QUEENSLAND COURTS

# OFFICE OF THE STATE CORONER

# FINDINGS OF INQUEST

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| CITATION: | **Inquest into the death of Jake Michael GARRETT- PRATT** |
| TITLE OF COURT: | Coroner's Court |
| JURISDICTION: | Brisbane |
| FILE NO(s): | 2012/934 |
| DELIVERED ON: | 31 May 2013 |
| DELIVERED AT: | Brisbane |
| HEARING DATES: | 30 April, 29 May 2013 |
| FINDINGS OF: | Mr John Lock, Brisbane Coroner |
| CATCHWORDS: | CORONERS: child, ride-on lawn mower, rural property |

REPRESENTATION:

| | |
|---|---|
| Counsel Assisting: | Mr Peter De Waard |
| Ms Helen Garrett and Mr Michael Taiaroa (The deceased's mother and step-father): | Mr Peter Boyce (Butler McDermott Lawyers) |

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## *Introduction*

1. Jake Garrett-Pratt was 12 years of age when he died at the Brisbane Royal Children's Hospital at approximately 9:30am on 18 March 2012.

2. Jake died as a result of head injuries sustained on 6 March 2012 when he lost control of a modified ride-on lawn mower down a steep hill on his mother's and step father's rural property in Kandanga.

3. Eight days before the incident that led to his death, Jake had acquired a modified Greenfields 11 horse power ride-on mower from his good friend for $150 to drive around this property. Jake's mother and step-father allowed Jake to drive the ride-on mower unsupervised but his mother had told him not to drive down the steeper of the two driveways on the property.

4. A vehicle inspection of the ride-on mower identified that the ride-on mower was aged and appeared not to have been well maintained.

5. For reasons which will become clear, there was considerable uncertainty as to the circumstances in which Jake died, and a decision was made to hold an inquest. The issues determined at a pre-inquest hearing were:

    a) The findings required by s. 45 (2) of the *Coroners Act 2003*; namely the identity of the deceased person, when, where and particularly how he died and what caused his death;
    b) determine the circumstances in which modifications were made (and the adequacy of those modifications) to the ride-on lawn mower;
    c) determine the adequacy of the maintenance and serviceability of the ride-on lawn mower;
    d) determine the adequacy of the precautions in the ride-on mower User Manual in relation to: the age, skill and qualifications of the driver; supervision of children; maintenance and modification; and operating instructions regarding speed, braking and terrain;
    e) determine the circumstances in which Jake was allowed to operate the ride-on lawn mower;
    f) determine the extent to which the incident was caused by terrain, speed, driver error and vehicle failure; and
    g) consider whether any changes to procedures or policies could reduce the likelihood of deaths occurring in similar circumstances or otherwise contribute to public health and safety or the administration of justice.

## *The scope of the Coroner's inquiry and findings*

6. An inquest is not a trial between opposing parties but an inquiry into the death. The scope of an inquest goes beyond merely establishing the medical cause of death.

7. The focus is on discovering what happened, not on ascribing guilt, attributing blame or apportioning liability. The purpose is to inform the family and the public of how the death occurred and in appropriate cases, with a view to reducing the likelihood of similar deaths.

8. As a result, a coroner can make preventive recommendations concerning public health or safety, the administration of justice or ways to prevent deaths from happening in similar circumstances in future. In this regard the Commission for Children and Young People and Child Guardian has just

published an Issues paper in relation to off-road transport incidents, with a conclusion that it was important to consider and promote the relevance and transferability of transport safety messages to an off-road context. Accordingly, this inquest was also considering various safety issues regarding the use by children of such equipment.

9. However, a coroner must not include in the findings or any comments or recommendations, statements that a person is or maybe guilty of an offence or is or maybe civilly liable for something.

10. Proceedings in a coroner's court are not bound by the rules of evidence but that does not mean that any and every piece of information however unreliable will be admitted into evidence and acted upon. However, it does give a coroner greater scope to receive information that may not be admissible in other proceedings and to have regard to its origin or source when determining what weight should be given to the information.

11. A coroner should apply the civil standard of proof, namely the balance of probabilities. However the more significant the issue to be determined, the more serious an allegation or the more inherently unlikely an occurrence, then the clearer and more persuasive the evidence needs to be for a coroner to be sufficiently satisfied it has been proven to the civil standard.

12. If, from information obtained at an inquest or during the investigation, a coroner reasonably suspects a person has committed a criminal offence, the coroner must give the information to the Director of Public Prosecutions in the case of an indictable offence.

