



OFFICE OF THE STATE CORONER

FINDINGS OF INQUEST

CITATION: Inquest into the death of
Nicholas Peter JOHNSON

TITLE OF COURT: Coroner's Court

JURISDICTION: Brisbane

FILE NO(s): 2010/958

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DELIVERED AT: Brisbane

HEARING DATES: 8 August 2013; 9 - 10 September 2013; and 14
November 2013

FINDINGS OF: Mr John Hutton, Brisbane Coroner

CATCHWORDS: CORONERS: fire, farmstay, budget
accommodation, petrol generator, fire safety, rural
numbering

REPRESENTATION:

Counsel Assisting:	Mr Peter De Waard
Mrs Tanya Johnson (the deceased's spouse)	Mr Brett Charington (instructed by Mullins Lawyers)
Mr Peter Harvey (owner of property)	Mr Charles Bagley (instructed by McLaughlins Lawyers)
Mr Thomas Harvey (manager of property/ Farmstay)	
Mrs Rosalyn Harvey (manager of property/Farmstay)	
Office of Fair and Safe Work Qld (incorporating Workplace Health and Safety Qld)	Mr Peter Matthews
Department of Community Safety (incorporating Queensland Fire and Rescue Service)	Mr Michael Nicolson

The *Coroners Act 2003* provides in s. 45 that when an inquest is held, the coroner's written findings must be given to any person who I gave leave to appear at the inquest. These are my findings in relation to the death of Mr Nicholas Peter Johnson. They will be distributed in accordance with the requirements of the Act and posted on the web site of the Office of the State Coroner.

Introduction

Mr Nicholas Johnson was 47 years of age when he died in a fire on Sunday 31 July 2011, which occurred in a generator shed at a farmstay where he and his family and friends had been staying over the weekend. The property was known as 'Cloudhill Farm' at Tarome in Queensland.

These findings:

- confirm the identity of the deceased person, when, where and how he died and what caused his death
- determine the adequacy of the safety systems in place at Cloudhill Farm to manage the risk of fire and loss of life arising from the operation of the petrol generator
- determine the adequacy of government regulations for farmstays to ensure owners and managers take appropriate measures to manage the risk of fire and loss of life of guests
- determine the adequacy of government regulations relating to rural numbering in light of the delay experienced by some Queensland Fire Rescue Service (QFRS) personnel attending the scene
- consider whether any recommendations can be made to reduce the likelihood of deaths occurring in similar circumstances or otherwise contribute to public health and safety or the administration of justice.

Findings required by s. 45

I make the following findings pursuant to s. 45(2) of the *Coroners Act 2003*:

Identity of the deceased – The deceased person was Nicholas Peter Johnson.

How he died – Mr Johnson died from smoke inhalation due to fire after attempting to refuel a petrol generator on a farmstay. His group of 18 people, including family and friends, had paid to stay at the farmstay over the weekend at Tarome in Queensland. The primary source of power to the rural property was solar power. The generator was used as a secondary source of power and was housed in a relatively closed shed with poor ventilation. Mr Johnson had received a briefing from the manager of the property in relation to the operation of the generator and it was envisaged that he may need to refuel the generator during their stay. However, he was given no instructions about the safe refuelling of the generator, nor was he given a copy of the generator Operator's Manual. A 20 litre jerry can of fuel and a plastic funnel were left behind by the manager for the purposes of refuelling the 15 litre generator tank. There were no fire extinguishers on the property and no access to a pressurised water source. The fire began at approximately 7:30am on Sunday 31 July 2011 and was caused either: as a result of Mr Johnson spilling fuel on the generator allowing fluid or vapours to contact the hot engine block and exhaust; or by static discharge igniting fuel vapours due to the build up of static charge caused by the movement of Mr Johnson's fleece and polyester jacket and the movement of a large quantity of fuel through a plastic funnel into the generator tank. Mr Johnson was unable to escape from the shed due to experiencing problems exiting through an inwards opening door.

Place of death – Mr Johnson died at Cloudhill Farm, Lot 508 in the Scenic Rim Council rural zone, Tarome, in Queensland.

Date of death – Mr Johnson died on 31 July 2011.

Cause of death – Mr Johnson died from smoke inhalation due to fire.

Findings on the issues

The adequacy of the safety systems in place at Cloudhill Farm to manage the risk of fire and loss of life arising from the operation of the petrol generator

I find that the safety systems in place at Cloudhill Farm to manage the risk of fire and loss of life arising from the operation of the petrol generator were inadequate. This is because:

- The portable petrol generator was housed in a poorly ventilated shed against the manufacturer's recommendation, which significantly increased the risk of fire. This was in circumstances where the portable generator was permanently installed for the purposes of providing a secondary power source to the property and it was likely to be used by paying guests at the farmstay, many of whom would not have had any experience with such machinery.
- The exit point within the generator shed in the event of a fire was inadequate. The main door was inwards opening and difficult to navigate around in an emergency. Paying guests were not familiarised with the existence and operation of the roller door.
- A 20 litre jerry can containing large quantities of fuel and a small plastic funnel was supplied to paying guests for refuelling purposes, contrary to the generator manufacturer's recommendations. This increased the risk of the petrol splashing; overfilling; and a spark due to static discharge. This in turn increased the risk of fire.
- There was no fire safety equipment (such as fire extinguishers or a water supply with adequate pressure) accessible to paying guests on the property.
- There was no fire evacuation plan in the event of a house or shed fire.
- The generator Operator's Manual, which contained vital information regarding safe refuelling, was not made available to paying guests. This was despite Mr Thomas Harvey having read the manual, a warning within the manual that it should be read prior to operating the generator, and Mr Harvey having the manual in his possession at the dwelling.
- The briefing provided by Mr Harvey to nominated persons within the group regarding the operation of the generator did not include sufficient information regarding the safe refuelling of the generator or a physical demonstration.
- Written instructions regarding the safe refuelling of the generator, such as the ones Mr Harvey claimed he kept for his own purposes, were not provided to paying guests.

- The 'Cloudhill Conditions Form' that Mr Harvey said was provided to guests to sign after receiving a briefing, made no mention about the generator.
- The 'Cloudhill Handy Hints' poster, which was posted within the dwelling, pointed out some common dangers on the property but made no mention of the generator.
- There had been no safety audit conducted of the property prior to it being rented out as a farmstay to paying guests.

I find that the inadequate safety systems in place at the time the group, including the Johnson family and friends, visited Cloudhill Farm contributed to Mr Johnson's death.

The adequacy of government regulations for farmstays to ensure owners and managers take appropriate measures to manage the risk of fire and loss of life of guests

I find that the government regulations for farmstays to ensure owners and managers take appropriate measures to manage the risk of fire and loss of life of guests are inadequate.

More stringent fire safety standards such as that which apply to budget accommodation under the *Building Act 1975 (Building Act)* would not have applied to this farmstay, even if the owner had lodged the relevant applications through local council. This is because the more stringent standards are not aimed at accommodation where group bookings rather than individual bookings are made.

Since fires do not distinguish between these different groups of people, neither should the regulations. A farmstay setting is one in which large groups of people are often accommodated in the one building in circumstances where machinery such as generators are in operation and the risk of fire is high.

This case has demonstrated the danger of relying on owners and managers of such tourist accommodation businesses taking appropriate action to adequately manage the risk of fire and loss of life of guests

The adequacy of government regulations relating to rural numbering in light of the delay experienced by some Queensland Fire Rescue Service personnel attending the scene

I find that the lack of government regulation mandating rural addressing is inadequate in an emergency response situation.

In this case, the lack of rural numbering did not result in a delay for the first QFRS responders and did not contribute in any way to Mr Johnson's death. However, this experience demonstrates that a lack of rural numbering could quite easily result in a material delay in future emergency response cases.

