of the Act; namely the identity of the deceased, how, when, and where they died and what caused their deaths;
- Examine the adequacy of the regulatory regime governing the use of vehicles on Fraser Island;
- Examine the regulatory and policy response of various government bodies to the two accidents and contrast it with earlier actions;
- Examine evidence derived from the fields of engineering, mechanics, psychology and statistical analysis in order to devise methods by which the use of vehicles on Fraser Island, in particular hire vehicles, can be made more safe; and
- Make recommendations in this regard.

As this is an inquest and not a criminal or civil trial, these findings will not seek to lay blame or suggest anyone has been guilty of a criminal offence or is civilly liable for the deaths.

I will deal separately with the circumstances surrounding each of the two accidents before jointly considering the safety, regulatory and policy issues arising from both.

Queensland Police Service (QPS) investigations

April 2009 Incident

Senior Constable Glenn Rusten has been attached to the Maryborough District Traffic Branch since 2003 and has completed courses in basic and advanced crash investigation. On 18 April 2009 he was ordered to fly to the scene of the crash in company with a Maryborough scenes of crime officer. Senior Constable Rusten was charged with conducting the forensic investigation into the accident which had occurred earlier that morning.

On arrival at the scene he took up with Sergeant Roger Williams, the Officer in Charge of Fraser Island station who was the first police officer on the scene. Sergeant Williams had spoken to the driver of the only vehicle involved in the incident, James May, and required him to provide a sample of breath for analysis. Senior Constable Rusten carried out a survey of the areas surrounding the vehicle and took detailed measurements in order to later produce a forensic map of the area. A careful examination of the vehicle and markings on the beach were used later in order to recreate the vehicle's course of travel immediately prior to the crash and in order to make a calculation of its likely speed.

A series of photographs were taken of the vehicle and surrounds by a QPS photographer. A QPS mechanic was engaged to carry out a detailed inspection of the vehicle. Witness statements were taken from each of the occupants of the vehicle as and when their injuries allowed. Enquiries were made with the hire company which owned the vehicle and a statement taken from the staff member who had dealt with the occupants.

At the completion of that investigation Senior Constable Rusten compiled a detailed report for the Coroner.

December 2009 Incident

The QPS investigation into the second crash was conducted by Sergeant Steve Webb of the Wide Bay Forensic Crash Unit.

Sergeant Webb attended the scene in the hours after the crash and carried out an inspection of the single vehicle involved and the surrounding areas. This included an examination of tyre and impact marks left on the sand. On the basis of these observations Sergeant Webb formulated an explanation as to the vehicle's movements from the point when the driver appeared to lose control to the point where it came to rest.

A mechanical inspection of the vehicle was carried out by an experienced QPS mechanic. Enquiries were made with the four wheel drive hire company which owned the vehicle and the records relating to its hire were later obtained. A series of photographs of the scene was taken by a QPS photographer. Statements were obtained from the occupants of the vehicle (all of whom were Japanese) and, where necessary, a translator was made available.

At the completion of his investigation Sergeant Webb compiled a detailed report for the Coroner.

I thank both officers for their efforts in the conduct of the investigations and the compilation of their reports. Those reports and their oral evidence at the inquest were of great assistance.

Jurisdiction and inquest

As the three deaths were violent and unnatural they were reportable deaths for the purposes of the *Coroners Act 2003* ('the Act'). I determined that it was desirable that an inquest be held in relation to each of the deaths. In each case the imminent repatriation of the driver of the vehicle meant the inquests were opened at short notice. On 28 May 2009 proceedings commenced in relation to the deaths of Mr Davy and Ms Dell'Angelo. Evidence was taken under direction from the driver of the vehicle involved in the first incident, James May, and an occupant of the vehicle, Carl Morgan.

On 29 December 2009 an inquest into the death of Takeshi Sakai was opened and evidence taken under direction from the driver of the vehicle involved in that incident, Takashi Nukutou.

Having regard to the similarity of the issues to be investigated in each inquiry, I determined it was appropriate to combine them into a single inquest as envisaged by s33 of the Act.

The evidence

I turn now to the evidence. Of course I can not even summarise all of the information contained in the exhibits and transcript but I consider it appropriate to record in these reasons the evidence I believe is necessary to understand the findings I have made.

Fraser Island

I am mindful of the desirability in all inquests of explaining the circumstances surrounding a death to that person's family and loved ones. The geographical remoteness common to all three of the families concerned with these proceedings heightens the need to describe, in some detail, the places, institutions and practices relevant to these findings.

Fraser Island lies just off the coast of Queensland, approximately 300km north of Brisbane. At 1840 square kilometres it is the largest sand island in the world. The latter part of last century saw transformation in the management and use of the island with the cessation of sand mining and logging and its listing, in 1992, as a UNESCO World Heritage site.

In the mid 1970's the island attracted around 20,000 visitors a year. In 1993, a year after the UNESCO listing, it attracted around 220,000 visitors. As of 2008 that number was estimated at 360,000 individual visitors (and over 1 million visits).

Fraser Island is well known for its long stretches of vehicle accessible beach which extend over 210km in total. Approximately 55% of visitors come to the island on commercial tours; 15% of all visitors are backpackers who share hired 4WD vehicles; while the remaining 30% travel independently in their own or hired 4WD vehicles (this may include a small percentage of backpackers who hire vehicles not caught by the earlier statistic).[1]

The un-audited estimates from 4WD hire agencies catering for the 15% of backpackers referred to above suggest that around 60% of customers are international visitors.[2] In turn these are largely made up of visitors from the UK, Western Europe and East Asia.

Around 240 hire vehicles operate on Fraser Island and 15 different hire companies account for ownership of nearly all of these.[3] The companies operate on the mainland with those hiring the vehicles making their way to the eastern side of the island by vehicular barge and then inland roads on the island itself.

The volume of visitors, the disparate nature of the activities undertaken by them, their experience in remote areas and the wide variety and ever changing nature of the environment on the island creates difficult challenges for the relevant regulatory agencies. The regulatory regimes are detailed and critiqued later in these findings.

Events of 17 and 18 April 2009

On the morning of 17 April 2009, in a well rehearsed procedure at the Beaches Backpackers Resort at Hervey Bay, guests who wished to visit Fraser Island gathered in the foyer, shortly before 7.00am. They were almost all young international visitors who had chosen to stay at Beaches as part of a tour that included a trip to Fraser Island.

They were divided into four groups of 11 and the pre-departure procedures were explained to them. They were told they would need to nominate a driver who had to be over 21 and they had to complete shopping order forms for food and alcohol. The four nominated drivers each drove a Toyota Troop Carrier – a model of 4WD light truck – to the premises of Bay 4WD, a vehicle rental company owned by the proprietors of Beaches. Two from each group who had agreed to do the shopping went with a staff member to do that, the rest of each group went in the troop carriers.

They were met by an employee of Bay 4WD, John Knight, who managed the paperwork and briefing of the group.

[1] Ex H1.7 P41
[2] Ex I1.1 P43
[3] Ex I1 P5

Hiring of the vehicle

Over the course of the next hour Mr Knight arranged the hire agreements, which in each case was signed by the nominated driver. A security bond was posted by one of the group prepared to use his or her credit card for that purpose and two from each vehicle were asked to check the equipment in the vehicles, record existing minor damage to the vehicles and pack the food and drinks when the shoppers returned. The impending travellers were also asked to watch two videos distributed by the then Environment Protection Agency (and produced in consultation with the Fraser Coast 4WD Hire Association). They were also given a verbal briefing by Mr Knight.

Mr Knight was adamant he advised the whole group that only those over 21 could drive and any intending drivers had to watch the safe driving video. There is evidence which supports and contradicts the first of these assertions but none which supports the second. It could be the confusion arose because the process was rushed.

Swati Chavda, a 22 year old backpacker from the UK, was the nominated driver of the troop carrier later involved in the fatal crash. She recalls being required to produce her licence and to sign a rental agreement. She knew she had to be 21 or older to do this. She also recalls that another backpacker from the UK, Ian Davy, provided credit card details for the purpose of providing the damage security bond.

Ms Chavda, Mr Davy and five others from her group, including a 26 year old tourist from Montella in Italy, Concetta Dell'Angelo, watched the safety and instructional videos.

While they were doing this two 20 year old Britons, James May and Carl Morgan, packed the camping gear and, when they arrived, the provisions. All of the camping gear and most of the food went onto a roof rack on top of the vehicle while some of the alcohol and some eskies were stored inside. They both say by the time the inspection and packing had been completed the video had or was about to end.