## *The investigation*

13. On 18 March 2012, Constable Van Den Heuval and Constable Stafford, from the Brisbane Central Child Protection and Investigation Unit (CPIU), attended the Brisbane Royal Children's Hospital and obtained details of Jake's death.

14. The Officer in Charge at the Gympie CPIU, Detective Sergeant Andrew Bailey, was the primary investigator. Detective Sergeant Bailey obtained statements from Jake's neighbours and Queensland Ambulance response personnel who attended the incident scene. He seized the ride-on mower; arranged scenes of crime photographs and mapping of the incident area; as well as a mechanical inspection report of the mower. By the time the matter was reported to the police the ride-on mower had been moved from the incident scene.

15. Unfortunately, Jake's mother and step-father declined on legal advice to provide statements or participate in police interviews during the investigation. Although they were entitled to take this course, if they had a reasonable excuse such as the evidence may incriminate them, this left a large gap in information relating to the circumstances of Jake's death.

16. Detective Sergeant Bailey completed his police investigation report on 21 May 2012 but noted he was unable to determine the usage and purpose of the mower and the level of maintenance carried out on the mower prior to the incident. He therefore recommended an inquest.

17. Detective Sergeant Bailey's investigation was conducted in a timely manner and his investigation was professionally conducted and as thorough as possible, given the gap in the information.

## *The inquest*

18. A pre-inquest conference was held on 30 April 2013 and an inquest set down to commence on 29 May 2013. The vehicle inspection report, all of the statements, medical records, photographs, and material gathered during the investigation were tendered at the inquest.

19. Mr Boyce, Lawyer, who had only recently been requested to represent Jake's mother and step father, acknowledged the gap in information and agreed with my suggestion that obtaining a statement from his clients may at the very least usefully achieve a reduction in the length of the inquest and may avoid totally the necessity for his clients to be put through further distress in giving oral evidence at all. It is understood that Jake's mother is very emotionally traumatised by the tragic events and I accepted she may not be required to give a statement. Jake's step father provided the Court with a statement. As a result a further statement was obtained from another witness, whose son had previously bought and used the ride-on mower and on sold it to Jake. I have made a determination to not identify the name of this young boy or his family, given these findings will be published.

20. Given the further evidence received, I considered I now had sufficient information to fulfil my statutory obligations under the Coroners Act. It was proposed that no further oral evidence be heard and that Counsel Assisting, Mr De Waard, proceed by way of oral submissions, followed by Mr Boyce. I agreed that the evidence tendered, together with oral submissions from Mr De Waard and Mr Boyce, would be sufficient for me to make the requisite findings. Mr Boyce agreed with that proposal.

21. I also heard from Jake's biological father, Cameron Michael Pratt who attended the inquest together with his partner and Jake's paternal grand parents.

## *The evidence*

### Background

22. At the time of his death, Jake Garrett-Pratt was living in Upper Kandanga, which is approximately 35 kilometres south of Gympie and 47 kilometres west of Cooroy. Jake resided with his mother, Ms Helen Garrett, his step father, Mr Michael Taiaroa, and his 14 year old sister.

23. Ms Garrett and Mr Taiaroa married in January 2009. Jake's biological father, Mr Cameron Michael Pratt, resides in the Sunshine Coast area.

24. On or about Monday 27 February 2012 (eight days prior to the incident), Jake purchased an 11 horsepower Greenfield ride-on mower[1] from his good friend

[1] Whilst the police investigation and autopsy report refers to the ride-on mower as a 'go kart', this term has not been adopted in these findings because the original mower chassis was unmodified. According to Mr Lee McKinnon from Brisbane Mowersport Inc, 'go-karts' use specially built tabular chassis.

for $150.00. His friend had only owned the mower for about a month and a half prior to selling it to Jake.

25. The exact year of manufacture of the ride-on mower is unknown but according to the Production Manager of Greenfield Mowers, Mr Michael Whitaker, the mower would have been manufactured sometime between 1980 and 1986.

26. Jake's friend also resided on a rural property in Kandanga with his parents. According to the friend's father, his son had previously purchased the mower for $150 in January 2012 from a person in the local area, after it had been advertised for sale for $200 on the side of the road. The mower was acquired to ride around the property. It was never used as a mower.