The paying guest who made the first phone call to emergency services was asked for an address, a suburb, and a direction from the nearest landmark. She was unable to provide this. One of the QFRS units which responded to the emergency also experienced delay and confusion when attempting to locate the property. All QFRS personnel who attended the scene agreed that a rural number would have assisted them when responding to the emergency.

Evidence, discussion and general circumstances of death

Background

Mr Johnson was 47 years of age when he died in a fire whilst attending to a petrol generator at a farmstay on Sunday morning 31 July 2011. He was survived by his wife and two children (who were aged two and five years at the time of his death).

In a statement read out on behalf of Mrs Tanya Johnson at the inquest, she described her husband as a kind and caring man, a loving husband, doting father, conscientious employee and a generous friend.

The farmstay was on a rural property, which was then known as 'Cloudhill Farm' at Tarome, situated near the Cunningham Highway, approximately 100 kilometres south west of Brisbane. The property was within the rural zone of the Scenic Rim Regional Council area. There was no rural numbering or address for the property or any other means of easy identification (such as a sign at the entrance way off the road).

The property was primarily used as a privately owned operating farm up until 2010. In 2010, the owner, Mr Peter Harvey, agreed that his son, Mr Thomas Harvey, could manage and operate the property as a farmstay for tourists. Within its first year of operation, the property was rented out through the internet site 'stayz.com.au' to large groups of up to 18 tourists at a time, every second weekend on average. The property was always rented as a whole, rather than by separate rooms, and always under the one booking. The rest of the time it was used as a residence by the Harveys or as a retreat for extended members of the Harvey family and friends.

The Johnson family and their group of friends, comprised of ten adults and eight children, paid Mr Harvey approximately \$1,800 for their two night stay in 2011. Each of the four families electronically deposited their share of the rent directly into Mr Harvey's bank account. The same group had previously rented the property about a year earlier.

The main dwelling on Cloudhill Farm was a two storey old Queenslander comprising of seven bedrooms and two bathrooms. There was no mains power connected to the property and no land phone line. The dwelling and sheds obtained power from batteries, which were charged primarily by solar

panels, and secondarily by a petrol generator. There were two external sheds, one of which housed the generator (the generator shed).

The petrol generator was positioned to the right of the shed as you walked through and around the main entrance door. The generator was an air cooled Honda 6.8 kva petrol portable generator with a 15 litre long range fuel tank. The portable generator was permanently in place through a fixed installation completed by a qualified electrician.

The generator shed was approximately three metres wide, six metres long and 2.4 metres high. It was constructed from timber beams with corrugated iron wall sheeting, on a concrete slab. There were some gaps around the eaves of the roof. The main door into the shed was inwards opening (with the hinges on the right hand side as you faced the door from the outside). There was also a roller door to the left hand side of the shed when facing the entrance door. There were two small windows (one high above where the generator was positioned and one high on the opposite side of the shed). Besides housing the generator, the shed was also used to store old furniture and equipment. It would appear that the majority of the furniture was stored on the opposite side of the shed to where the generator was positioned and that it was relatively easy to navigate around the furniture when attending to the generator in the shed. The lighting in the shed was poor but it was possible to see what you were doing in the day time. Mr Harvey said there was a light in the shed but it was not identified or used by any of the witnesses and it presumably relied on solar power/generator power.

A 20 litre jerry can was stored within the generator shed on the concrete, one to three metres away from the generator. There was no sprinkler system within the shed and no fire extinguishers or fire fighting equipment. Although there was a gravity fed water tank near the shed, there was no hose connected to it. The shed was situated approximately 35 - 60 metres north of the main dwelling.

Mr Harvey said in oral evidence that the roller door of the shed was permanently chocked with wood, so that it was partly open. None of the three witnesses recalled seeing any roller door, but remnants of the roller door were identified by the fire investigators during their investigation.

Safety System in place at Cloudhill Farm

No provision of the generator Operator's Manual

In oral evidence, Mr Harvey admitted to having possession and reading the Operators Manual for the petrol generator. He stored the manual and other generator documentation in a plastic bag in the middle drawer under the

television of the dwelling, but he did not advise paying guests where it was located.

It is noted that the relevant Honda Owner's Manual says to read the manual before operating the generator. The manual provides a range of safety information of relevance to this case. Examples include:

- Your engine's exhaust contains poisonous carbon monoxide.
- Do not run the engine without adequate ventilation, and never run the engine indoors.
- The engine and exhaust become very hot during operation.
- Refuel in a well-ventilated area with the engine stopped. If the engine has been running, allow it to cool first. Never refuel the engine inside a building where gasoline fumes may reach flames or sparks.
- Refuel carefully to avoid spilling fuel. Do not fill the fuel tank completely. Fill tank to approximately 25 mm (1 inch) below the top of the fuel tank to allow for fuel expansion. It may be necessary to lower the fuel level depending on operating conditions.
- **WARNING:**
 - Gasoline is highly flammable and explosive, and you can be burned or seriously injured when handling fuel.
 - Stop engine and keep heat, sparks, and flame away.
 - Handle fuel only outdoors.
 - Wipe up spills immediately.
- Keep the engine at least 1 meter (3 feet) away from buildings and other equipment during operation. Keep flammable materials away.

The manual also suggests that the following warning stickers are on the generator:

- Gasoline is highly flammable and explosive.
- Turn engine off and let cool before refuelling.
- The engine emits toxic poisonous carbon monoxide gas. Do not run in an enclosed area.

Due to the age of the generator (having been purchased in 2000) and the poor lighting conditions within the shed, it is unlikely these warnings would have been easily readable.

In oral evidence, Mr Harvey acknowledged that he was aware that the manual contained pages relating to the safe operation of the generator, including safety tips about refuelling. However, he did not accept that it was necessary to provide a copy of the manual to paying guests, nor to advise them where the manual was located.

Mr Harvey felt the manual was far too comprehensive for his paying guest's needs. He was of the opinion that manuals help people understand how a machine works but are not essential to the operation of them. He said that manuals were only important from a safety perspective when doing work on the machine.

Mr Harvey said that he adequately relayed the manual's safety instructions regarding refuelling of the generator to paying guests through provision of a verbal briefing to nominated male persons he termed as 'power monitors'.

Mr Harvey said that if guests needed to know where the manual was, all they needed to do was make a phone call to him and ask. However, Mr Harvey did accept that in hindsight, he should have copied the refuelling page of the manual and placed it near the generator.

Briefing provided by Mr Harvey

In oral evidence, Mr Harvey placed great emphasis on the detail of his briefing to nominated power monitors from each group regarding the use of the solar system and generator at the beginning of their stay.

He said that he arrived at what he considered to be an appropriate briefing using his common sense, training and background as well as information he acquired after reading a number of manuals.

Mr Harvey advised that he provided the same briefing to each power monitor in relation to the use of the generator, regardless of their level of experience. He said that although some words may vary, the sequence of his briefing would remain the same. He said the briefing would normally go for a minimum of 30 minutes. During the first inquest sitting, he said he spent about an hour briefing Mr Johnson on Friday afternoon 29 July 2011. During the second inquest sitting, he said he spent at least an hour and a half briefing Mr Johnson. He confirmed they were standing the whole time and Mr Johnson did not complain of any pain, despite having had hip surgery a month prior. Mr Harvey also said he spent about an hour briefing the power monitor, Mr Andrew Tatum, of the group who stayed at the property the weekend prior.