Mr May recalls that shortly after he completed packing and inspecting the vehicle he was told to go inside and sign a form that was headed "*Additional drivers*". Not surprisingly he said he believed this meant he was entitled to drive the vehicle on the island. He denies he was told drivers had to be 21 and to have watched the video. Mr Morgan also thought the form was to be signed only by those who intended to drive and indeed he erroneously thought that because he did not intend to drive he didn't sign the form.

The operators claim the form was only meant to record the names of all in the group and their agreement to share liability for any damage done to the vehicle. Rick Sethi, a member of the same group, agrees he was told this was the purpose of the form and he said he knew he was not entitled to drive, even though he had signed the form, because he did not have his English drivers licence with him. He was unsure whether he was told of the age

restriction and had no memory of hearing Mr Knight insist that only those who had seen the safe driving video could drive.

The group was then given a briefing by staff while situated outside by the vehicles. This briefing apparently related to the engaging of 4 wheel drive and the high and low range gear boxes, including instructions on the possible benefit of reducing tyre pressure if the vehicle were to become bogged in soft sand. Maps and suggested itineraries were provided and instruction given on the location of Cathedral Camp Ground, on the eastern side of the island, where the groups were to rendezvous for the evening.

The groups then set off with Ms Chavda at the wheel of the vehicle containing Mr May, Ms Dell'Angelo, Mr Davy and seven others.

Specifications of the vehicle

The group had been assigned an 11 seat Toyota Landcruiser Troop Carrier powered by an 8 cylinder diesel engine. The interior of the vehicle was arranged to allow 3 occupants (including the driver) to be seated on a front bench seat, while the remaining 8 passengers sat on bench seats running along the length of the vehicle and facing each other. Each bench seat was flat, metal framed, without head support and contained 4 'cross-lap' seat belts. Only the driver's position and front left passenger position had the more familiar three point lap-sash seatbelt with retractors.

The vehicle was fitted with a roof rack which specified a maximum weight of 200kg. The manufacturer's specifications for the vehicle itself permitted a Gross Vehicle Mass (GVM) of 3300kg. The tare (or unloaded) weight of the vehicle is 2320kg.

I am unable to determine the weight of luggage in the vehicle when it set off. The evidence of Mr May was that there were instructions from Bay 4WD and/or Beaches Backpackers that large packs would not be allowed. In addition to personal effects though, the group set off with camping equipment and a not insubstantial amount of food and alcohol. This was divided between the roof rack and the rear cabin of the vehicle. As will become evident, at the time of the accident much of this had been left behind and the amount of luggage on board was not such as to, in itself, raise significant concern.

Day 1

After arriving on the island the group continued for around an hour before another of the occupants, Gereon Berster, a tourist from Germany, took over the driving. He had been one of those who did the shopping and as a result he had not seen the safe driving video. There was a complaint about the speed he was driving and he was told to slow down. He continued for an hour before Ian Davy took over and drove the rest of the way to the campsite. It appears that driving on the first day was relatively uneventful. In his evidence Mr May made reference to the vehicle at one stage becoming bogged and this had led to some thoughts of reducing the tyre pressure. He said they were reluctant to do this as they did not know where they might be able to reinflate the tyres on return to the mainland. Ms Chavda refers in her statement to

difficulties experienced in applying the vehicle's handbrake which did not appear to effectively halt the vehicle on slopes. An inspection undertaken after the crash confirmed it was defective.

The group arrived at the campsite at about 6.00pm and, shortly after arriving, began to socialise with the other groups who had already set up camp. Nearly all in the group drank alcohol in varying degrees throughout the evening. Mr May was questioned in some detail about his alcohol consumption that evening when he gave evidence at the inquest. He recalls drinking 3 to 4 stubbies of VB, stating that his motivation for drinking less than he might otherwise was that he spent much of the evening talking to a girl he had met earlier in the day. I am inclined to accept his version and certainly there is no other evidence to the effect that he drank more heavily. In any event there is no suggestion that alcohol played a role in the ensuing accident.

Day 2

The group set off early the next morning with Ms Chavda at the wheel again. They planned to head north along the eastern beach towards a place known as Champagne Pools. Ms Chavda, Mr May and Mr Morgan all report that particular note was made in relation to the wearing of seatbelts and that on this morning, as it was with the previous day, the driver would light heartedly make an announcement in this regard. Mr May recalled it had been made clear to them at the time of hiring the vehicle that they may be subject to a police check on the wearing of seatbelts during their trips.

Shortly after setting off Mr May said he would like to have a drive of the vehicle; a request with which Ms Chavda was happy to comply. It was Mr May's understanding the speed limit on the beach was 80km/hr and he recalls driving at around 70-80km/hr for the majority of his stint at the wheel.

In his evidence to the inquest Mr Morgan commented that Mr May was driving "*faster*" and "*quite speedy*". However, in further questioning he said it was not faster than the vehicle had been driven the day before. He estimated a speed of 70km/hr and stated "*it didn't hit me as being dangerous or over the top or erratic"*[4]. Ricki Sethi gave evidence that Mr May drove faster than the others had been driving the day before and that he "*had an uneasy feeling in (his) stomach".* Ms Chavda said Mr May was *"a bit faster than the others were driving at"* but not *"noticeably excessive".* Gereon Berster said Mr May "*was driving about 70 to 80km per hour. It was faster than I would have driven but I didn't think it was unsafe."*

The crash

Ms Chavda said initially the vehicle was keeping to the left of the strip of wet sand but after travelling for perhaps 10km she noticed they were getting closer to the water. Next, she noticed "*a surge of water coming in front of the car".* She saw Mr May steer sharply to the left in an attempt to avoid it.

[4] Transcript of proceedings 28 May 2009 p. 16

The next thing she remembers is regaining consciousness on her back on the beach.

Mr Berster didn't see the wave but he saw Mr May attempting to recover control of the vehicle after he had swerved sharply to the left. He was unsuccessful and the car started to roll. When it came to a stop Mr Berster was aware some of the passengers were unconscious and others were screaming. He helped some out of the car and then tried to comfort the injured.

When Mr May was questioned about the crash by Sergeant Roger Williams from Fraser Island police station 90 minutes after the event he said: "*I was driving along when a wave came up under my right front tyre. I swerved to my left and just lost control".* In his evidence at the inquest Mr May stated he in fact did not recall swerving to the left or moving the steering wheel with any suddenness in that direction. I accept however that this happened and that it was the direct cause of the vehicle rolling over.

Aftermath

In the course of the vehicle rolling, Mr Davy and Ms Dell'Angelo were thrown out of it. The first person at the scene after the crash was Steven Nicol, a Queensland Parks and Wildlife Ranger, who arrived to find CPR being administered to Mr Davy by two of the other passengers. He commenced CPR on Ms Dell'Angelo and continued this for around 20 minutes. Mr Nicol later assisted with the other occupants who had been injured including an attempt at further CPR on Mr Davy who remained unresponsive. Two other QPWS rangers arrived and Mr Nicol instructed one of them to return to their Dundaburra base to summon assistance.

In the course of the crash, in addition to the two fatalities, five other of the occupants were seriously injured and later required hospitalisation. Sadly, it is now known that even the most prompt attention would not have saved Mr Davy or Ms Dell'Angelo but the lack of communication facilities in the area of the crash made access to medical attention painfully slow. It is estimated the crash occurred at around 7:30am. Sergeant Williams received notification via Maryborough Police Communications at 7:55am but his distance from the incident meant he was unable to arrive until 8:40am. Queensland Ambulance Service records show they received notification of the incident at 7:56am. The Queensland Ambulance Service paramedic located at the Happy Valley Ambulance Station on the island was notified at 8:01am and although heading to the incident immediately they did not arrive until 8:45am. Two helicopters dispatched by the QAS did not arrive until 9:18am.

This must have seemed an eternity for all of the surviving occupants but especially for Ms Chavda who suffered a fractured spine and paraplegia but remained conscious throughout.

Autopsy findings

On 22 April 2009 an autopsy was carried out on the bodies of Mr Davy and Ms Dell'Angelo by an experienced forensic pathologist, Dr Beng Ong, He found no markings on either body consistent with the wearing of a seatbelt at the time of impact. He limited his examination to an external examination which was sufficient for him to find that the cause of Mr Davy's death was head and neck injuries and head and chest injuries in Ms Dell'Angelo's case.