27. Whilst the mower was in the friend's possession, it had never been taken to any service centres or mechanics. The friend had carried out all the work on the mower under his father's supervision. They had removed the cutter deck for safety reasons. No other modifications had been made to the mower. His father could not recall whether the chain was ever oiled. He was also unable to recall the last time the ride-on mower was driven prior to its sale to Jake. However, he described the mower as being in a 'good state of repair' prior to it being sold to Jake.

28. According to Mr Taiaroa, Jake purchased the mower from his friend for the purpose of riding it around the farm and to have a bit of enjoyment with it. At the time of purchase, Ms Garrett picked up the ride-on mower and took it back to their property.

29. Ms Garrett has not provided a statement to police but it is assumed that she did not inspect the mower at the time Jake purchased it or at any other time. Mr Taiaroa has stated that he also did not personally inspect the mower when Jake purchased it. Nor did he do a mechanical inspection at any other time.

30. According to Mr Taiaroa, the maximum speed of the mower was a fast walking pace. This would appear to be consistent with the ride-on mower's user manual, which mentions that the speed of the mower is a variation of between zero and six miles per hour. The father of Jake's friend has also confirmed that the mower had not been modified to make it go any faster whilst it was in their possession.

31. According to Mr Taiaroa, Jake was experienced in riding and driving. He had been riding motorcycles for about six years. He initially had a smaller 50cc motorcycle and at the time of his death he had a Honda 80 motorcycle. Jake also had a bicycle. His friend also had a motorcycle and a bicycle and they would regularly ride together. It was not uncommon for them to ride part of the way to school, or to and from school on their bicycles.

32. Mr Taiaroa has stated that in the eight days prior to the incident, Jake drove the ride-on mower every day. He estimates that Jake drove the mower on their property for approximately six hours in total. On the weekend before the incident, Jake spent the weekend with his friend at his parents' property and had taken his ride-on mower over there to drive it. It is unknown how much time he spent riding the mower at the friend's residence.

33. Mr Taiaroa was unaware of the servicing regime of the mower prior to Jake purchasing it. From Mr Taiaroa's perspective, there was nothing untoward or different about Jake's ride-on mower.

34. On the day of the incident, Jake bent the steering arm of the mower and Mr Taiaroa helped him to bend it back. In doing so, he broke the carburettor pipe. Mr Taiaroa and Jake fixed the pipe together. Mr Taiaroa has stated that was the only time he had anything to do with the mower.

35. According to Mr Taiaroa, they had two driveways on the property, one steeper than the other. Jake used to drive down the driveway when he rode his motorbike. Jake had been riding the mower up and down the less steep driveway on a number of occasions in the eight days prior to the incident. Mr Taiaroa did not ever see Jake go down the steep driveway and Jake was apparently told by Ms Garrett not to go down the steep driveway.

36. There is no evidence to indicate Jake ever wore a safety helmet when using the ride-on mower. Jake's father in particular made reference to this in his brief address to me at the inquest.

## The collision

37. At about 4.30pm on Thursday 6 March 2012, Jake was riding his modified ride-on mower down the steeper of the two driveways at his residence. It is apparent he lost control of the ride-on-mower and it careered down the hill through a four strand barbed wire fence, tumbling into the neighbours' paddock.

38. The incident was not witnessed by Jake's mother or step-father. Ms Jai Smith, a farm hand on the neighbouring property, witnessed the incident from about 800 meters away, while shoeing a horse. Ms Smith alerted Mr John Mercer (the owner of the neighbouring property). They went directly to Mr Mercer's residence to have his wife call Ms Garrett to inform her of what had happened.

39. Mr Mercer and Ms Smith then drove on a four wheeler to where Jake was laying and they arrived there at the same time as Ms Garrett. Jake was lying on the ground unconscious.

40. Mr Mercer then sent Ms Smith back to his house to phone an ambulance while Ms Garrett performed CPR. When Ms Smith returned with a mobile phone to talk with ambulance officers, Mr Taiaroa arrived with Jake's sister, April.

41. The ambulance was called at approximately 5:04pm.

## Jake's medical care

42. The first response ambulance officer, Mr Raymond Robbins, arrived at the scene at approximately 5.21pm and assessed the situation. Mr Robbins handed over to the ambulance crew, Mr Nigel Beyer and Mr Rod Klein, who arrived at approximately 5.38pm. They managed Jake's airway, obtained intra venous access, placed a cervical collar and splint on Jake's left upper arm and administered a small amount of morphine. The Medi-Vac Helicopter arrived at the scene at approximately 6.00pm and transported Jake to the Royal Children's Hospital, where he received further treatment.