Mr Harvey was very specific at the inquest about the sequence of the briefing he provided to the power monitor. He said he would begin by going through the solar power board and the readings in the solar power room at the main dwelling. They would then turn the tap on in the bathroom to activate the

water pump and look at the readings. He did this to demonstrate the load on the system when using the water pump. Mr Harvey would then go through the lights and the circuit board in the house, which was separate to the normal household safety board.

From there, they would walk down to the generator shed. Mr Harvey said that he would show them how to start the generator and then get them to start the generator themselves. He would request that guests keep the door of the generator shed open whilst the generator was running. They would then leave the shed and return to the solar power room. They would look at the numbers on the screen to observe the impact that running the generator was having on the solar power system.

They would then go back to the generator shed and turn the generator off. Mr Harvey said he would direct them to wait with him outside the generator shed for five minutes to allow the carbon monoxide build up within the shed to clear and for the engine to cool down before filling it with fuel.

Mr Harvey said he would then take them back inside the generator shed after five minutes, show them where to locate the jerry can of fuel and ask them to put the jerry can back in the same spot after using it.

Mr Harvey said that he would remove the generator fuel lid, place the plastic funnel snugly onto the neck of the machine, then locate the jerry can, and open it. He said that he would not physically pour any fuel into the generator as part of his demonstration, because he knew that he had already prefilled the generator three quarters or so full.

Mr Harvey said that he provided a full detailed brief to Mr Johnson prior to his death. He is adamant that he showed Mr Johnson how to refuel the machine. He also said that Mr Johnson received the same briefing from him when their group stayed at Cloudhill Farm the year before in 2010.

Mr Harvey claims that Mrs McDarra was not present for the refuelling part of the briefing. He said he stayed behind at the generator shed with Mr Johnson for about 30 – 40 extra minutes to have a 'men's chat'. He said that he had a good conversation with Mr Johnson about motorbikes and he seemed quite proficient. He saw no indication that Mr Johnson was uncomfortable with machinery. He was not aware that Mr Johnson had no prior experience with generators. At one point during examination, Mr Harvey said that the reason he did not provide Mrs McDarra with the refuelling briefing was because she disappeared to help with the children and took no further interest in the rest of the briefing. At another point, he said he did not provide the refuelling briefing to Mrs McDarra because she was not required to be there. He was 'old school' and did not expect females to have to refuel machinery on the property. He said that if it turned out that Mr Johnson was unable to refuel the

generator during their stay, he would have expected the other paying guests to phone him or simply not use the generator.

Mr Harvey said that the power monitor he appointed was also the fire monitor in the sense that they had all encompassing duties and they were briefed about a bush fire evacuation plan and about the fire exits within the main dwelling as well as other hazards.

The inquest heard from three witnesses who have previously received a briefing from Mr Harvey. The first witness was Mr Nicholas Bailey who had received the briefing from Mr Harvey during the group's first stay at the property in 2010 (the year prior to the fatal incident). The second witness was Mrs McDarra. The third witness was Mr Andrew Tatum, who received the briefing from Mr Harvey when his group stayed at the property the weekend before the fatal incident in 2011.

The accounts provided by these three witnesses are inconsistent with Mr Harvey's version of events in the following material respects:

- They all estimate that the duration of the briefing provided to them by Mr Harvey was between 10 and 20 minutes (and that only about half of that time was spent on the petrol generator).
- They are all certain that Mr Harvey did not provide a physical demonstration or a verbal explanation about how to safely refuel the generator.
- They all say they were not instructed by Mr Harvey to wait outside the generator shed for at least five minutes before refuelling the generator (and they did not do this with Mr Harvey during the briefing).
- None of them recollect that there was a plastic funnel with the jerry can or the generator and they cannot recall this being pointed out to them by Mr Harvey.
- They all say that the door of the generator shed was inwards opening and that they had to push it in from the outside to get into the shed.
- None of them recall Mr Harvey saying anything about keeping the door open when running the generator.

- None of them recall that the roller door was chocked open.
- None of them recall being told anything about fire evacuation plans or exit points from the dwelling.

Mrs McDarra is adamant she was present during the briefing in 2011 and has a very different recollection about the level of detail provided by Mr Harvey to that claimed by him at the inquest. She is adamant that there was never an explanation or a physical demonstration about refuelling provided by Mr Harvey. He simply pointed out where the fuel cap on the generator was and where the jerry can was, in the event the generator needed to be refuelled.

Mrs McDarra recalls Mr Johnson and Mr Harvey discussing motorbikes but said that this was at an earlier time in the afternoon down at the main shed after she and others had gone for a drive with him in the old truck. The only point she said where she left Mr Johnson and Mr Harvey during the briefing was when the discussion in the solar power room was getting a bit technical. She turned away to leave the room but they followed her and they all walked down to the generator shed together.

Mr Harvey's handwritten briefing notes

During the first inquest sitting, when asked by counsel assisting whether he had his briefing written down anywhere, Mr Harvey said that he had handwritten briefing notes in his personal file. He said he would usually read them before guests arrived to prompt him to ensure he covered all the points during his briefings. He said he did not provide them to anyone. They were just for himself, but if a paying guest had asked him for a copy, he would have provided it to them.

Mr Harvey said that he kept his briefing notes in the middle drawer beneath the television at the dwelling of Cloudhill Farm and that he still had them in his possession. When asked by counsel representing the next of kin whether he had thought about producing the written notes to the coroner, Mr Harvey said he had not thought about it.

Whilst the inquest was adjourned, I issued Mr Harvey, through his solicitors, with a Notice to Produce his original briefing notes. This was required one and a half weeks prior to the re-commencement of the inquest. A copy of the briefing notes was only produced by Mr Harvey's solicitors late on the afternoon prior to the re-commencement of the inquest. The so-called original briefing notes, which were undated, were not produced until the morning the inquest re-commenced.

During the second inquest sitting, Mr Harvey gave evidence that he prepared his written briefing notes in about November of 2010. He said he wrote them out in case one of his sons was going to do a briefing to guests for him, as he was planning to go away on holidays. He said he never actually went away and he later used the notes to prompt himself only once or twice. He said he did not recall saying at the previous inquest sitting that he would usually use them to prompt himself every time a group of guests came out. He could not provide any explanation as to why he would refer to the notes, as he was fairly familiar with the equipment and he said he did not need his notes.

Mr Harvey also did not have an explanation as to why it was good enough for him to provide his son with detailed written briefing notes but not good enough to provide them to paying guests. He said he expected his paying guests to retain 35 – 40 minutes of the detail provided to them during his briefing but wanted his son to have written notes to 'fall back on'. He could not explain why he did not provide the same notes to his guests to fall back on. He said that the system (together with his verbal briefing) was pretty simple to operate.

In terms of the time delay providing the original notes to me, Mr Harvey claimed he did not know that I had issued him with a notice to produce them. This was supported by his counsel advising me that his solicitor had never advised him of the Notice. He said that his wife had only faxed a copy of the notes to his solicitor earlier in the week in relation to a discovery letter he had received from Carter Newell solicitors to produce all relevant documents in relation to civil dependency claim proceedings.

Mr Harvey's counsel advised me at the re-commencement of the inquest that the original handwritten notes had not been provided to Mr Harvey's solicitor or counsel until the day prior to the recommencement of the inquest. Counsel had a conference with Mr Harvey 10 days prior to the recommencement of the inquest and Mr Harvey indicated to him at that stage that he could not find them.

A copy of an e-mail sent by Mr Harvey to his solicitor on 5 September 2011 was tendered by his counsel at the inquest. Counsel representing Mr Harvey advised me that the e-mail was a typed version of Mr Harvey's notes (except with some embellishments rather than abbreviations). It was suggested that although the original copy was never seen by Mr Harvey's legal representatives until recently, the hand written briefing notes did in fact exist in 2011 and they were not a recent fabrication.