Investigation findings

The crash occurred a little over two hours before low tide. At most places there was a reasonably wide strip of hard wet sand suitable for driving on.

A mechanical inspection of the vehicle conducted by a QPS mechanic, Andrew MacDonald, found no mechanical defects which may have caused or contributed to the crash. He found the handbrake did not apply fully to one of the rear tyres as ought to have been the case. At the inquest he indicated that as the inspection had occurred about three weeks after the crash he could not rule out corrosion which had occurred since the crash as the cause but in view of Ms Chavda's account that the handbrake was not working when she drove the vehicle on the first day of the trip I conclude it was defective when the vehicle was hired.

Senior Constable Rusten estimated the weight of the items on the roof of the vehicle at the time of the crash would have been approximately 55kg to 85kg. An inspection of the vehicle showed the passenger side roof edge had been the part of the vehicle most damaged during the crash. Witness statements revealed this was consistent with the seating positions of those killed and most seriously injured. It is clear Mr Davy was sitting on the passenger side rear bench seat in the position closest to the front of the vehicle. Ms Chavda and Ms Dell'Angelo were sitting immediately to his right in the two middle positions on that bench seat.

The wreckage was strewn over 50 metres. The vehicle came to rest on its driver's side. All panels on the vehicle were damaged and all glass windows were smashed. The bonnet was torn off as was the roof rack.

Senior Constable Rusten made a calculation of the coefficient of friction for the road surface at the point of the collision and, applying recognised scientific methods to the measurements he took earlier, determined that the minimum speed of the vehicle at the commencement of roll-over would have been between 59 and 73km/h. Markings on the beach were consistent with the vehicle having completed three and three quarter rotations. Senior Constable Rusten and Mr MacDonald both noted the seatbelts for the middle two positions on the passenger side bench seat were, in contrast to the others, extended much more fully (almost to their full extent). The seatbelt where it is understood Mr Davy was seated was found to be buckled up, but adjusted such that the investigating officer doubted it would have fitted Mr Davy.

The vehicle was found to have been in fourth gear at the time of the crash.

A road side breath test performed on Mr May by Sergeant Williams at 9:10am returned a zero reading.

Vehicle limitations

Two experts gave evidence about the greater propensity for Toyota Troop Carriers to roll over due to their relatively narrow wheel track and high centre of gravity. This characteristic is markedly exacerbated by the number of people in the vehicle and the placing of load above the floor of the vehicle. This evidence and its ramifications for the vehicle hire industry are dealt with in more detail later. Suffice it to note at this stage that on the day in question the incident vehicle was carrying 11 people, its maximum carrying capacity, and there was a metal roof rack with 55 – 85kgs of extra load on the roof.

Causes of the crash

An examination of the scene found the tyre tracks of the vehicle just before it rolled over had been washed away, supporting Mr May's evidence that a wave washed into the path of the vehicle. As is typical of much of the eastern beach, there was a ridge of higher, dry sand just south of the crash site. To negotiate that formation a driver would need to slow and steer towards the ocean; once over it the driver would need to again change course and head up the beach to avoid driving into the waves which wash further ashore on the less elevated portions of beach. Other than at low tide, a driver can not travel along a straight course on such a beach but must usually weave along following the undulations and contours. This can only be done at a relatively low speed and safe changes of direction can not be sudden.

When Mr May's inexperience led to him being surprised by a wave washing up the beach his ignorance of the conditions led him to attempt to swerve away from the water. Even at a relatively low speed the instability of the vehicle he was driving, exacerbated by its load, combined with the sudden change of direction caused the vehicle to roll over with disastrous results.

Findings required by s45 – Davy and Dell'Angelo

I am required to find, as far as is possible, who the deceased were, how they died, when and where they died and what caused their death. As a result of considering all of the material contained in the exhibits and the evidence given by the witnesses, the material parts of which I have summarised above, I am able to make the following findings.

Identity of the deceased - The deceased persons were Ian James Davy and Concetta Dell'Angelo.

How they died - They died when the Toyota Troop Carrier, in which they were travelling along the beach, rolled over when the driver swerved suddenly to avoid a wave.

Place of death - They both died on the eastern beach of Fraser Island in Queensland.

Date of death - They both died on 18 April 2009.

Cause of death - Mr Davy died as a result of head and neck injuries.
Ms Dell'Angelo died as a result of head and chest injuries

Events of 12 and 13 December 2009

Hiring of the vehicle

On 12 December 2009 a group of Japanese nationals who had been travelling in Australia independently over a period of weeks and months arrived in Hervey Bay with a view to travelling to Fraser Island. The group were familiar with each other from having met at a backpacker hostel in Bundaberg. One of the party, Nana Matsumura, contacted a 4WD hire company known as Aussie Trax Rentals prior to the group's arrival in Hervey Bay and booked a 4WD vehicle. When she made the booking she told the operator there would be eight people in her party.

When they arrived in Hervey Bay two of the party, Takeshi Sakai and Takashi Nukutou, attended at Aussie Trax premises in order to pick up the vehicle and attend to the necessary paper work. The remaining six travellers waited nearby until they were picked up.

It was the group's intention that all of the driving would be shared between Mr Sakai and Mr Nukutou. When they got to Aussie Trax premises another group was already watching the QPWS safe driving safety video referred to earlier in these findings which is all in English. They watched the rest of the video with the other group and then it was shown to them again while the first group attended to the paperwork.

As was evident from his evidence at the inquest, Mr Nukutou has a very limited understanding of English. He stated that Mr Sakai had a much better understanding, a view shared by the company employee who dealt with the pair, Bryce Taylor, who believed he was able to convey the important information to the pair. Certainly the video wasn't a waste of time as Mr Nukutou clearly picked up some important elements including, for instance, that it was mandatory to wear seatbelts; that the speed limit on the beach was 80km per hour; and that they needed to ensure they did not drive in salt water. Conversely, it seems they were told something about the tyre pressure but did not understand and consequently randomly let air out of the vehicle's tyres when they saw others on the barge lowering the pressure in their tyres.

They were apparently shown a two page information sheet written in Japanese that reportedly includes important safety information. According to Mr Nukutou, they weren't given a copy to take away but only saw it briefly at the office of Aussie Trax.

I conclude that while the basic information such as the speed limit and the use of four-wheel drive high and low gear ratios was probably successfully conveyed to the hirers, the more complex and subtle information about the beach and driving on it could not have been communicated. Indeed the appropriate travelling times referenced to the prevailing tides were not even completed on the hire agreement.

On being provided the vehicle it was clear to Mr Nukutou that it only contained 7 seats. He says that no fuss was made over this explaining at the inquest that he dismissed it as some local quirk. Aussie Trax was unable to explain with any degree of certainty how this error had occurred.

Specifications of the vehicle

The vehicle hired to the party of 8 was a 2002 model 100 series Toyota Landcruiser station wagon powered by a 6 cylinder diesel engine. The vehicle had been legally modified and was registered to carry 9 people however a rear double seat had been removed. All 7 remaining seats faced towards the front of the vehicle. There was no roof rack attached to the vehicle and it is clear that all luggage carried by the group was contained, unrestrained inside the vehicle.

Day 1

In his evidence to the inquest Mr Nukutou indicated he was comfortable with driving the vehicle although he stated that almost immediately after setting off he noticed a problem with the steering such that it pulled to the right when travelling at speeds over 80km/hr. This though was not sufficiently serious for him to consider returning at any point. The group's travel on 12 December was otherwise uneventful and, as planned, they spent the night at a resort at Eurong on the island.

It seems that Mr Nukutou drank a significant amount of alcohol that evening. He admitted he was still drinking past midnight although he believes he had made it to bed by 1am.

Day 2

The following morning the group had breakfast at the hotel. When pressed, Mr Nukutou admitted that before setting off that morning he had drunk some wine, as had been noticed by some of the other passengers. It appears there was a process of transferring wine from casks into bottles that morning and Mr Nukutou drank what was leftover rather than seeing it go to waste. He estimates it would have been no more than half a glass.

That morning the group travelled to Eli Creek and went for a walk before setting off northbound on the eastern beach towards Indian Head with Mr Nukutou at the wheel. This was at about 9.30am. High tide had occurred at shortly before 6.00am and so by this stage there was a reasonably wide strip of wet sand suitable for driving.