43. Upon arrival at the Royal Children's Hospital, Jake was assessed by the Trauma Team and went for X-rays and CT scans. Jake was also treated with antibiotics and a tetanus booster. Jake was admitted into the Paediatric Intensive Care Unit.

44. X-rays revealed a fractured left humerus, fractured right forearm and wrist, a laceration of his spleen, fractured nasal bones and collapsed right lower lobe of lung. CT scans showed generalised cerebral swelling, contusions and a probable subdural haematoma.

45. Over the course of the next two weeks, various treatments and procedures were performed with the aim of stabilising Jake.

46. From 13 March 2012, Jake was weaned off sedation, medications and ventilation to allow him to wake. However, he remained at 'GCS 3'.

47. On 16 March 2012, an MRI of Jake's brain and spine showed diffused severe injury of the brain, including brainstem and EEG slow background activity only.

48. On 18 March 2012, Jake rapidly deteriorated and resuscitation was begun. The poor prognosis was discussed with Jake's mother and step father. Essentially, Jake was suffering from a severe brain injury, which resulted in central dysfunction of his brain. This, along with his other severe injuries, led to multi organ failure of a terminal nature. Throughout this time, Jake was reviewed by surgical, orthopaedic and neurosurgical teams. However, Jake continued to deteriorate.

49. At approx 9.30am on 18 March 2012, it was determined that Jake was deceased.

50. There are no concerns with respect to the level of care and treatment provided to Jake by the Hospital. Mr Cameron Pratt did have some issues with respect to limited communication with him at the Hospital about the seriousness of Jake's condition and the decisions to withdraw treatment, which he was not involved in. These are matters which are outside of the scope of the inquest, however Mr Pratt has been advised to raise these matters with the Hospital and I intend to pass on his concerns directly at the conclusion of the inquest.

## Ride-on mower's mechanical condition

51. An inspection of the ride-on mower was conducted on 29 March 2012 at the Gympie Police Station by a Vehicle Inspection Officer, Mr A. R. McLaren.

52. Mr McLaren noted that the ride-on mower was only fitted with a parking brake system, which meant that stopping of the vehicle relied on engine braking and/or gear reduction.

53. Mr McLaren noted that the rear axle drive chain was broken, which would have allowed the vehicle to roll freely with no stopping capabilities apart from the park brake. The drive chain (which was found at Jake's residence, separate from the mower) was worn with movement within its links and appeared not to have been oiled or serviced for some time. Mr McLaren

concluded that the general appearance of the mower was that it was not well maintained.

54. The left hand side rear axle bearing assembly top retaining bolt had also been missing its nut for some time. The bearing assembly was loose allowing the rear axle to move, which may have been the result of impact damage. Mr McLaren noted that if the axle was in that condition prior to the incident, this may have placed excessive load on the drive chain due to misalignment of the rear axle drive sprocket.

55. Mr McLaren noted that the outer face of the handbrake gear wheel was triated, which may have been due to handbrake operation or caused by the barbed wire, which was wrapped around the left side of the rear axle due to the incident. Should handbrake engagement have occurred prior to the incident, this may have also caused the left side of the rear drive axle to move.

56. Mr McLaren was unable to determine the exact causation of the drive chain breakage. He concluded that it may have been caused by the lack of maintenance, age and wear with the potential of rear axle movement and/or possible excessive vehicle (chain) speed prior to its breakage.

57. Mr McLaren concluded that if the chain had broken prior to the incident, the mower would have been in free-wheel, with no engine and/or gear braking. Should handbrake application have occurred whilst the vehicle was travelling at speed, the rear wheels would have locked, resulting in a potential loss of vehicle control.

**Photographs of Ride-on Mower and Drive Chain**


## *Autopsy results*

58. An external autopsy, including a CT scan and toxicology testing, was conducted by a forensic pathologist, Dr Nathan Milne on 19 March 2012.

59. Dr Milne formed his opinion as to the cause of death from the police and medical history, and his external post-mortem examination. Dr Milne issued a certificate listing the cause of death as:

    *Head injuries resulting from a motorised go kart collision.*

60. Dr Milne concluded that the head injuries were associated with diffuse axonal injury and secondary hypoxic injury. Dr Milne noted that Jake had sustained other injuries to his body but these did not appear to have had any significant contribution to his death.