In re-examination by counsel assisting, Mr Harvey advised that he had transferred his written notes into typed form in mid August 2011. In cross

examination by counsel representing the next of kin, Mr Harvey said that he copied his handwritten notes into the body of the e-mail but that the typed version was better laid out than the original. He later admitted to adding an extra line in his typed version in capital letters: 'NEVER TRY TO FUEL WHILE THE ENGINE IS RUNNING', that did not appear in his handwritten notes. He said the line came straight out of the Operator's Manual and he verbally briefed it. Counsel representing the next of kin also noted there was a discrete entry at the top of one of the pages in the handwritten notes: 'Do not close door whilst machine is operating', which appears to be somewhat of a significant entry in the handwritten notes but is not so in the typed e-mail. In cross examination, Mr Harvey then said that he did not actually have the handwritten notes when he typed it up. He said he had the handwritten notes available to him but he typed it from his memory of the briefing.

Counsel representing the deceased's next of kin produced a copy of a letter from Carter Newell solicitors on behalf of Mr Harvey's insurer of the property dated 23 July 2013, in relation to a civil dependency claim. The letter purported to be a copy of all of the relevant documents relating to an allegation that Mr Harvey had failed to properly instruct Mr Johnson on how to use the generator safely, especially when refuelling the generator after it had been used. Yet, the written briefing notes were not listed in that letter. The only document mentioned was the Cloudhill Conditions Form. Mr Harvey claimed that Carter Newell did not request him to provide a copy of the documents until 23 or 24 October 2013 and that prior to the inquest he had no contact with them. He agreed that this would have been a relevant document for his defence. He said an insurance investigator came around to see him after the fire but did not ask for it, so he did not produce it. He said he volunteered the fuel receipt relating to his refilling of the jerry can to the insurance investigator (which he said he delivered to the investigator). This also was not disclosed to the next of kin's solicitors. He had no answer as to why he did not volunteer the handwritten briefing notes, which would be a crucial document for his defence.

It is noted that nowhere in Mr Harvey's e-mail dated 5 September 2011, does it say that Mr Harvey provided a physical demonstration to guests as to how to refuel the generator.

It is also noted that Mr Harvey did not make any mention of his handwritten briefing notes to Workplace Health and Safety Queensland (WHSQ) inspectors when they questioned him at the property on the morning of the incident. Yet he gave them an overview of the briefing that he provided to guests and made specific mention of them signing a 'Cloudhill Conditions Form' as evidence of the briefing they received. He produced an unsigned copy of the form, yet he did not provide them with a copy of his handwritten

briefing notes, which he could easily have done if they were located within the dwelling as he has suggested.

I find that the handwritten briefing notes produced by Mr Harvey are indeed detailed and consistent with the account given by him during the inquest about the sequence of his briefing. However, I find that they are a recent fabrication due to the number of inconsistencies in his story. The e-mail dated 5 September 2011 does no more than evidence his version of events as to the sequence of the briefing he said he provided to guests. It does not prove the authenticity of his handwritten notes.

Without being able to rely on Mr Harvey's handwritten notes to support what he said was included in his briefing, I must weigh Mr Harvey's oral evidence against the written and oral evidence provided by the three witnesses who received briefings from him.

Despite Mr Harvey having been granted privilege at the inquest in relation to key aspects of his oral evidence, I found that he was not, overall, an open and frank witness. He gave me a very strong impression that he was making his story up as he went along. He did not present as a credible witness and there were too many inconsistencies between his version of events and that of the three witnesses. Mr Tatum's evidence is of significant weight because he was not in any way related by friendship to Mr Johnson or his next of kin. Mr Bailey and Mrs McDarra also presented as reliable and credible witnesses. I therefore prefer the collective evidence of Mr Tatum, Mrs McDarra and Mr Bailey in relation to the deficiencies of the briefing over Mr Harvey's evidence in this regard.

The Cloudhill Conditions Form

Mr Harvey produced two documents entitled 'Cloudhill Conditions Form' dated 2010, which appears to have been signed by Mr Johnson and Mr Bailey during their first visit to the property on 27 August 2010. Mr Harvey said that at the conclusion of the briefing he asked the power monitor whether they felt comfortable with everything and if there was anything they did not understand or wanted him to go over again. He then required them to sign the form at the conclusion of the briefing process. He said he was more insistent that the form be signed in 2010 but was more relaxed about it in 2011.

Mr Harvey said he left the form for Mr Johnson to sign after the briefing he received in 2011 but it was never signed and he did not make a big deal out of it because he was going to come back on the Saturday for activities.

The Cloudhill Conditions Form appears to be an attempt by Mr Harvey to indemnify himself and his father's business against liability. From a safety perspective, I find that the two most relevant clauses are as follows:

- (Clause 1) 'I have been made aware of the additional dangers and risks of injury associated with rural properties and agree to accept all dangers and risks of injury arising out of my conduct'.
- (Clause 6) 'I have been made aware that Cloud Hill is a working property and have been adequately briefed on safety guidelines and safety requirements for and during our stay at Cloud Hill'.

It is noted that there is no clause in the form that specifically relates to the generator. Mr Harvey admitted in oral evidence that he did not mention the generator when requiring persons to sign the form.

I find that whilst the Cloudhill Conditions form signed by Mr Johnson in 2010 may evidence that he received a briefing that year, it does not assist the court in relation to whether the briefing was adequate. Even if Mr Johnson was adequately briefed in 2010, I find that it does not follow that this diminished the need for an adequate briefing in 2011. For example, Mr Bailey was very clear that although he received a briefing in 2010, he had forgotten how to operate the generator and would not have been comfortable doing so in 2011 without another briefing. Mr Bailey also said that although he was comfortable signing the form in 2010, he admittedly had no way of knowing whether the briefing he received was adequate.

In oral evidence, Mr Harvey acknowledged that a person who was totally unfamiliar with safety on the property and relying on him to tell them everything, had no real way of knowing whether the safety information he gave them was adequate.

Mr Tatum's evidence was particularly instructive on this point in relation to the generator. He said that despite some experience with generators and despite having received a briefing from Mr Harvey about the operation of the generator, he would have refuelled the generator when it was still hot. He would have done this because other guests would have been putting pressure on him to get the power back up and running. He did not know to wait for the generator to cool down and was not instructed to do so by Mr Harvey, yet he thought he had received an adequate briefing from him at the time.

Cloudhill 'Handy Hints'

Mr Harvey compiled a document entitled 'Cloudhill Handy Hints', which was posted on a wall in the dwelling at Cloudhill Farm. He said it was a friendly reminder that guests were responsible for their use of power and it pointed out some dangers on the property such as snakes, spiders and loose rocks. He said that he did not intend for this document to list the most important dangers on his property. Mr Harvey agreed there was no mention of tips for operating the generator in the Handy Hints document but he explained that this was because it was something he specifically covered in his briefing to the power monitor.

Lack of accessible fire safety equipment

It would appear that one or two fire blankets were in the kitchen at Cloudhill Farm.

Besides this, I find there was a distinct lack of accessible fire safety equipment on the property because:

- There was no water pressure on the property, apart from a gravity fed water tank. Mr Harvey said there was a 45 metre garden hose that connected to a tap outside the laundry adjacent to the water tank that reached the perimeter of the dwelling and this was pointed out to Mr Johnson. However, none of the witnesses who received briefings from Mr Johnson could recall him making any mention about water supply in the event of a fire. But even if there was water pressure on the property, it is doubtful that this would have been adequate to fight the fuel fire in question, due to the fire investigator's evidence that it can actually make matters worse if untrained.
- There were no accessible fire extinguishers. The fire investigator advised that dry powder extinguishers would have been required for the fuel fire in question. Mr Harvey gave evidence that there were four fire extinguishers on the property (some of which were powder) but they were locked in the main shed, which was out of bounds for paying guests.