Peter Maywald was with his son Ben and two friends on the eastern beach between Dundaburra and Indian Head. Mr Maywald was sitting in his vehicle having a rest while the remainder of the party fished. His attention was drawn to a vehicle coming along the beach from south of his position by its roaring motor which he considered was being operated at maximum revolutions – "*red lining*" and "*flat to the floor*" as he put it. As it passed on the sea side of his vehicle he could see that one of the rear passengers had their feet hanging out of the side window.

He formed the impression the vehicle was travelling much too fast for the conditions. He said in his statement it was possibly travelling as fast as 120km/hr. At the inquest he even countenanced 150km per hour but accepted he had little chance to accurately assess the speed. He said he was reasonably comfortable the vehicle was travelling at least 100km per hour. He stated that it was as fast as he had seen anyone travel in his 15 years of visiting Fraser Island. The vehicle passed between his position and the other three in his party, who were standing in the surf, without noticeably slowing. As the vehicle passed the driver sounded the horn and some of the passengers could be heard yelling out. Terrence Hollworth and Shawn Jarrett, Mr Maywald's two friends also estimated the vehicle to be travelling at more than 100km/hr as it went past them.

In his statement signed two weeks after the crash Mr Maywald said; *"From what I saw by the way they were driving I was almost certain that they were going to crash."* At the inquest he was adamant that was not a view formed with the benefit of hindsight but an accurate reflection of his state of mind at the time.

Mr Nukutou and the other passengers in the vehicle acknowledge that at various times over the weekend some occupants of the vehicle had parts of their body outside of its windows while it was travelling. Mr Nukutou recalls on the first day they were on the island two of the passengers had in fact been sitting on the window ledge with their torsos outside the vehicle while he was driving. One of the occupants Kentaro Okada stated none of the four occupants in the middle seat (there being three in the front and one in the single rear seat) were wearing a seatbelt. The forensic evidence certainly suggests that Mr Sakai who was in the front passenger seat was not wearing a seatbelt at the time of the crash.

The crash

Mr Maywald continued to observe the vehicle as it travelled along the beach and says when it was approximately 600-700 meters north of him it appeared to turn to the right, the right wheel lifted and the vehicle began somersaulting like a top. His macabre premonition had eventuated.

Mr Nukutou states he has no recollection of the immediate lead up to the crash and does not remember what speed he was doing at that time. He says the last he does remember was travelling at 80km/hr and although admitting that at times he may have reached speeds of up to 100km/hr he does not believe he exceeded this.

The evidence from the occupants of the vehicle is inconsistent in relation to whether the vehicle swerved left or right immediately before crashing and otherwise no explanation is provided as to what may have been the cause. Michiaki Yamamoto who was in the rear seat recalls the vehicle was close to the waves just prior to the crash and expresses a belief the driver veered left to avoid them before losing control.

Aftermath

Mr Maywald and his group immediately drove to the crash site. It was clear some of the occupants of the crashed vehicle had been badly injured. He observed one of the occupants giving mouth to mouth to another lying on the ground. An attempt at a triple 0 call was unsuccessful as there was no reception and Mr Maywald decided to drive the 15 minutes to the nearest ranger station where he was able to contact the QAS.

He was given instructions in regard to setting up a safe landing location for a helicopter which he arranged when returning to the site. Mr Jarrett and Mr Hollworth remained at the scene where they observed the continued attempts at CPR on the unconscious Mr Sakai. The QAS paramedic based at Fraser Island was the first member of emergency services to arrive at the scene. A defibrillator was attached to Mr Sakai however sadly it was clear by this time nothing further could be done and CPR was ceased. QAS records show they were notified of the incident at 9.30am and the first unit arrived at 10.19am. The most seriously injured were transported by helicopter to Royal Brisbane Hospital. This included Mr Nukutou who suffered a broken neck in the crash.

Autopsy results

A post mortem examination was conducted on the body of Mr Sakai on 16 December 2009 by an experienced forensic pathologist Dr Storey. Dr Storey did not note any markings on the body consistent with Mr Sakai having been wearing a seatbelt at the time of the crash. The examination revealed injuries consistent with having been struck by parts of the vehicle either during the course of being ejected from it or as the vehicle continued to roll after ejection. Dr Storey listed the cause of death as multiple severe injuries including skull fracturing, multiple bilateral rib fracturing, pulmonary lacerations and liver lacerations due to or as a consequence of a motor vehicle accident.

Investigation findings

Sergeant Webb determined the crash was caused as a result of sudden steering input by the driver causing the front left hand tyre to dig into the sand and resulting in the vehicle overturning at least 3 times before coming to rest back on its wheels. He included that none of the occupants were restrained by seatbelts at the time the vehicle crashed and that a number of occupants, including the deceased man Mr Sakai were ejected from the vehicle as it rolled. Sergeant Webb is of the view the vehicle was being driven at excessive speed at the time it crashed. This view is based on the eye witness accounts rather than any forensic analysis of the crash scene.

A mechanical inspection of the vehicle revealed no faults or deficiencies that could be said to have contributed to the crash. Only the right rear tyre remained inflated at a pressure of 37psi.

Cause of the crash

The tracks of the vehicle in the sand show that shortly before it rolled, the vehicle had left the hard wet sand and driven onto a patch of soft sand. The tyre marks indicate that as it did so the vehicle started to yaw – that is the rear tyres are seen to be tracking outside and to the right of the front tyres. Undoubtedly, driving into soft sand caused the vehicle to rapidly decelerate. The tracks then show a turn to the right - presumably an attempt to correct the yaw – and immediately thereafter the left front tyre dug in and the vehicle flipped over and somersaulted three times.

The driver lost control of the vehicle because it was being driven too fast in the prevailing conditions.

Findings required by s45 - Sakai

I am required to find, as far as is possible, who the deceased was, how he died, when and where he died and what caused the death. As a result of considering all of the material contained in the exhibits and the evidence given by the witnesses, the material parts of which I have summarised above, I am able to make the following findings.

Identity of the deceased – The deceased person was Takeshi Sakai.

How he died – Mr Sakai died when he was flung from a rolling 4WD vehicle in which he was a passenger that was being driven at high speed along a beach when the driver lost control of it

Place of death – He died on the eastern beach of Fraser Island in Queensland.

Date of death – He died on 13 December 2009.

Cause of death – He died as a result of multiple injuries incurred in a motor vehicle crash.

Condolences

Whenever a young person dies in a sudden, violent incident the distress of family and friends is severe. When the bereavement occurs as a result of something that happens on the other side of the world the suffering is magnified by the isolation. I'm sure the family and friends of the three people who died in these two crashes continue to grieve. I offer them my sincere condolences.

Referral to DPP

The Coroners Act by s48 requires a coroner who, as a result of information obtained while investigating a death, "*reasonably suspects a person has committed an offence,"* to give the information to the appropriate prosecuting authority.

I take "*committed an offence*" to mean there is admissible evidence that could prove the necessary elements to the criminal standard.

In my view this provision requires me to consider whether I should refer the conduct of either of the drivers in these two incidents to the Director of Public Prosecutions to enable him to determine whether a charge under section 328A of the Criminal Code - dangerous operation of a vehicle causing death - should be preferred.

The Criminal Code in section 328A(4) creates an offence in the following terms: "*A person who operates…a vehicle dangerously in any place and causes the death... another person commits a crime*".

In determining whether a vehicle was being operated dangerously it is appropriate to apply an objective test – *R v McBride* [1962] 2 QB 167. For this reason the accused person's state of mind – that is whether he or she intended to drive carefully or dangerously is irrelevant and the offence does not require proof of criminal negligence – see *R v Wilson* [1965] QWN 42. It is simply a question for the jury to determine whether the manner of driving was dangerous in all of the circumstances.

For many years Queensland courts had held when determining whether a person was guilty of dangerous driving that the Crown must show some fault on the part of the driver which caused the danger to the public – see *R v Webb* [1986] 2 Qd R 446. However that is no longer the law. In *R v Wilson* [2008] QCA 349 it was confirmed that the High Court decision in *Jiminez v R* (1992) 173 CLR 572 obviated this. In the leading judgement of the court McMurdo P stated; "*it follows from Jiminez that in a trial for an offence against section 328A the jury need not be told that fault is an element of the charge. That is not to say that in establishing the offence any consideration of the offender's mental state must necessarily be disregarded. Section 24 and other provisions of chapter 5 Criminal Code like section 23, section 25 and section 31 are sometimes raised in such cases*".