## *Safety Issues*

### National Coronial Information System (NCIS)

61. I requested a search be made of the NCIS database for national deaths associated with ride on mowers. This indicated there were 25 deaths identified between 1 July 2000 and 1 February 2013 that were reported to an Australian or New Zealand Coroner which involved a ride on mower, Dune buggy or go-kart. Of those 25 cases, 11 related to ride-on lawnmowers.

### Relevant provisions in the Australian Standard for ride-on mowers

62. Standards Australia is an independent, not for profit, non government standards body. In consultation with government, business, industry, community, academia and consumers, Standards Australia develops internationally aligned Australian Standards (AS) and related publications to

help ensure the safety, reliability and performance of a range of products, services and systems.

63. On their own, AS have no legal status and no requirement for compliance by manufacturers, consumers or the public. However, they provide a useful bench mark and they are also often called up in State and Commonwealth legislation. When this happens, these AS become mandatory and can be subject to the scrutiny of the courts.

64. The relevant AS for ride-on lawn mowers is AS 3792.1-1990 'Ride-on Lawnmowers', which came into effect in 1990 and appears to have only been amended once in 1991.

65. Paragraph 4.1 entitled '**Safety Instructions**', provides that:

> *Safety instructions covering items of essential maintenance, mower operation and mowing procedures shall be supplied with each mower. Such instructions shall include the information listed in Appendix L except where inappropriate to the particular type of mower.*

66. Two safety instructions of note in Appendix L are:

*Do not allow children...to use the mower* (paragraph 2); and

*You should not over-speed the engine or alter governor settings* (paragraph 30).

67. Paragraph 4.3 entitled '**Documentation**', provides that:

> *Each mower shall be provided with a manual giving operating, servicing and maintenance instructions. These instructions shall include...operations which can normally be performed by the operator…*

68. Paragraph 4.3(e) provides that:

> *Instructions, stating that special training is necessary for operating the machine, shall be placed so as to be visible from the operator's position.*

69. Appendices I and J set out the methods for determining the efficiency of the service brake system and the parking brake system respectively.

## Relevant provisions in the user manual for the ride-on mower

70. There is no evidence that a user manual accompanied the ride-on mower during its sale to Jake and it is highly unlikely.

71. A copy of the user manual entitled 'Greenfield Farm and Garden Tractors – Spare Parts and Instructions' (May 1980 edition) was provided by the Greenfield Mowers Senior Product Engineer, Mr Michael Whitaker, on 12 March 2013. The user manual provides important maintenance and operating instructions. Mr Whitaker has advised that the user manual is now, and was at the time the mower was sold to Jake, available from Greenfield Mowers.

72. On page 18 of the user manual, a check list is provided of steps that need to be taken before the ride-on mower is started. In relation to the drive belts, the following guidance is provided:

> ***BEFORE STARTING***
>
> ***Drive Belts:*** *Check the condition of the blades and bolts. Tighten if necessary. Replace if damaged or worn. Use genuine parts only.*
>
> On page 19 of the user manual, the maintenance instructions are given in relation to the rear chain:
>
> ***HINTS TO HELP YOU***
>
> *…**Maintenance:***
>
> ***Rear Chain – to Adjust:***
> *…*
>
> ***CAUTION:*** *…Once a year, the chain should be removed, thoroughly cleaned with kerosene and lubricated with AMPOL roller chain lubricant. If the chain is worn, replace. A worn chain will damage the sprockets.*

## Sport of Mower Racing

73. During the course of this investigation it became apparent that Mower racing appears to be an increasingly popular sport in Queensland. There is no suggestion that Jake was 'racing' the ride-on mower prior to the incident that led to his death, but the research indicates a number of key safety measures are put in place by mower racing organisations prior to their use in the sport. Of course this does not make it risk free, as is evident by an injury to an observer at an event reported only very recently in the media.

74. The Secretary and Treasurer of Brisbane Mowersport Inc has outlined to me in a letter dated 15 March 2013 a number of key modifications made to ride-on mowers by Queensland mower racing clubs. These include as an example:

- removal of the blade deck to allow lowering for stability and handling;
- removal of the front axle assembly from underneath the mower chassis and repositioning on the front of chassis, to lower the ride height and weld solidly to chassis;
- removal of the rear axle assembly and modification of rear chassis mounting points to allow for carrier bearings to be mounted on top of the new rear chassis rail assembly to create a lower ride height;
- solid rear axle made by an engineering company out of 25-30mm steel, with keyways cut in for rear sprocket and brake disc mounting positions;
- a clip on product similar to that used around the edges of car doors to cover exposed edges of the ride on mower;

- A ‘kill switch’ with a lanyard to attach to the body of the driver to ensure that if the mower rolls or the driver is separated from the mower, the engine stops;

- Disc or drum brakes that must lock up the rear wheels of the mower when applied; and

- A securely mounted seat.