It is unknown whether fire alarms were present in the dwelling at the time.

According to the witnesses who received a briefing from Mr Harvey, he did not discuss with them any fire mitigation plan or fire evacuation plan. It would appear that he had a plan in place in terms of bush fires but he had not adequately considered the possibility of a fire at the main dwelling or in the generator shed.

In circumstances where the previous dwelling had burnt down in the past, there was a fireplace in the main dwelling, a fire pit close to the dwelling, and a petrol generator operating as a secondary power source in a relatively closed and poorly ventilated environment, I find that the absence of such fire safety equipment and fire mitigation or safety plans was inadequate.

No formal safety audit/risk assessment

Mr Harvey said that at the time he set up the farmstay business he did not consider retaining anybody to do a safety risk assessment or safety audit of

the property. This is because he said he had friends in that line of work, he had a fairly good working background himself, and his wife had workplace health and safety experience. Having been on the property for 40 years, he also felt he knew where the pitfalls were. In hindsight, he conceded that he should have retained an external party to conduct a safety audit of the property.

I find that the failure to conduct a safety audit or risk assessment in circumstances where a large number of paying guests likely to be staying there would not have had experience on rural properties or with the use of machinery such as generators, was inadequate.

Use of the generator and refilling of jerry can prior to the incident

Mr Harvey said in oral evidence that on the Thursday 27 July 2011, he filled the 15 litre generator fuel tank with between 14 and 15 litres of fuel. He considered that he had filled the tank to somewhere between three quarters and full. He said that this, combined with the lawn mowing that he did on the property that day resulted in him using the entire contents of the 20 litre jerry can.

He said that after filling the generator on the Thursday, he ran the generator to do vacuum cleaning at the main dwelling for 15 to 20 minutes.

Mr Harvey produced a receipt during the inquest which showed that on the next morning on Friday 28 July 2011, he purchased 10.89 litres of petrol from the Aratula service station, down the road from Cloudhill Farm.

Mr Harvey was adamant that the jerry can was later left for the incoming families only half full because he had filled an empty 20 litre jerry can with 10.89 litres of petrol that morning and used 0.8 litre of that fuel to fill his chain saw later that day.

He explained that the reason why he only half filled the jerry can was because:

- he thought he only had \$20 or thereabouts in his EFTPOS account and he always bought fuel in \$5 increments (hence 10.89L of fuel adding up to approximately \$15.02).
- he was mindful that any more than half a jerry can of fuel was too heavy for guests to carry if they needed to refuel the generator.

- half a jerry can of fuel was sufficient for the group, considering the generator was already at least three quarters full and this provided an estimated four to five hours of running time.

I find that Mr Harvey's evidence in regards to whether he simply filled the jerry can to the top or half filled it as he has suggested is highly questionable. This is because of the elusiveness in which he provided this evidence at the inquest. He first said that he only had \$20 cash on him and announced that it was time he 'dropped' a document on the court to prove it. He produced a receipt which showed his fuel transaction but I pointed out to him that it was an EFTPOS, rather than a cash transaction. He then advised that he only had \$15 cash on him, which he wanted to keep free in case he needed it and that he only had \$20 or thereabouts in his bank account. When questioned by me about this, Mr Harvey's counsel offered to obtain the relevant bank account statement and produce it to me. I advised that if the bank statement was not produced, I would obtain it by subpoena from the bank. Mr Harvey did not produce the bank statement until the day of the recommencement of the inquest. I had already obtained it and distributed it to the parties.

The bank statement showed that Mr Harvey had \$454.34 in his account at the time he made the fuel transaction. In cross examination, Mr Harvey then claimed that his wife did all the banking and he did not monitor his account. He claimed that he was not aware of the money that came into the account from the Johnsons and Baileys on 26 and 27 July to bring his bank balance up.

Mrs McDarra recalls starting the generator on Friday night 28 July 2011 after seeing a red light on the solar system and letting it run for 30 – 40 minutes, before turning the generator off. She said she did this for the purpose of obtaining hot water to bath the children.

Between 6:00am and 6:20am on Sunday 30 July 2011, Mrs McDarra remembers having to start the generator up again after seeing a red light on the solar system indicating there was no battery power. She did this because there was intermittent power that morning after lights had been left on in the dwelling overnight for the children. She did not turn the generator off.

Mr Bailey recalls getting up at around 6:30am on the Sunday, after Mrs McDarra had been out to turn the generator on. He said appliances such as the toaster, kettle, microwave, lights, bathroom and television were all being used at that time without any problems.

At approximately 7:00am, Mr Bailey was cooking breakfast in the main kitchen with Mr Johnson. Just prior to 7:30am, Mr Bailey recalls that Mr Johnson left the house.

I find that it is more likely than not that the 20 litre jerry can in the generator shed was full, rather than half full at the time of the incident. Clearly Mr Harvey used the same jerry can for refilling machinery other than the generator, such as his mower and chain saw. I find that it is therefore likely that he would have wanted to keep his petrol stocks high for those purposes. It makes no sense that he would keep his only petrol jerry can stocks so low; simply because he was concerned about it being too heavy for guests to lift or that they did not need any more fuel. His explanation about his perception of his financial situation as the main reason for not filling the jerry can is simply not credible.

All of the witnesses who received briefings from Mr Harvey recall him saying that he had filled the generator, so this supports his evidence that he had filled the generator fuel tank to between three quarters and full prior to the Johnson group arriving (and probably prior to refilling the jerry can). Mr Harvey's estimate that the generator would have run three to four hours depending on load seems reasonable.

If you take the maximum estimates of the generator running time from Mr Harvey and Mrs McDarra (20 minutes on Thursday, 40 minutes on Friday and 1 hour between 6:30 and 7:30am on Sunday), the generator would have run for a period of approximately two hours. If the generator was closer to three quarters full and it had been under considerable load due to the number and duration of appliances being used over the weekend, it is possible that the generator had run out of fuel at the time Mr Johnson attempted to refill it. It is also possible that it had not run out of fuel and it is noted that none of the witnesses reported noticing any power problems at the time Mr Johnson went down to the shed. Exactly what possessed Mr Johnson to refill the generator that morning will never be known.

The incident leading to Mr Johnson's death

Two to three minutes after Mr Johnson left the house to go down to the generator shed at 7:30am, Mr Bailey was at the outside door when he heard Mr Johnson shout for help. He said that Mr Johnson's yell for help was clear, insistent and desperate. Mr Bailey does not recall hearing the generator running at that point. Mrs McDarra recalls having a 10 – 15 minute hot shower upstairs around that time, which she said occurred without any power problems.

From the house, Mr Bailey could see through the generator shed door (which he said was approximately 10cm ajar inwards). He saw flames from the floor to the ceiling. He ran straight down to the shed. As he was running towards the shed, he heard Mr Johnson yell out for help two more times but he did not hear him again after that. By that time the fire was out of control.

After pushing on the door and it not moving, Mr Bailey searched for a water source. He found a hose on the ground in front of the four bay vehicle shed (about 25 metres away) next to the farm truck but it was not connected to anything. He looked around for a tap but could not find one.

Mr Bailey then ran back to the generator shed to look for alternative entry points. He found the window above the generator but it was too high up and too small for him to fit through it. He was not aware of a roller door and did not see one at the time.

Mrs Bailey then arrived with a broom and the two tried to lever open the door. They were unable to open the door due to Mr Johnson's body blocking it. Mr Jason McDarra and Mr Mark Fisher then arrived and tried to use a second hose, which had little to no water pressure. The house was searched for fire extinguishers but none were found.