The evidence establishes that the cause of the first crash was a combination of Mr May's sudden movement of the steering wheel, the speed of the vehicle and its propensity to roll over as a result of design limitations and its load. Applying the law to the circumstances of this case I am of the view that a jury is likely to conclude Mr May's driving was objectively dangerous in that it was too fast for the actual road conditions. The question then becomes whether the Crown could negate the defence provided by section 24 - Mistake of fact. That is, could the Crown prove that Mr May did not have an honest and reasonable belief that it was safe to drive in the manner in which he did.

In assessing that issue it is necessary to consider what Mr May knew about the conditions in which he was driving and what instructions he had been given. The fact that Mr May was driving at or under the speed limit he understood to be in place goes some way to assisting him but is not determinative of the issue. It is incumbent on a person in Mr May's position to drive at a speed appropriate to the circumstances. That speed may be under the speed limit in force. For example the QPWS video warned that sharp turns on the sand should be avoided even at low speed.

Notwithstanding that, I am of the view that the Crown could not persuade a reasonable jury that Mr May did not have an honest and reasonable belief that his manner and speed of driving were safe.

Accordingly, a reasonable jury properly instructed would not convict him and therefore I do not intend to refer his conduct to the DPP for consideration of a prosecution.

The same approach must be adopted in respect to Mr Nukutou. I am of the view that a jury could reasonably conclude that the manner of Mr Nukutou's driving – particularly the high speed he was driving at just before the crash occurred - was dangerous.

Further, I also consider a jury could reasonably reject a suggestion that Mr Nukutou held an honest and reasonable, but mistaken belief that his manner of driving was safe in the circumstances. A jury could well conclude that the persuasive evidence concerning his speed and the likelihood that he knew his passengers were unrestrained; in circumstances where the evidence strongly indicates that he was aware of the rules regarding speed and the wearing of seatbelts, cannot be reconciled with such a belief.

Accordingly, I take the view that a jury could find that Mr Nukutou did not have a valid defence available to him. It is my duty under s.48 of the Act to forward the material I have collated which relates to the manner of Mr Nukutou's driving to the appropriate prosecuting authority, in this case the DPP.

Concerns, comments and recommendations

Section 46, in so far as it is relevant to this matter, provides that a coroner may comment on anything connected with a death that relates to public health or safety, the administration of justice or ways to prevent deaths from happening in similar circumstances in the future.

Introduction

The empirical and anecdotal evidence indicates the circumstances of the crashes that resulted in the three deaths investigated by this inquest are far from unique. On the contrary, the factors which contributed to the sad deaths of these three young international tourists seem typical of the disproportionate number of crashes involving members of this demographic on Fraser Island in recent years since the rapid increase in the number of young independent travellers – backpackers – visiting the island.

It seems clear ensuring the safety of this group poses special challenges. Many local visitors are introduced to the island as juveniles in the company of responsible adults and learn the risks of the place gradually, or go there for the first time with returning visitors. In contrast, each year many thousands of foreign tourists, many who are not fluent in English, arrive in Hervey Bay one day and want to be on Fraser Island the next before heading off to the next "must see" attraction. If we invite them to do that we have an obligation to make it as safe as reasonably possible.

Some of the witnesses expressed concern about the financial impact on some local businesses of some of the precautions that were raised for consideration during these proceedings. I am of the view the pecuniary interests of those businesses can not take precedence over public safety. Nor should the public be expected to bear the cost of emergency services and medical care incurred through unsafe business practices.

It is legitimate however, to seek to avoid regulation which unnecessarily impinges on public enjoyment of the wilderness of Fraser Island that so significantly contributes to its attraction.

I shall now attempt to describe and define the extent of the safety risks, and the regulatory regime which may be utilised to minimise them with a view to suggesting further preventative measures.

Traffic incident trends and causes

A report into road user safety on Fraser Island commissioned in July 2005 by what was then Queensland Transport, and prepared by the consulting firm ARRB Group analysed crash data on the island between 2000 and 2004. That data revealed 54 casualties from 35 crashes. Of those crashes 70% were described as "overturned vehicle" or "hit object" and 46% resulted in someone being hospitalised. It is significant that 77% occurred on the eastern beach of Fraser Island. The drivers most likely to be involved were overseas drivers between 17 and 24 years of age and Australian drivers between 40 and 49 years of age.

A more recent crash risk analysis has been conducted for the purpose of these proceedings by the Department of Transport and Main Roads. In the five years 2003 to 2007 there were 60 crashes involving 67 vehicles which resulted in 106 casualties. That casualty rate of 2.36 casualties per crash compares with the Queensland average of 1.33.

Two of these crashes resulted in fatalities while another 27 resulted in hospitalisation of one or more people. Single vehicle incidents accounted for 49 of the 60 crashes.

Analysis of the data shows that 41 of the 67 drivers were aged under 30. In those cases where the details are known, 77% of the drivers were male, 52% of the drivers held an overseas licence, 56% were self-drive rental vehicles and 53% had a seating capacity of between 9 and 11 persons.

It seems clear the frequency of crashes on Fraser Island has been increasing: there were 10 crashes from 1998 to 2002 and 60 crashes between 2003 and 2007. While to some extent this increase reflects the rapid growth in visitor numbers but it far outstrips it. It is also significant that accident figures for other vehicle accessible beaches do not give rise to safety concerns.

A human factors expert retained by DTMR, Dr Ron Christie, who gave evidence to the inquest about the behavioural factors he considers contribute to these crashes concluded:

> *Vehicle crash risk and injury severity is relatively higher on Fraser Island due to high levels of exposure-to-risk stemming from a combination of environmental, vehicle and human factors. Most vehicle operators and passengers are tourists, often from overseas, visiting the island for a short period of time and are unfamiliar with 4WD vehicles and driving on sand tracks or beaches. Human error and risk are increased by the youthfulness and maleness of many of the visitors, the lack of enforcement controls, the absence of traffic engineering measures present in less remote areas and reliance on 4WD vehicles with safe handling and crashworthiness levels that may be below those of modern passenger cars.*[5]

The circumstances of the crashes investigated in this inquest and the empirical and anecdotal evidence provided in the exhibits and oral evidence confirms the validity of these observations. The risk factors can be grouped into environmental, driver related and vehicle related, although they of course overlap and intersect.

- The driving environment is very different to the roads many of the first time visitors will have experienced previously. It contains many unusual and often partially hidden potential dangers that may be difficult for a novice to identify. The safety of the driving environment changes rapidly in response to weather and tide conditions. It may appear deceptively benign. Law enforcement is less prevalent and obvious than in most densely settled regions.

- The drivers are frequently young males travelling with their peers. They frequently have had no experience or exposure to similar driving conditions. Lack of fluent English can make awareness raising more difficult. They are frequently in a relaxed, effusive or expansive frame of mind, wanting to actively engage with the wild environment free of the constraints that burden their lives in their countries of origin.

- The vehicles are frequently loaded to maximum capacity with load distribution that contributes to a propensity to roll over which is masked by otherwise normal handling characteristics. The vehicles are

[5] Ex D5 p 11

frequently inadequately maintained to equip them to operate safely in a harsh environment.

It is these numerous factors any regulatory regime must seek to ameliorate.

Regulatory regime

All of Fraser Island is a "recreation area" for the purposes of the *Recreation Areas Management Act* 2006 (*RAMA)*. The RAMA confers extensive powers in relation to the management of such areas on the chief executive of the governing agency; currently the Department of Environment and Resource Management (DERM). It requires the area to be the subject of a management plan and provides for the regulation of nearly all human activity. The Act establishes a framework for the issuing of vehicle access permits and empowers the chief executive to appoint officers to enforce the conditions of those permits. Section 11 of the Regulation enables the chief executive to place signs or markings in a recreation area regulating the use of vehicles; by way of example the regulation makes specific reference to the imposition of a speed limit.

Sections 12 and 13 of the Regulation act to subject those driving on Fraser Island to the same licensing and registration requirements as would be required on a public road. The Regulation explicitly imposes a requirement that drivers comply with various elements of the Queensland Road Rules and of the *Transport Operations (Road Use Management) Act 1995* (TORUM).

The eastern beach of Fraser Island is gazetted as a public road and the provisions of TORUM and the Road Rules are applicable in any event. Section 25 of the Queensland Road Rules applies a speed limit of 100km/h to such roads in circumstances where a speed limit is not otherwise specified. Although various literature distributed on the Island recommended a speed limit of 80km/h, as at 18 April 2009 this was not specified in any mandatory or official sense.