75. The Queensland mower racing clubs also appear to recognise the need to conduct regular safety checks on their modified ride-on mowers and they mandate the use of safety equipment such as gloves, boots, full body clothing, neck support and a full race or motor cycle helmet.

76. The inquest was not examining the sport of mower racing and makes no comment about its safety generally. Although it is not risk free there is no suggestion the sport is not otherwise conducted safely. What was of interest to me were the various safety features adopted by the sport in the conduct of its operation. Accepting it is unreasonable to expect ride-on mower users generally to adopt the EXTENSIVE mechanical changes to mowers, which are made for compliance with the rules, the importance of regular safety and maintenance checks and the use of safety equipment, in the context of child users, are relevant.

## Commission for Children and Young People and Child Guardian (CCYPCG) Issues Paper: *Child deaths – Risk of death in off-road transport incidents*

77. The Commission has just issued a Trends and Issues Paper[2] which noted that approximately one quarter of transport-related child deaths in Queensland occurred in an off-road context between 2007 and 2012.

78. The issues paper also noted that a total of 62% of motorcycle and quad bike related child deaths occurred in an off-road context. The paper noted that it was essential that there is community awareness about safety messages to prevent quad bike( sometimes referred to as All Terrain Vehicles or ATVs) deaths. Although I do not consider that this particular ride-on mower should be classified as a quad bike, in my view the same principles apply in so far as they relate to ride-on mowers and their use by children.

79. In its conclusion to the Issues Paper the Commission stated it supported the following position in relation to quad bike use:

- Quad bikes are not recommended for use by children under the age of 12 (regardless of engine capacity) as operators or passengers.
- Young people aged between 12 – 16 years should not ride adult sized quad bikes (in engine capacity of greater than 90 cc).
- All young people must be formally trained, including specialised training related to task and terrain.

[2] Trends and Issues paper number 16, May 2013, *Child deaths – risk of death in off-road transport incidents*, Commission for Children and Young People and Child Guardian

- When riding quad bikes, young people should be supervised at all times. This means young people should be in the line of sight of a responsible adult able to respond immediately to an incident.
- Co-riding of quad bikes increases the risk of injury and is not recommended any age.
- Helmets and personal protective equipment should be worn at all times when operating a quad bike.

## *Findings on the Issues*

### Adequacy of the modifications to the ride-on mower

80. Prior to Jake acquiring the ride-on mower, the cutter deck had been removed from the mower by its previous owner, under his father's supervision.

81. Other than some minor repairs to the steering arm and carburettor pipe that were made on the day of the incident by Jake and his step-father, it does not appear that any other modifications had been made to the ride-on mower.

82. There was no suggestion in the vehicle inspection officer's report that the removal of the cutter deck or the repairs to the steering arm and carburettor pipe were inadequate or that they contributed to the incident that caused Jake's death.

### Adequacy of the maintenance and serviceability of the ride-on mower

83. Mr Taiaroa considered there was nothing untoward or different about Jake's ride-on mower. Given he had nothing to do with it until he assisted Jake with some minor repairs on the day of the incident, it is difficult to find any support for his view.

84. It does not appear that any other maintenance or servicing had been carried out by Jake in short period the mower was in his possession.

85. In the month and a half that his friend owned the mower prior to selling it to Jake, it had never been taken to a service centre or mechanic. All work on the mower was conducted by the young friend under the supervision of his father. However, the father could not recall whether the drive chain had at any time been oiled.

86. After conducting a mechanical inspection of the ride-on mower, the QPS vehicle inspection officer, Mr McLaren, concluded that the mower had not been well maintained. This is also abundantly evident to me upon viewing the QPS photographs taken soon after the incident, which depicts a general appearance that the mower was not well maintained. In particular the drive chain was very rusty looking and oil has clearly not been applied to it for a considerable time.

87. Whilst Mr McLaren was unable to determine the exact causation of the drive chain breakage, he concluded that it may have been caused by the lack of maintenance and/or other factors.