No explosion was heard but the fire burnt quickly. Witness accounts put the time between four - five minutes from the beginning of the blaze to when the shed became totally engulfed in flames.

Mrs Bailey rang emergency services at 7:44am. She gave evidence that when the operator continually asked her to provide the address for the property, all she knew was that it was 17.5 kilometres from Aratula. The operator asked her in which direction but she was unsure. The operator asked her which suburb but she was unsure. She conversed with Mrs McDarra at the time but she was also unsure. This appears to have caused the emergency services operator considerable confusion. The remaining women and children then evacuated by vehicle to Aratula.

Mr Bailey also phoned emergency services at approximately 7:49am. He was able to tell them the distance and direction of the property (17.5km west towards Cunninghams Gap).

QFRS from Kalbar and Boonah attended and were assisted by Aratula Rural Fire Brigade. The first unit arrived at approximately 8:15am. It took fire fighters over an hour to extinguish the fire. Once the fire was extinguished, the deceased was discovered inside the shed. The deceased had suffered major extensive burns and Paramedic Mark Benstead issued a life extinct certificate.

Impact of lack of rural numbering

At my request, Acting Inspector Chris Robinson, Area Commander, Scenic Rim Command, conducted a review of QFRS' response to the emergency to determine whether any of the units experienced delay or confusion attending the scene due to the lack of rural numbering on the property.

By letter dated 18 April 2013, Acting Inspector Robinson advised that the second attending QFRS urban appliance did experience a delay due to no rural numbering and no one meeting them at the entrance to the property. After not being able to identify the property at the entrance, they travelled to the top of Cunninghams Gap, turned around and returned to the approximate vicinity of the emergency scene, which caused them considerable delay. All other appliances did not experience any delay.

Acting Inspector Robinson advised that the majority of QFRS personnel who attended the fire believe that the inclusion of a rural numbering system on the property would have assisted them in terms of identifying the property and most importantly, the property entrance to the fire.

In oral evidence, both Mr and Mrs Bailey, who made phone calls to emergency services, agreed that a rural address or a sign on the side of the highway identifying the property would have assisted them when advising emergency services of their location. (Although, Mrs McDarra felt that she may still have panicked and not been able to remember the address anyway).

Autopsy results

An external and partial internal autopsy was conducted by Dr Nathan Milne on 2 August 2011. Associated testing included radiology, histology, toxicology, forensic biology and forensic odontology. Due to the severe burns sustained by the deceased, dental records were used to confirm his identity.

The cause of death was determined by Dr Milne to be smoke inhalation due to fire.

Investigations

Queensland Fire and Rescue Service investigation

On the morning of the incident, Mr Brad Jeffs, a station officer at the Toowoomba fire station and qualified fire investigator, conducted an investigation on site in the presence of another QFRS employee, Mr Simon Young, and a QPS Scientific Officer, Sergeant Darren Smith. The QFRS investigation report was completed later that day.

From Mr Jeffs' external observations of the shed, he concluded that there had been a large fuel load fire in the shed, possibly from the jerry can and the stored furniture.

Mr Jeffs' internal observations of the generator shed were limited due to the fire damage to the interior. He observed two generators and an old fridge against the eastern wall. The diesel generator was inoperable. The fuel cap belonging to the petrol generator was found on top of the machine in an upturned position. The on/off switch and panel on the petrol generator had been burnt away, so he was unable to ascertain if the switch was in the 'on' or 'off' position.

The remains of Mr Johnson's body were evident in the middle of the shed. Mr Johnson's head was against the petrol generator. A 20 litre jerry can was found lying on the floor near Mr Johnson's feet. The jerry can lid was open. The remains of the furniture were found against the western wall of the shed.

Flashover (when all combustible fuels within a compartment are ignited) had occurred in the room of origin. Due to the intensity of the fire, deep charring was evident on all timber. The windows were missing from the shed and the door of the shed was not apparent. The door hardware such as hinges and a draw bolt were found on top of Mr Johnson's remains.

Mr Jeffs was unable to determine the exact point of origin of the fire within the generator shed. He concluded that the source of ignition was most likely heat from the hot motor or exhaust of the petrol generator. His opinion was that the most likely cause of the fire was spillage of petrol onto a hot exhaust manifold of the petrol generator. In oral evidence, Mr Jeffs advised that he had not considered the possibility of a spark due to static discharge igniting the fire but he agreed with the opinion of the expert forensic engineer (discussed below).

Mr Jeffs' concluded, as a result of the witness statements he obtained and his observations of the scene, that it appeared the petrol generator had been running on the morning of the fire. His view was that Mr Johnson entered the generator shed for an unknown reason and attempted to refuel the generator. Petrol may have been poured onto the top of the fuel tank and petrol had been ignited by the hot exhaust. The jerry can had also been dropped and this added more fuel to the fire. The door to the generator shed opened inwards and would have impeded exit from the shed. Mr Johnson would have been overcome by the fire and would have been unable to exit.

Mr Jeffs observed a window on the right hand side of the door entrance and on the rear side. Remains of a roller door were also found. There was no way of knowing whether they were open because the glass was actually missing.

The windows were all burnt out and the frames were all burnt out due to the size of the fire.

The back left corner of the shed was filled with old furniture (some old bed frames and mattresses and chairs etc). He was of the opinion that the fire started in the right hand side and then all the furniture, etc was brought up to a very hot temperature, resulting in a flashover.

In oral evidence, Mr Jeffs advised that the best type of fire extinguishers for the fuel fire in question would have been dry powder. Applying water to such a fire was not advisable unless trained to do so.

The Queensland Police Service investigation

Senior Constable Wayne Noffke, from the Boonah police station, was the primary QPS investigating officer. He attended the scene on the morning of the incident and was assisted by officers from Ipswich.

Senior Constable Bronwyn Bagent from the Ipswich District Scenes of Crime Section took a number of photographs of the scene.

Sergeant Darren Smith from the QPS Scientific Section conducted an examination of the scene with the QFRS Investigating Officer, Mr Jeffs. Sergeant Smith essentially made the same observations and drew the same conclusions as Mr Jeffs.

Sergeant Smith concluded that there was no evidence of the storage of chemicals prone to spontaneous combustion and the weather conditions were fine at the time of the fire. He concluded that the period of time between the entry of Mr Johnson to the shed and the fire development was extremely small, making an electrical cause unlikely. He formed the opinion that the cause of the fire was human involvement.

The generator was seized by QPS and retained in a secure facility as directed by the coroner who had initial carriage of the matter. A full police investigation was directed by the coroner and was finalised on 30 December 2011.

Senior Constable Noffke's conclusions were consistent with those reached as a result of the QPS Scientific Officer's examination and QFRS investigation.

Senior Constable Noffke determined that there were no suspicious circumstances.

The Workplace Health and Safety investigation

Because the incident arose as a result of the conduct of a 'business or undertaking' for the purposes of s. 28 of the *Workplace Health and Safety Act 1995*, WHSQ Inspectors Ms Mimosa Festa and Mr Terry Mutze also attended the site and commenced an investigation on the day of the incident.

The WHSQ inspectors spoke with Mr Thomas Harvey at the scene. Notes were kept but no formal statement was taken. Mr Harvey advised the inspectors that he provided verbal training with guests on how to use the generator. He said that the content included showing them the generator, the jerry can of fuel and that he explained how to turn on the generator and how to monitor the control panel of the solar powered system. There was no mention in their notes about Mr Harvey saying that he provided a physical refuelling demonstration in his briefing.

Mr Harvey advised the inspectors that he provided the training to Mr Johnson and Mrs Danielle McDarra upon their arrival. He did not mention anything about having any handwritten notes of the training.