Notwithstanding the powers conferred on DERM, the role of enforcing road rules and speed limits is, and always has been, left to the QPS. There are two police officers permanently stationed on Fraser Island. Traffic enforcement constitutes a significant portion of their duties and in this they are supported on occasion by patrols from Maryborough District Traffic Branch and other specialist units. In peak periods Fraser Island police conduct joint operations with DERM officers in order to assess vehicle safety and permit compliance.

Prior to 2010 there was no requirement for businesses hiring 4WD vehicles for use on Fraser Island to be licensed for this purpose. Once the vehicles were registered, provided they had fewer than 12 seats there is no requirement for vehicles owned by these companies to be inspected for compliance with safety standards. Proposed changes to be implemented later this year will mean that some vehicles will be subject to compulsory 6 monthly checks. It is doubtful this will be applicable to anything other than a very small percentage of all hire vehicles in the region.

Regulatory policy development

Great Sandy Region Management Plan

The cessation of sand mining on Fraser Island and its acceptance as a UNESCO World Heritage site in 1992 obliged State and Federal Governments to create a formal framework for the future management of the area. The result was the Great Sandy Region Management Plan 1994-2010. A revised plan was issued in September 2005. The purposes and content of the plan are diverse, however, both the original and revised plan set out a series of aims with respect to the often competing interests of future tourism, conservation and development of infrastructure on the island and surrounds. The plan lists proposed guidelines and actions to achieve these desired outcomes.

The following aspects of the plan are worth noting:

- The plan states that responsible four wheel driving will be recognised as a legitimate recreational activity within the region and envisages a minimal impact code for four wheel driving will be developed.
- The plan proposes that a maximum speed limit of 80km/h on beaches will apply to vehicles used within the region. This proposal is also to be found in the original plan published in 1994.
- The plan proposes that driver training education programs to promote appropriate sand driving will be encouraged and appropriate self-guided drivers will be developed and promoted within the region.
- The plan makes specific reference on two occasions to the driving of hire vehicles by international visitors or international backpackers and specifically references their perceived lack of experience in driving on sand. The plan proposes liaison with 4WD hire centres to assist with the implementation of pre-visit briefings but does not otherwise address this issue.

The inquest heard from Mr Clive Cook, a senior director of Queensland Parks and Wildlife. He conceded that DERM had taken no steps to implement an 80km/hr speed limit on the beaches of Fraser Island between 1994 and January 2009 when the Fraser Island Traffic Accident Committee first met to discuss the issue. In submissions it was noted that prior to legislative amendments made in 2007, responsibility for regulation of activity on Fraser Island in fact rested with a board made up of the chief executives of the government departments responsible for the administration of the *Forestry Act* 1959 and the *Nature Conservation Act* 1992 respectively. That board was empowered to regulate the movement of vehicles on Fraser Island. In 2007 that power was transferred to the Chief Executive of DERM and specific reference made in the legislation to the imposition of speed limits by way of example of the nature of the power. Mr Cook suggested that less focus may have been given to the application of this power to the eastern beach (as opposed to the inland tracks) as it is gazetted as a road.

The Fraser Coast 4WD Hire Association

The inquest heard from the President of the Fraser Coast 4WD Hire Association, Mr David Robertson. He explained that the association was formed in 1997 and that it currently counts as members 12 of the 14 companies in the local area hiring vehicles for use on Fraser Island. It is a member of Fraser Coast South Burnett Tourism and was instrumental in the production of a safe driving video in 1999 which, in various guises, has since been used by all member companies to instruct and inform their customers. The inquest heard that after the initial production of this video, DERM (and its predecessors) took over the production of the subsequent versions with varying levels of consultation with the Association and its members.

The association appears to have been formed for various purposes including an attempt to deflect media criticism of some aspects of the industry and with a view to improving vehicle standards (these two issues seemingly being linked). The association has long been a lobbyist for the implementation of a licensing or permit regime for operators of businesses hiring 4WD vehicles for use on Fraser Island. The inquest was shown correspondence sent by the association to relevant government bodies in this regard from 1998 onwards. In 2001 the focus of the association turned to the introduction of tag-a-long tours.

In February 2008 a code of practice drawn up by the association was endorsed by the Environmental Protection Agency and implemented. The voluntary code sets out minimum requirements in respect of vehicle inspections, safety equipment, visitor briefings and number of passengers.

In the absence, of until now, more stringent regulation on practices within the industry the association can hardly be criticised in its attempts to impose some degree of oversight. I accept the voluntary code has met with some success and provided standards to assist scrupulous operators to more effectively manage their businesses. However, the results of the series of vehicle inspections carried out by DTMR in 2009, which are detailed later in these findings show the failure by the Association and its code to deliver adequate standards of vehicle maintenance. This was candidly admitted by Mr Robertson when he gave evidence.

The 2005 ARRB Road User Safety Review

A firm of consultants was commissioned by the then Department of Transport in July 2005 in response to reports concerning high risk behaviour by drivers in the region. The report was presented to the Department in 2006 and contained 35 recommendations designed to address the concerns identified. The recommendations are extensive; however, it is appropriate that I identify those which might be considered relevant to the circumstances with which these proceedings are now concerned. These include:-

- Implementation of 80km/hr speed limits on Fraser Island beaches and an expansion of enforcement activities once speed signs are installed;

- Co-ordination of regular enforcement activities between DERM (as the relevant agency now is) and QPS;
- Establishment of blood testing facilities on Fraser Island for suspected drink drivers;
- Focus enforcement activity on the eastern beach;
- Review of the process of self monitoring by 4WD hire companies;
- "Encouragement" of vehicle hire companies to carry out regular maintenance and safety checks of all hired vehicles;
- Inclusion of communication devices in all hire vehicles;
- Provision of compressed air facilities at mainland barge terminals; and
- Vehicle hire companies to 'restrict the amount of luggage placed on top of vehicles (typically Toyota Troop Carriers) and ensure maximum passenger numbers do not exceed each vehicles carrying capacity'.

The report found there was a general lack of understanding by visitors to the island of many driving and safety requirements. The report encouraged a detailed review of all literature and notices directed at such matters.

The report noted "strong support by various stakeholders" for the introduction of guided 4WD tours. The report described this as involving groups of tourists travelling in a small fleet of vehicles led by an experienced driver familiar with driving conditions on Fraser Island.

Response to ARRB Report

In the course of preparing for this inquest a request was made of DERM, DTMR and, subsequently, the QPS to detail the actions taken by each in response to the recommendations contained in the ARRB report. I am grateful for the assistance provided to the court by those bodies in the preparation of what were very thorough and helpful statements setting out those matters.

That material establishes that almost all programs, interventions and regulatory changes designed to address the ARRB report recommendations have been made or put into practice only after the deaths of Ian Davy and Concetta Dell'Angelo in April 2009. I accept financial and human resources are finite and one must avoid hindsight bias when considering what matters ought to have been prioritised prior to these two accidents. It is the case, though, that the ARRB report had cogently set out a series of safety concerns and had identified ways in which they might be addressed. The report itself, of course, was commissioned in response to safety concerns that had already been raised and came in the wake of two other fatal crashes on Fraser Island.

Regulatory reform

The Fraser Island Traffic Accident Committee (TAC) was formed and met for the first time in January 2009. It only met once before the April 2009 crash with which this inquest was concerned. This was the body charged with the mandate to progress the recommendations of the ARRB report. It was, and continues to be made up of representatives of DTMR, DERM, QPS and the Fraser Coast Regional Council.

On 13 May 2009 the TAC endorsed speed limit changes for Fraser Island beaches and inland roads. This involved a reduction to a speed limit of 80 km/hr on the eastern beach and this came into effect on 3 July 2009 with the placement of relevant signage.

As a result of the April 2009 crash the DTMR conducted an inspection of 31 vehicles from 15 4WD hire companies in the Hervey Bay and Rainbow Beach area. As a result of the high number of defects detected a further 121 vehicles were inspected in early June of 2009. The detail of what was found during the course of these inspections is outlined later in these findings. A further 22 vehicles were inspected by DTMR officers stationed at an inspection post at River Heads between 30 November and 2 December 2009 as part of what the inquest heard will be an ongoing practice occurring four times a year.

A two stage policy initiative concerning the safety of 4WD hire vehicles on Fraser Island is in the process of being implemented. Stage 1 came into effect on 1 April 2010 and involved legislative changes requiring all 4WD hire vehicles on Fraser Island to carry no more than 8 occupants including the driver. A new requirement was also introduced prohibiting the carrying of any load on the roof of a hire vehicle.