88. The evidence supports a finding that the ride-on mower was not well maintained and the breakage of the drive chain may have been caused by or contributed to by a lack of maintenance.

## The extent to which the collision was caused by terrain, speed, driver error and vehicle failure

89. I have considered the vehicle inspection officer's observations, the discovery of the broken chain at the scene of the incident and the neighbour's observation of Jake loosing control of the ride-on mower.

90. It is not at all difficult to conclude that Jake lost control of the ride-on lawn mower due to the rear axle drive chain breaking, as he was driving the ride-on mower down the steep driveway.. This led to the ride-on mower being in 'free-wheel' with no engine or gear braking capacity.

91. The CCYPCG notes that children should receive training in relation task and terrain before they operate this type of machinery. The evidence suggests Jake had been told not to drive down the driveway but that clearly is not the same as having tuition in relation to the safe use of such machinery. It is not possible to tell otherwise whether driver error contributed to the loss of control. Had Jake attempted to apply the handbrake after the drive chain breaking, the evidence suggests this would only have resulted in a greater loss of control.

92. I accept the vehicle inspection officer's conclusion that it is not possible to determine the precise cause of the rear axle chain breaking. The chain could have been broken as a result of any one or more of the following factors: lack of maintenance, age, wear causing rear axle movement, and excessive chain speed. It is likely to be as a result of all of those factors.

93. It is however unlikely that the results of a rear axle drive chain breakage would have been anywhere near as serious on a flatter terrain. The terrain, being the steep driveway, must have also been a factor.

## Adequacy of the provisions in the ride-on mower user manual

94. The relevant user manual for the ride-on mower was published in 1980.There is no evidence a user manual accompanied the ride-on mower during its sale to Jake but it is unlikely. Mr Whitaker from Greenfield Mowers has confirmed that in the event the user manual was misplaced, a copy of the user manual could have been obtained through them.

95. The user manual contained important maintenance and operating instructions. Had the maintenance and operating instructions been read and followed, it is possible the state of the drive chain would have been observed and rectified.

96. The user manual is silent in terms of guidance in relation to the recommended age, skill and qualifications of the driver; and supervision of children. Much of this information should be common sense.

97. The relevant AS on ride-on mowers now provides guidance to ride-on mower manufacturers about the information of this nature that should be provided in user manuals. However, the AS did not come into place until 10 years after

the user manual was published, so it would be unfair to assess the user manual against the AS in place in 1990.

98. The provisions in the Greenfields user manual applicable to the ride-on mower were adequate, according to the standards applicable at the time the user manual was published in 1980.

## Circumstances in which Jake's mother and step-father allowed him to operate the ride-on mower

99. Jake's mother and step-father allowed him to drive the modified ride-on mower around the property for enjoyment purposes. This is likely to be a relatively common practice on rural properties and it is recognised that children on rural properties will often have access to such vehicles at a much younger age.

100. However, in the circumstances applicable at the time, I agree with Mr De Waard's submission that the decision of Jake's mother and step-father to allow Jake to drive the ride-on mower was unsound given:

- Jake was only 12 years of age and it may have been unrealistic to expect him to follow instructions not to drive the ride-on mower down the steeper of the two driveways;
- Jake was unsupervised and had been known to drive down the steep driveway on his motorbike;
- although Jake had driving experience on motorbikes and bicycles, these vehicles are still quite different to ride-on lawn mowers;
- the ride-on mower was being used for a purpose for which it was not intended;
- it should have been obvious just by looking at the ride-on mower that it was likely to be in poor mechanical condition, no enquiries appear to have been made about the previous servicing and maintenance regime on the ride-on mower and a safety or mechanical inspection should have been carried out on the mower prior to allowing Jake to drive it;
- Jake was not wearing safety equipment, and in particular a helmet.

## *Findings required by s 45*

101. I am required to find, as far as is possible, the medical cause of death, who the deceased person was and when, where and how he came by his death. As a result of considering all of the material contained in the exhibits, I am able to make the following findings in relation to the other aspects.

I. Identity of the deceased – The deceased person was Jake Michael Garrett-Pratt.

II. How he died – Jake lost control of a modified ride-on mower whilst driving it down a steep driveway at his residence. He careered down the driveway through a four strand barbed wire fence, tumbling into the neighbour's paddock. The ride-on mower became uncontrollable

due to the breakage of the rear axle drive chain, leaving it with no effective braking mechanism. The rear axle drive chain broke as a likely result of a number of factors including poor maintenance of the ride-on mower and in particular the drive chain, the age of the machine, excessive rear axle movement, and likely excessive speed to the drive chain as a result of the steep terrain. He was not being supervised or wearing a safety helmet. As a result he suffered fatal head injuries associated with diffuse axonal injury and secondary hypoxic injury.

