CERTIFICATE OF FINDINGS

Section 94, Coroners Act 2006

IN THE MATTER of **Bessie Tehuia TOKONA**

The Secretary, Ministry of Justice, Wellington

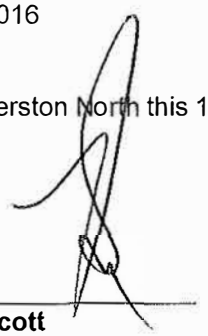
As the Coroner conducting the inquiry into the death of the deceased, after considering all the evidence admitted to date for its purposes, and in the light of the purposes stated in section 57 of the Coroners Act 2006, I make the following findings:

Full Name of deceased:	Bessie Tehuia TOKONA
Late of:	15-17 Exeter Crescent Takaro Palmerston North
Occupation:	Unknown
Sex:	Female
Date of Birth:	22 October 1953
Place of Death:	15-17 Exeter Crescent Takaro Palmerston North New Zealand
Date of Death:	03 September 2015
Cause(s) of Death	
(a). Direct cause:	Effects of fire
(b). Antecedent cause (if known):	
(c). Underlying condition (if known):	
(d). Other significant conditions contributing to death, but not related to disease or condition causing it (if known):	Coronary artery atherosclerosis

Circumstances of death:
Bessie Tehuia Tokona, a 61 year old beneficiary and Eunice Rebecca Jean Felton, a 6 year old infant, both living at 15 Exeter Crescent Palmerston North died at that address on the morning of Thursday the 3rd of September 2015 from the effects of fire and in circumstances outlined in this decision.

Those findings, and my reasons for making them, are also set out in my written findings dated:
19 December 2016

Signed at Palmerston North this 19th day of December 2016.



Coroner Tim Scott

IN THE CORONERS COURT
AT PALMERSTON NORTH

CSU-2015-PNO-000459/460

UNDER	**THE CORONERS ACT 2006**
AND	
IN THE MATTER OF	An inquiry into the death of **BESSIE TEHUIA TOKONA & EUNICE REBECCA JEAN FELTON**
Date of Reserved Decision:	19 December 2016

RESERVED DECISION OF CORONER T SCOTT

Introduction

[1] This is a decision relating to the deaths of Bessie Tehuia Tokona and Eunice Rebecca Jean Felton. I will refer to them from now on by their first Christian names.

[2] Bessie and Eunice lived with nine other members of their whanau at 15 Exeter Crescent Palmerston North. Bessie was the oldest member of the household at 61 years and Eunice was the youngest member at 6 years. They lived with Eunice's mother Nechia Tokona and Nechia's other eight children. The oldest child Aperahama Maurierere but known as Kohi is 21 years old and recently celebrated his 21st birthday.

[3] Bessie and Eunice died as a result of the effects of a fire which consumed the house in the early hours of the morning of Thursday the 3rd of September 2015.

[4] The house belonged to the Housing Corporation of New Zealand. It was two storied. Originally it had been two semi detached houses separated by a concrete fire wall. However the two dwellings had been modified in particular by the cutting of two doorways in the fire wall so that the properties could be accessed as one dwelling. There were two bathrooms but only one kitchen. The dwelling had been specially modified for the whanau because the whanau was very large.

[5] I heard the evidence on Wednesday the 5th day of October 2016. This decision is about what happened and why.

The Issues

[6] The issues here are how did the fire start? What warning was given to the whanau members that the fire had started? Could this warning have been given earlier? How did most of the whanau escape the building? Could this escape have been managed better? Why were Bessie and Eunice unable to escape?

How Did the Fire Start?

[7] All members of the whanau were at home on Wednesday the 2nd of September 2015. However in the early evening Nechia went to visit a friend for a few hours. Kohi also went to visit a friend in Dannevirke for a few hours.

[8] Kohi arrived home first at about 9:30pm. By the time he arrived home all whanau members except Bessie had gone to bed. Kohi cooked himself a meal of spaghetti and potato and heated the spaghetti in a pot on the stove. When Kohi made a statement to the Police he did not mention anything about turning the stove off or for that matter leaving the stove on after he finished cooking. I had intended to ask him about this quite carefully when he gave his evidence because of the likelihood that the fire started at the stove. However as the hearing proceeded I no longer felt the need to do this and the reason will be obvious shortly.