Stage 2 of the initiative is to be implemented on 31 December 2010. As of that date all 4WD hire vehicles on Fraser Island must be fitted with no more than 8 seats and all seats must be either rearward or forward facing and fitted with seatbelts which conform to Australian design rules.

An extensive publicity campaign has been put in place to advertise these new requirements. Signs detailing the new requirements have been designed and, at least as they relate to the first stage of the initiative, have been erected at appropriate points on Fraser Island and the mainland.

A new safety video has been produced by DERM and is in the process of being distributed. The video was compiled after considering input from DTMR and QPS. A series of translated fact sheets in 12 different languages have been compiled to complement that video.

A process is underway to implement what are known as “tag-a-long” tours. Details of the policy and legislative basis for these tours are detailed below. The changes will target hire vehicles where groups have been put together by selling individual seats rather than where the company “dry hires” a vehicle. The relevant regulations will require that those affected will travel as part of a group led by a qualified guide.

There has been an increase in the level of traffic enforcement activity by police officers on Fraser Island over the last 12 months and an increased focus on joint vehicle safety inspections with DERM officers.

In my view these are all worthwhile initiates and I commend the departmental officers responsible for driving the process.

Specific safety measures and concerns

A consideration of potential changes to regulation must be tempered by the acknowledgement that the use of 4WD vehicles on Fraser Island is an activity enjoyed every year by many thousands of people; and that it is overwhelmingly done in a safe manner. While eminent environmentalists have questioned the wisdom of allowing hundreds of thousands of tourists to roam and drive at will over such a fragile cluster of ecosystems, the State Government has accepted self directed four wheel driving on Fraser Island as a legitimate recreational activity. It is against this background that the endeavours to reduce the great personal and financial costs from an increasing incidence of vehicle related injury on Fraser Island must be judged.

Police enforcement

The importance of the enforcement, in particular speed limits, was envisaged by both the Great Sandy Region Management Plan and the AARB Road Safety Report. As was always intended by the management plan, Fraser Island now has a permanent police presence with two officers stationed at Eurong.

Traffic enforcement forms an important part of the role of these two officers. The material provided to me by DERM and the QPS in the lead up to this inquest refers to an increase in the intensity of joint patrols between those two agencies. Sgt Tony McCarthy who has been involved with enforcement activity on Fraser Island since 1992 confirmed this was the case when he gave evidence at the inquest. Over 4900 vehicles have been intercepted and inspected as part of operations conducted jointly by these agencies since April of last year, primarily during peak times such as school holidays. There has also been an increase in the amount of traffic enforcement patrols conducted by the police officers alone since the first of the fatal accidents relevant to the inquest occurred in April 2009.

Since the installation of reduced speed limits in July 2009 more advanced speed detection devices have been provided to the officers on Fraser Island and additional patrols conducted by mainland units in both marked and unmarked vehicles. In excess of 4600 breath tests have been performed on drivers at Fraser Island since April 2009 resulting in 11 persons being charged. As recommended in the ARRB report, enforcement activities are focused on the eastern beach on Fraser Island. The inquest heard that the increased level of enforcement activity and frequency of joint operations between DERM and QPS is to continue.

Tag-a-long tours

After many years of such an arrangement being suggested by industry participants and after being specifically contemplated in the ARRB report, “tag-a-long” tours are to commence from 1 July 2010. DERM has put in place a requirement that all 4WD hire operators offering multi day tours on Fraser Island enter into a “commercial activity agreement” as that term is defined under RAMA.

The licence issued pursuant to these agreements requires operators from 1 July 2010 to conduct their 2-3 day tourist services in tag-along-tour formation if that service is sold on a per seat basis. These tours will consist of no more than 4 vehicles in which the lead vehicle is to be driven by an operator appointed driver-guide. The effect of this is that the lead vehicle will be considered to be providing a public passenger service for the purposes of the *Transport Operations (Passenger Transport) Act 1994.* This will require a level of operator and driver accreditation. In the case of the driver/guide, they will be subject to various character and experience checks by DTMR before being accredited. The lead vehicle used in the tours will be subject to mandatory six monthly inspections by DTMR by virtue of it being considered to be operating as a public passenger service.

The evidence presented at the inquest indicates that these changes have the support of the local industry. They will not apply to vehicles not hired on a per seat basis although of course those vehicles will be subject to the new regulations concerning number of occupants, placement of luggage and seating specifications outlined earlier in these findings.

It remains to be seen how prevalent these tours will be. The owner of 'Aussie Trax' gave evidence indicating that the new regulations had in fact caused him to abandon that side of his business and focus solely on hiring on a 'per vehicle' basis. The efficacy of these reforms will be compromised if a substantial proportion of inexperienced drivers continue to hire vehicles independently.

Recommendation 1 –Monitor up-take of guide led tours

I consider tag–a-long tours to have significant safety, social and environmental advantages that will only deliver benefits if those visitors ill-equipped to safely and responsibly undertake independent travel utilise them. Accordingly, I recommend DERM monitor the success of the initiative with a view to encouraging greater participation by island visitors through further restrictions on independent travellers if that appears necessary.

Safety briefings and driver instruction

Evidence presented at the inquest by representatives of DERM and DTMR was to the effect that a new driver instruction and safety video has recently been produced by those agencies with input from the QPS. I am of the view that for those who have a good understanding of English the contents of the video strike a good balance between conveying necessary information without being too long. DERM have produced a two page instruction pamphlet titled "Driving on sand in National Parks" which complements the video. It is available in 12 languages.

The inquest heard that audits of hire operators showed all were using the DERM video. I am mindful of the failures of self-regulation evident in other areas of the industry and have considered recommending a more formalised approach to ensuring the video is shown to all prospective passengers of hire vehicles on Fraser Island. However the difficulty of sparing regular and repeated visitors from unnecessarily having to view the video and the

motivation of the operators to increase the likelihood their vehicles will be returned undamaged has convinced me to refrain from doing so.

Increasing driver awareness

DTMR have set out in detail the steps taken to publicise the regulatory changes which have been in place since April 2009. I am satisfied the extensive campaign of media advertising, fixed signage on both Fraser Island and the mainland and an increased presence of safety notices in backpacker accommodation and on Fraser Island ferries is an adequate response to the issues identified as a result of these accidents. The ARRB report focussed on various ways in which such safety measures could be publicised, and recommended a system of tourists signing off safety obligations.

This issue may be of particular relevance to non English speaking visitors. As mentioned DERM have taken steps to address language barriers by producing information sheets which accompany their instructional video to be translated into 12 languages. Signs erected on Fraser Island and the mainland addressing the new safety requirements in regard to number of occupants and speed limits in particular have been translated into other languages.

The second accident with which the inquest is concerned highlighted a set of circumstances where a driver of the hired vehicle had proceeded to the island without fully understanding the instructions given. There is no evidence that problem in itself contributed to the accident. To the contrary the evidence was that important elements of the video could be understood without a good understanding of English and at least the driver of that vehicle knew of the requirements with respect to the wearing of seatbelts and the speed limit but chose to ignore them.

Notwithstanding this, a useful description of the peculiar features associated with operating a 4WD vehicle on Fraser Island is not something that translates easily. The particular difficulties faced by operators in satisfactorily conveying all the relevant information to clients when they have a poor grasp of English was explained very well by Mr Robertson at the inquest. He referred to occasions when it became clear to him his attempts to breach the language barrier were not able to convey relevant safety information so that the client understood it to his satisfaction. In these circumstances he has had to ask them to see the island through a guided tour rather than via a self drive tour. The nature of his operation is such that this would not mean a lost customer as he operates both types of tour. I am concerned as to the lack of incentive for other operators to act as prudently as Mr Robertson. I am of the view the translated literature available may not be sufficient to address this problem.

Educationalists recognise the summative and formative effects of assessment: a questionnaire may assess a person's level of knowledge and also contribute to increasing that knowledge. I consider such an approach could have benefit in this context.

Recommendation 2 – Check comprehension

With such a significant volume of first time and foreign visitors seeking permits to drive on the island, I am of the view there would be utility in ensuring they have understood the crucial safety measures conveyed in the DERM video and facts sheets. I therefore recommend that DERM consider introducing a set of questions to accompany the application for vehicle permits.