III. Place of death – He died at Brisbane in Queensland.

IV. Date of death – He died on 18 March 2012.

V. Cause of death –

1 (a) Head Injuries, due to or as a consequence of;

1 (b) Ride-on mower collision (rider)

## *Comments and recommendations*

102. Section 46, insofar 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.

103. This case has demonstrated the importance for people: either being given or obtaining user manuals upon purchase of a used ride-on mower; and

- reading and following the operating and maintenance instructions in the user manual prior to driving a ride-on mower for the first time;
- regularly servicing a ride-on mower;
- arranging professional safety and mechanical inspections upon purchase of a used ride-on mower;
- utilising ride-on mowers for the purpose for which they were intended for or obtaining professional assistance in the event they will be using it for non-mowing purposes; and
- in relation to children there needs to be considerations as to the age of the child and training and supervision in relation to use and terrain as well as use of safety equipment such as helmets.

104. In considering the relevant Australian Standard AS 3792.1-1990 it is noted that it already provides that:

- that the mower should not be lent or sold without the user manuals;
- that the manual should be read and understood;
- children or people unfamiliar with the manual instructions should not be allowed to use the mower;

- advises extreme caution when on slopes; and

- in my view provides adequate detail regarding the necessity to be sure the mower is in a safe operating condition.

105. Given the circumstances of this case, the fact that the NCIS database indicates deaths are occurring on ride-on mowers, and given the Standard has not been considered for amendment since 1990, it may now be time for Australian Standards to reconsider AS 3792.1 to ensure it meets with current safety standards and expectations, including the matters raised by the CCYPCG Issues Paper in relation to children and warnings about the use and modifications of such machinery for non mowing purposes.

106. With that in mind I will write to Australian Standards providing a copy of this decision and recommend it convene the relevant technical committee to consider such matters. It may be appropriate that consideration be given for mandating the AS within appropriate State and Federal Legislation. I am aware the process for considering mandating standards is lengthy and involves much consultation. The Office of Fair Trading is the relevant State Government agency which has responsibility for product safety and standards and has in my experience been most proactive in its approach to safety issues and I will write to it in a similar fashion.

107. I accept it is unlikely that even if there is a change to the AS that this would prevent people from using ride-on mowers for non-mowing purposes, or allowing children and young people to use such vehicles, especially on rural properties. Therefore, consideration should be given to ways in which people and particularly children can be encouraged to do so safely.

108. I therefore recommend that until such time as appropriate consideration is given in relation to safety issues in respect to the Standard, the recommendations found in the CCYPCG Issues paper in so far as they relate to quad bikes also be followed in respect to ride-on mowers or other similar vehicles such as go-karts and be generally adopted. To be abundantly clear such safety measures should include:

- Such vehicles are not recommended for use by children under the age of 12 (regardless of engine capacity) as operators or passengers.

- Young people aged between 12 – 16 years should not ride adult sized quad bikes or similar vehicles (in engine capacity of greater than 90 cc).

- All young people must be formally trained, including specialised training related to task and terrain.

- When utilising such vehicles, young people should be supervised at all times. This means young people should be in the line of sight of a responsible adult able to respond immediately to an incident.

- Co-riding of such vehicles increases the risk of injury and is not recommended at any age.

- Personal protective equipment and certainly helmets should be worn at all times by young people when operating a quad bike, ride-on mower or similar vehicles.

- This case specifically raises the issue that these vehicles need to be properly serviced and maintained and any modifications be performed by an appropriate mechanical professional.

109. That safety message needs to be disseminated and I welcome the attention of the media in assisting. As well such organisations as 'Kidsafe' or the 'The Queensland Ride-On Mower Racing Association Inc' may wish to consider ways to spread safety messages regarding the use of ride-on mowers for mowing or non mowing purposes, quad bikes or go-karts to the general community through mediums such as their individual internet sites, local newspapers and magazines. I am aware Kidsafe Queensland has or is just about to publish a fact sheet in relation to quad bikes, which will be available on its website.

John Lock
Brisbane Coroner
Brisbane
31 May 2013