[9] Nechia also gave a statement to the Police and she gave verbal evidence at the hearing. There had been evidence in statements given to the Police that water leaked from outside the house and from the bathroom within the house into the kitchen and laundry areas down electrical wiring to lights. Evidence was given at the hearing that it had been raining shortly before the fire broke out and I thought it certainly possible that the fire might have started from an electrical short circuit because of the leaks. However Nechia said in her verbal evidence that repairs had been made sometime before the fire and there were no leaks by the time the fire started.

[10] Nechia's evidence was that she had not been drinking when she visited her friend and had had one glass of tequila when she returned home. However when the person representing the family at the hearing (Rhonda Tokona) asked her if she had smoked cannabis that evening she admitted to doing that. Then to my very great surprise Nechia said that she had left the element of the stove on and that she had turned the element on to spot cannabis. I was very surprised by that evidence because she was under no pressure to

disclose this information. Neither I and nor Rhonda asked her any questions about having turned the stove on and not having turned it off. When she made that statement my initial thoughts were that she was probably trying to protect her son Kohi who to my mind was the most likely candidate for having left the stove on. However I changed my view because it was obvious to me and others that Nechia was extremely upset and crying. Her reaction seemed to me to be quite genuine and for that reason I do not think she was trying to protect her son.

[11] Nechia said that she went to bed about 1:00am. By this time Kohi had gone to bed and the only one left awake in the house was Bessie.

[12] At about 2:30am Kohi awoke to the sound of smoke alarms activating. Other whanau members also awoke or were awoken by Kohi. Nechia said that when she awoke there was nothing unusual happening in her bedroom but as soon as she opened the door there was thick smoke. It appeared that by the time the whanau were awakened by the activating smoke alarms the fire had already taken hold and the house was well and truly on fire. What of course cannot be determined is for how long (if at all) the fire alarms had been sounding before any members of the whanau woke. It is probably fair to think that whanau members woke quite quickly as that of course is what smoke fire alarms are designed to achieve but there can never be any evidence of that. People only recall things that happen once they are awake.

[13] All whanau members except Bessie and Eunice were able to make an escape from the burning house. Their escape route down the stairs was blocked by the fire and they therefore escaped by breaking windows and climbing down a fixed fire escape ladder or jumped from the upper story to the ground.

[14] Kohi was largely responsible for waking the whanau members and making sure they did manage to escape the burning building. Once they were out of the burning building he organised a head count and realised that Bessie and Eunice were missing.

[15] I stated at the hearing and it needs to be stated now in this decision that but for Kohi's prompt brave and unselfish actions my investigation would probably not have been confined to enquiring into the deaths only of Bessie and Eunice. I stated to the whanau then and I repeat here that although the deaths of Bessie and Eunice are a complete tragedy the whanau can take positives from the tragedy namely that nine whanau members escaped.

[16] Nechia and one of the children Royeileen slept in a bedroom downstairs and all the other whanau slept upstairs. When Nechia awoke she said she heard her mother (Bessie) shouting from the hallway outside her (Nechia's) bedroom for everyone to get out. Once

Nechia opened the bedroom door she began to make her way down the passageway to the lounge but realising that Royeileen was still in the bedroom she went back got Royeileen and they both exited the house through the lounge.

The Response to the Fire

[17] Once Nechia was out of the house she went around the back and tried to fight the fire with the garden hose. She kept on doing this till a Police Officer pulled her away saying it was too dangerous. Fire communications received a 111 call about the fire at 2:49am and thereafter received multiple calls about the fire. The Police arrived at the scene shortly before the Fire Brigade. When the Fire Brigade arrived two fire fighters were directed to enter the house using breathing apparatus to attempt the rescue of the two whanau members who were by this time known to still be inside. Eunice was located in her bedroom but she appeared to be deceased. Bessie was not located,but was later located on the ground floor – I cannot determine why she did not escape the fire – as she was heard raising the alarm – refer para 16. Within a short period of time the fire fighters themselves came under threat and needed to be rescued themselves. Although they attempted to take Eunice from the building they were not able to do so. I am satisfied that the Fire Service did the best it could in the circumstances to rescue the whanau members from the house. Fire fighters only abandoned this rescue attempt once it had been established that Eunice appeared to be deceased and their own lives were at considerable risk.

The Fire Investigation Report

[18] A Fire Investigation Report was prepared by a Specialist Fire Investigator Mr Michael Finucane he completed a very lengthy report and he concluded that the most probable point where the fire started was the stove. In particular the back left hand element. He said that he was able to determine that the two back elements on the stove had been left on at the high position and that initially flames had reached and melted an extractor fan above the stove. This caused the motor of the fan to fall from its mountings into or onto the pot at the left hand rear of the stove. This caused the pot to be dislodged from the stove and fall to the floor and this caused the fire to spread.