Mr Harvey informed inspectors that he put fuel in the generator before guests arrived and made a jerry can of fuel and a funnel available for use if it was necessary for them to refuel the generator.

The inspectors did not physically inspect the petrol generator. They were advised by Mr Harvey that the oil had been changed by him approximately eight months prior to the incident and an electrician had checked the system in January 2011 in response to minor flooding on the property.

Mr Harvey advised inspectors that guests were required to sign a document entitled 'Cloudhill Conditions'. He said that Mrs Alana Bailey signed the document on behalf of the group (which later turned out to be inaccurate). He provided an unsigned copy of the document to them as he could not locate the signed copy.

The inspectors noted a framed handwritten document entitled 'Welcome to Cloudhills some handy hints for you', which was displayed in the dwelling. A series of photographs were taken of the scene.

The primary WHSQ investigator concluded in his report that Mr Thomas Harvey:

- had not identified the relevant hazards

- allowed uncontrolled access to the generator by others
- failed to provide others with adequate information, instruction, training and supervision to ensure their health and safety
- failed to ensure the health and safety of others by allowing uncontrolled access to the generator shed
- failed to provide training or supervision with regard to the refuelling of the generator and that very minimal instruction was provided to the families regarding the generator.

The initial WHSQ investigation was completed on 9 August 2011 by Investigation Manager, Mr Peter Twigg. A follow up report and recommendations were completed by the Regional Investigation Manager, Ms Tara Louise Bopf on 27 April 2012.

By letter dated 3 August 2012, the Director of Operations Support Services and Coronial Liaison Officer, Mr David Spann, advised that no matters were identified from the investigation to suggest a broad workplace health and safety issue which required a specific organisational response. He noted that an issue remained as to who was in control of the premises and in particular, the generator, at the time of the incident. Mr Spann advised that WHSQ may commence proceedings in the event that a coroner investigates the death and makes certain findings. He said that WHSQ was actively seeking an inquest to be held.

Cause of the fire

Following my requests for further information, QPS commissioned an independent forensic engineer, Mr William Kennedy from Kennedy's Engineering & Forensic to provide an expert report about the cause of the fire.

Mr Kennedy provided a report dated 6 August 2013 and then an addendum report on 27 August 2013 after further information was provided to him. Prior to compiling his reports, he conducted a physical examination of the generator. He did not conduct an inspection of the incident site.

After conferring with the electrician who installed the generator (Mr Arthur De Main), Mr Kennedy was satisfied that the generator had been appropriately installed and earthed with 0.5 ohm resistance.

Mr Kennedy made the following key observations in his reports and in oral evidence:

- The generator must not have been running at the time Mr Bailey heard Mr Johnson yelling out for help because he would have heard

the audible sound of the engine, which would have been operating under load.

- The generator engine would not have been at ambient temperature at the time to enable safe refuelling.
- The cap on the generator fuel tank was removed and left inverted on the generator. The cap was not distorted and was able to be refitted after the fire. This indicated the cap was removed by a person rather than from pressure caused by the fire.
- A plastic funnel conceals the generator fuel tank filler aperture and its contents, which promotes overfilling. If a plastic funnel had been used to fill the generator, this was contrary to the manufacturer's recommendations.
- He searched but could not find any remnants of a plastic funnel within the generator fuel tank or on the generator.
- The generator had been subjected to significant thermal influence (in the region of 500 degrees plus) which resulted in fluidisation of the alloy that comprises the engine block and cylinder head. This indicated that the fire initiated on the generator engine. It also indicated that significant fuel was contained within the generator fuel tank when the ignition event occurred.
- After the fire, the jerry can was found on its side lying on the ground. The jerry can did not display any evidence of self-combustion due to pressurisation from the fire. This indicated that the contents from the jerry can had been emptied. It also indicates that the petrol container came to rest on its side after being impacted by Mr Johnson.
- If Mr Johnson was wearing a soft shell jacket comprising of fleece and plain weave polyester as suggested by counsel representing the next of kin, this would have had a low moisture content and generated a degree of static electricity. This could have given rise to a spark between the fabric and an earthing point or conductive structure.

As a result of Mr Kennedy's observations, he concluded that the fire would have been caused by either:

- Mr Johnson spilling fuel on the generator allowing fluid or vapours to contact the hot engine block and exhaust; or
- Static discharge igniting fuel vapours from the build up of static charge caused by the movement of Mr Johnson's clothing and the movement of the fluid through the plastic funnel upon refuelling.

In oral evidence, Mr Kennedy was unable to determine if one scenario was more likely than the other. He said that both were equally as possible and the ignition of the fire in both situations would be fairly instantaneous due to the vapours which would have been present.

Discussion regarding fuel spillage scenario

A question was raised as to whether the generator could have sufficiently cooled in the event that the generator had stopped running for a period of time prior to Mr Johnson attempting to refuel it. Mr Kennedy acknowledged that the time period from unit shutdown to achieve a safe temperature for refuelling had not been established because tests would need to have been carried out by running the generator in the same environment and working out a graph as to the decline in temperature. However, Mr Kennedy did note that a generator in an enclosed environment such as the generator shed would have taken longer to cool down than a generator in an open environment (where it is designed to be).

Counsel assisting pointed to Bureau of Meteorology reports he obtained relating to the two closest weather stations to Cloudhill Farm (Warwick and Amberley). The reports show that the air temperature at 7:30am on the morning of the fire at Warwick was 0.4 degrees Celsius and at Amberley it was 5.5 degrees Celsius. Counsel assisting questioned what effect this could have had on the cooling of the generator. Mr Kennedy explained that whilst the generator would have cooled down more quickly than on a hotter day, ambient temperature does not have the same absorbency factor as air flow. The generator had an air cooled engine, not a water cooled engine. Because it is an alloy block, it would have been conductive and retained its heat. Therefore, the most effective way to cool the engine down is via good air flow.

Mr Kennedy also explained that the volatility of fuels determines the exercise of care. The smaller range of generators are generally petrol driven and the higher range are diesel driven. In recent years there has been a proliferation of these smaller petrol generators on the market. The risk of a spark from a discharge of static electricity is much higher with a petrol generator than a diesel generator because petrol vaporises at approximately 42 degrees Celsius, so there is a vast area of volatile fumes. Whereas, diesel vaporises at a much higher temperature (approximately 62 degrees Celsius). Ventilation therefore becomes paramount when operating petrol generators.

Discussion regarding static electricity scenario

Mr Kennedy's suggestion that the fire could have been caused by a spark from the discharge of static electricity was tested by counsel assisting, counsel representing the next of kin and counsel representing WHSQ.

The Bureau of Meteorology reports indicated that at 7:30am on the morning of the fire, the relative humidity at Amberley was 94% and at Warwick it was

100%. Counsel assisting questioned what effect this had on his theory. Mr Kennedy agreed that there was very high humidity at the time in question. He said that the higher the humidity, the lower the potential for static discharge. However, he also said that this did not change his view regarding the possibility of static discharge igniting the fire in this case. This is because the temperature readings were taken externally to the shed and although it was the same air inside the shed, it was a closed environment. This was the case even if the two windows and doors were open. He explained that the proximity of the activity to the generator and the build up of vapours, combined with the nature of the jacket worn by Mr Johnson and the pouring of fuel from a 20 litre jerry can into a relatively small plastic funnel, would still have created the necessary environment, irrespective of the weather external to the shed.