Speed

It is no surprise that speed is the prime risk factor for the occurrence of accidents involving 4WD's on Fraser Island. I have outlined in some detail above the changes which have been made since these accidents occurred. The 80km/hr figure was chosen by the Fraser Island TAC based on a brief report compiled by a DTMR officer in May 2009. The publicity associated with the April 2009 accident was such that it is not unreasonable to assume there was a degree of pressure to ensure changes were implemented as soon as possible.

The choice of 80km/hr as the appropriate limit is of course consistent with that suggested by earlier documents such as the regional management plan and the ARRB Report. It is my view a more detailed assessment should be conducted to determine whether a lower limit may be appropriate, at least in some areas. Reference was made at the inquest to the fact that some of the 4WD hire companies have placed stickers in their vehicles suggesting to their clients that a speed limit of 60km/h applies.

Recommendation 3 – Review of speed limit

In view of the extensive evidence that in many circumstances driving at 80km per hour on the eastern beach is unsafe and the evidence indicating it can be difficult for first time beach drivers to identify when this is the case, I recommend the Fraser Island Traffic Accident Committee consider recommending to DERM that the speed for hired 4WD vehicles on the island be limited to 60km per hour .

Age of the driver

The statistical analysis of accidents on Fraser Island conducted by DTMR for the inquest reveals a high percentage of the drivers involved are aged under 30 years. The use of these statistics are limited somewhat by the fact that overall statistics are not available as to the number of vehicles which are in fact driven by those under the age of 30 on Fraser Island. It is well established though that a connection exists between the age of a driver and the risk of them being involved in an accident.

The court heard evidence in this regard from Dr Christie who proposes restrictions based on age. In his view restrictions for both drivers and passengers ought to be entertained with the applicable age ranging somewhere between 25 and 30.

The court heard that the imposition of an age limit would have financial implications for local 4WD hire operators. I am not convinced this would be

the case if such restriction was limited to drivers only (rather than passengers). In any event tag-a–long tours could cater to these drivers. I am mindful that the second of the two crashes with which the inquest is concerned occurred in circumstances where the vehicle was being driven by someone only weeks from turning 30. However, the evidence that risk reduces with an increase in age seems overwhelming.

Recommendation 4 – Age restriction for independent drivers

In view of the evidence that the risk of drivers crashing reduces with age, and in view of the impending introduction of tag-a-long tours, I recommend DERM consider only issuing vehicle permits to independent travellers hiring 4WD vehicles if they are 25 or older.

Number and position of occupants and location of luggage

The inquest heard from Dr Shane Richardson, a traffic engineer who has conducted extensive testing in relation to the stability of 4WD vehicles. In 2000 he was one of four experts who conducted extensive testing on the stability of vehicle types used by the Victorian Police Service. That testing showed the Toyota Landcruiser Troop Carrier to be a vehicle with a high centre of gravity and a high propensity to rollover in comparison to the other vehicles tested.

At the inquest Dr Richardson explained that rollover propensity was a function of both static features (such as vehicle height, centre of gravity and tyre surface) and the handling characteristics of the vehicle. The second of those factors is influenced by the make up of the vehicle itself but also by the extent to which the driver is experienced in dealing with those characteristics.

Dr Richardson made it clear that the Troop Carrier model was a safe vehicle when driven by someone experienced in its characteristics and in a manner appropriate to the conditions. He stated, though, that it was a vehicle particularly prone to an increased rollover risk when being driven by someone unfamiliar with its nature. He described the vehicle as having handling characteristics more akin to that of a truck than a passenger vehicle; yet having an interior design and driver feedback such that an inexperienced driver would be easily led to think it handles more like the latter.

Dr Richardson was supportive of the regulatory changes relating to the removal of luggage from the roof racks of vehicles and the reduction in passengers. He also explained the inherent undesirability of side facing bench seats with no head or neck support if a vehicle was to roll.

The effect of Dr Richardson's evidence was that this particular model of vehicle could not be considered adequately safe when being driven by someone unfamiliar with its characteristics and/or unfamiliar with the driving of such a vehicle on sand if fully loaded.

These factors are related to the propensity for a vehicle to roll and I am grateful for the attempts made by Mr Laszlo Bruzsa, Principal Engineer (Vehicle Standards) with DTMR, in conducting extensive computer modelling

on them in order to assess their effects in regard to the placement of luggage and number of occupants in a Toyota Landcruiser Troop Carrier (as was the model of vehicle used by Mr Bruzsa). I am satisfied on the basis of the evidence presented by him at the inquest that the decision to ban luggage from being placed on the roof racks of hire vehicles on Fraser Island is a sound one. The enforced reduction in capacity of hire vehicles to 8 is based on sound principles relating both to vehicle stability and reducing the extent of injury should a rollover occur.

The desirability of limiting the number of occupants to 8 or less appears to have been given consideration by some within the local industry. The ability that 11 seat vehicles give to provide cheaper travel options to backpackers seems to have won the day over safety concerns up until now. Mr Robertson was commendably candid in acknowledging these competing viewpoints amongst his members.

I have outlined the changes that have already been made in regard to seating configuration and research carried out by Mr Richardson and others highlight the importance of prohibiting the use of side facing bench seats. It has been mentioned in the material put before the inquest that such seats have been banned under European Union regulations for some time as a result of safety concerns. I am satisfied this issue has been appropriately addressed.

The changes introduced by DTMR will also require seatbelts that meet appropriate Australian standards for these seats.

I am satisfied these changes will address most stability concerns.

Salt water clauses

In both cases being considered by the inquest, insurance bonds were demanded by the 4WD hire companies and collected in conjunction with the signing of detailed forms listing a series of requirements. These requirements, imposed on the person hiring the vehicle, were accompanied by clauses setting out liability for any damage to the vehicle caused by a failure to adhere to them.

In both cases clauses could be found that left the person hiring the vehicle responsible for damage caused by exposure to salt water. It is not my role to investigate the appropriateness of such a condition in contracts for hire of vehicles intended to be driven on a beach, but the matter has been raised as one of concern to the extent it might have caused one or both of the drivers in these cases to have steered sharply away from encroaching salt water. There was no evidence given by either driver that this influenced the way in which they acted immediately prior to either vehicle crashing. I am not of the view this issue needs to be further explored in the absence of any positive evidence to that effect.

Vehicle maintenance

Between 1 June and 5 June 2009 DTMR officers inspected 31 vehicles from 15 different hire companies in Hervey Bay and Rainbow Beach. That inspection resulted in the discovery of 13 dangerous defects, 6 major defects and 9 minor defects.[6] Seven of the 15 companies were found to have vehicles with major or dangerous defect.

As a result a further 121 vehicles were ordered to be presented for inspection from those seven companies (out of a fleet of hire vehicles numbering approximately 240). Of those 121 the inquest heard that 31 registrations were cancelled prior to inspection. An inference can safely be drawn this meant the owners were resigned to either the cost or length of time required to fix any defects were too great to be carried out in the notice period. It appears in nearly all cases the owners of the vehicle were given notice of a month to produce the vehicle. 32 of the 121 vehicles were issued with "cease use" defect notices and 58 vehicles passed.

A follow up inspection in December 2009 revealed 13 defects in 22 vehicles tested including 1 dangerous and 5 major defects.

I have already noted the acknowledgement of Mr Robertson that the results of these inspections evidence a failure by his association's members to adhere to its voluntary code of practice. These inspections indicate yet another failure of self regulation.

This problem is likely to be addressed to some degree by the new initiatives relating to tag-a-long tours which draw some vehicles into a scheme of mandatory testing. However I consider steps need to be taken to address the issue with the rest of the hire fleet. While there is a risk mandating annual safety inspections might inconvenience a small percentage of potential visitors who hire a 4WD in another location, operators will quickly become aware of the requirement and take appropriate steps to comply if they wish to hire to people intending to go to Fraser Island.

Recommendation 5 – Annual vehicle safety inspections

In view of the failure of self regulation to ensure the Fraser Island 4WD hire fleet is maintained to an acceptable safety standard, I recommend DERM only issue vehicle access permits to hire vehicles that have undergone an annual safety inspection.

I close this inquest.

Michael Barnes

[6] A dangerous defect is one that is severe enough that it poses a serious safety risk and requires the vehicle to be immediately grounded. In the case of a major defect the concern to safety may be such that the vehicle needs to be grounded. Minor defects will result in a notice being issued for rectification to be carried out by the owner within a certain time period.

State Coroner
Hervey Bay
23 April 2010