Counsel representing WHSQ noted that Mr Johnson had probably already touched several metal items prior to refuelling the generator and questioned whether this would have been enough to discharge any build up of static electricity. Mr Kennedy said that static electricity would have been discharged through the door if Mr Johnson touched the metal fittings when entering the shed. However, there was unlikely to be a discharge when touching the jerry can because it was sitting on a concrete floor, with no conductivity between the concrete and the metal jerry can. He agreed that when Mr Johnson touched the generator fuel cap, any static charge should also have discharged through the generator's metal parts, due to its earthing. However, he said there remained then the opportunity for static discharge to built up from the movement of fibres in his jacket whilst obtaining and positioning the jerry can for refuelling and by the actual pouring of a large quantity of fuel through the plastic funnel. He said that if no plastic funnel was used, this would have eliminated a compounding factor but the possibility of static discharge would still exist. He explained that although the generator was adequately earthed, the spark could still have occurred in the air gap between the refuelling position and the generator.

Mr Kennedy said that if the spark was of sufficient magnitude, Mr Johnson would have received a shock when pouring the fuel. The potential then is that there could have been a transition from the spark to the ignition source via the air gap. It is also possible that if there was no ignition at that point, the shock of the spark could have caused Mr Johnson to spill the fuel onto the hot generator.

I find that Mr Kennedy was a most highly qualified expert and his views are accepted. It is impossible to determine which scenario is more likely to have occurred. What is clear though is that the common causative factors for the ignition of the fire in both scenarios are:

- the use of a 20 litre jerry can (whether half full or full) to fill the generator using a plastic funnel.
- the operation and refuelling of the generator in a poorly ventilated area.

Regulatory framework applicable to Cloudhill Farm

The Director of Regional Services of the Scenic Rim Regional Council, Mr Tony Magner, provided a letter to me dated 31 July 2013 in response to questions by Counsel Assisting. Oral evidence was also heard from the Manager of Planning at the Council, Mr Scott Turner and a council Senior Building Certifier, Mr Lachlan McPhail.

Mr Magner advised that the council's records do not contain any indication of an approval or improvement for any of the subject property, nor was there any information that indicated its existence or a commencement date for the subject use. Both of these aspects are of central importance in the determination of applicable regulatory instruments and criteria under the council's administration.

Mr Magner noted that the Cloudhill Farmstay was operating illegally. In these circumstances, where council is unaware of the existence of the property or an unapproved farmstay operating out of the property, council is understandably unable to regulate any aspect of the dwellings, numbering or safety of the business in existence.

Mr Peter Harvey said that he was under the impression that he had council approval to move the dwelling onto the site after the previous building burnt down after a conversation he had with a member of the previous Boonah Council and an inspection of the building by an unknown council inspector in Brisbane prior to its removal from Clayfield. He knew he did not have approval for the four bay shed and he presumed he did not require approval for the generator shed. He assumed they did not require approval to operate the farmstay based on a conversation he said he had with council in the years leading up to their decision to begin the farmstay business. Mr Thomas Harvey said he relied on information on the council's internet site at the time.

Mr Magner advised that there are three inter-related elements to the regulatory system in question:

- The Planning Scheme and approval process under the *Sustainable Planning Act 2009 (SP Act)*
- The *Building Act* and requirements for budget accommodation

- The council's local laws.

Mr McPhail's view was that the use of the property as a farmstay for tourists, with the owner and manager residing there intermittently would have placed the property in the category of a 'Tourist Cabin' pursuant to the Boonah Shire Planning Scheme 2006. This meant that the owner would have had to apply for an approval for an Impact Assessable Material Change of Use under the *SP Act* with the council. The application would then have been assessed against a range of *SP Act* and Code criteria including water supply, sewerage, electricity and roads to an adequate standard for onsite services. This process also includes internal referrals within council to ensure relevant regulatory requirements under the *Building Act* and local laws are captured and addressed.

From a fire safety perspective, Mr McPhail explained that the council's only focus in relation to Tourist Cabins in a rural zone is on whether the manner in which the site fits within the landscape causes any issues in relation to bushfires. There is also a requirement that out of the minimum of a 45,000 litre tank of potable water supply, that 5,000 litres of that is set aside for bush fire fighting purposes. There is no focus on any other types of fire or safety mitigation.

Mr Magner and Mr McPhail were of the view that the dwelling would have been classified as a 'Class 1A Building' under the *Building Act*, rather than 'Budget Accommodation'. This is because Budget Accommodation is defined as accommodation to six or more *unrelated* persons who have shared access to bathroom facilities. The groups of people who stayed at Cloudhill Farm were related in the sense that they rented the entire house under the one booking. Therefore, had an application have been lodged with council, the structures would not have been assessed against the higher level of fire safety obligations applied to budget accommodation premises under the *Building Act* and *Fire and Rescue Service Act 1990*.

For Class 1A Buildings, the only fire safety requirement is that buildings must be installed with fire alarms. Whereas, Budget Accommodation buildings must comply with a fire safety standard, which ensures that occupants of the building are provided with:

- Early Warning
- Emergency Lighting
- Exits from the building

- Fire-fighting equipment (if required)
- Fire Safety Management Plan.

QFRS officers can enter Budget Accommodation to determine if the Fire Safety Management Plan is being implemented in the building.

Mr Magner was also of the view that because the dwelling was occupied by a single party of persons that were known to each other, the activity did not constitute the operation of 'Shared Facility Accommodation' as defined in the council's local laws. Council's local laws do not regulate other classifications of short term tourist accommodation within a building. Whereas for Shared Facility Accommodation, the assessment criteria that must accompany an application includes:

- A site plan
- Floor plan
- Particulars of fire safety installations
- Water supply facilities
- An electrical safety certificate.

Rural address policy

The Scenic Rim Council does not require property owners to have a rural number assigned to their property. However, property owners may request that a rural property number be assigned to their property at their own cost. The council has not considered implementing a mandatory rural numbering system but has the discretion to do so under its existing local laws.

Cloudhill Farm was located in the former Boonah Shire Council Area. Boonah Shire Council became part of the new Scenic Rim Regional Council on 15 March 2008. Prior to amalgamation, Mr Harvey could have been granted a rural address for his property free of charge, providing he was a resident and the property had an approved access point. Non-residents could also apply and pay for rural addresses but the council did not generally grant them on the basis that such properties could be subject to significant reconfigurations in the future (i.e. building of a residence or subdivision of the block), which could have damaged the integrity of the rural addressing scheme. Since Boonah Shire Council had no record of a residence being constructed on the property, the property was never allocated a rural address.

Comments and recommendations

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.

Based on the circumstances of this case, I make the following recommendations:

- a. that relevant state and local government bodies consult with a view to considering regulating tourist accommodation such as farmstays from a fire safety perspective. A specific focus should be on ensuring that regulation is not limited by the number of guests, by the way in which accommodation is booked, or the relation of the guests to each other. Specific consideration should also be given to ensuring that where a property is powered by the use of a portable or fixed generator, the generator is housed appropriately and there are adequate safety systems in place where guests are expected to operate them. It is suggested that relevant bodies may include: Department of the Premier and Cabinet; Department of Housing and Public Works, Department of Tourism, Major Events, Small Business and the Commonwealth Games; Department of Local Government, Community Recovery and Resilience; Workplace Health and Safety Queensland; and Queensland Fire and Rescue Service. It is suggested that the Department of Housing and Public Works be the lead agency; and
- b. that relevant state and local government bodies consult with a view to introducing a compulsory rural numbering system throughout the whole of regional Queensland for emergency response purposes. Mandatory signage at the entrance of farmstays should also be considered. It is suggested that relevant bodies may include: Department of the Premier and Cabinet; Department of Housing and Public Works; Department of Local Government, Community Recovery and Resilience; Queensland Fire and Rescue Service; and Queensland Ambulance Service.

I close this inquest. I express my condolences to Mr Johnson's family and friends.

John Hutton
Brisbane Coroner
Brisbane
7 February 2014