[19] There was evidence that a pan of cooking oil was often left on the back left hand element of the stove (with a lid on) when not being used. It is probable that it was this pan full of cooking oil that caught fire and started the house fire because both back elements of the stove had been turned onto full. The only available evidence of how this happened is Nechia's evidence that she left the element on after she had been spotting cannabis. She had no need to turn both elements on to do this. Neither did Kohi have a need to turn both elements on to heat his spaghetti. I am left to conclude that Nechia turned both the rear

elements of the stove on (one by mistake) when she used the stove for spotting cannabis. There is no other explanation for how the element came to be on.

Exits from the House

[20] The evidence was that the upstairs windows of the house had been fitted with safety latches so that the windows would only open a small distance. This was a deliberate precaution undertaken by The Housing Corporation to prevent the very young members of the whanau from possibly falling from an open window. However this very measure designed with safety in mind had the result that it was much harder for whanau to exit from the upstairs. They were unable to use internal stairways because of the thick overpowering smoke. They broke the windows to exit.

[21] Some whanau members jumped from the upper story windows others went down a wooden fire escape ladder that was permanently fixed to the outside. There had been a second ladder but sometime earlier it was removed by The Housing Corporation because it had rotted. It was not replaced.

[22] The reason why the wooden fire escape ladder was not replaced is that it is now Housing Corporation policy to make fire escape routes user friendly for all people. There are many for whom an outside ladder is far from user friendly for example aged and infirmed people. The escape routes from this house were designed to be the two internal stairways and the three doors from the ground story exiting the house. When Mr Finucane said that the Fire Service preferred to see external fire escape ladders from two story dwellings but that the methodology of The Housing Corporation was acceptable, and compliance with the building code. He said that the main thing was the household needed good working smoke alarms and an escape plan. There was no evidence given about an escape plan and I strongly suspect that there was none. In any event an effective escape plan using the stairways and the downstairs exits would not have worked because by the time whanau were alerted to the fire that way was blocked off to everyone who was upstairs.

[23] I can appreciate and understand The Housing Corporation's reasons about fire exits needing to be available for all people – not just some people. I can also appreciate and understand the reasoning for the installation of window safety catches (keepers) on upper story windows. However while I can understand the reasoning I do not accept it. These policies did not result in any additional fatalities at Exeter Crescent but the might have done. Windows needed to be broken and that comes with its own set of issues and there was only one – and not two fire escapes. When it comes to a fire surely the more escape routes the better even if some of these cannot be used by all people all of the time. I appreciate that the removal of safety catches from upstairs windows must increase the chances of a small

child falling from such a window and that to me is a balancing act. Here I am investigating death by fire and it seems to me that in respect of a fire safety catches on windows are potentially death traps. Housing Corporation have advised that an acceptable solution for windows without safety catches is for the lower edge of the opening window to be at least 760mm above floor level or to have a barrier in front of the window of solid construction or with vertical timber or bars (so that climbing is difficult) at least 760mm high. It seems to me that so far as danger from fire is concerned vertical barriers in front of windows as described here is a better option than windows with keepers. I do not know if it is feasible for The Housing Corporation to consider this as a preferable solution rather than place keepers on windows which prevent windows from fully opening. That is something for the Corporation to consider.

The Fire Alarms

[24] There were eleven fire alarms installed by the Housing Corporation in the house. After the fire Mr Finucane was only able to locate nine. The evidence from Nechia was that none had been removed although one had been relocated.

[25] There are two types of fire alarm. Firstly an ionisation alarm which is now considered to be good at detecting flaming fires but particularly bad at detecting smouldering fires. The second type of alarm is a photoelectric alarm which is good at detecting smouldering fires but not so good at detecting blazing fires. Mr Finucane's evidence was that this fire probably started as a blazing fire but rapidly turned into a smouldering smoke producing fire as material within the house was consumed. This is the type of fire best suited to the photoelectric alarm and not at all suited to the ionisation alarm. There are dual alarm systems available and it seems to me that these would be best as they combine the properties of both ionisation and photoelectric alarms.

[26] The Housing Corporation had installed what it thought were combined alarms of the type known as iophic. The Fire Investigation Report contained an explicit photograph of the box in which these alarms are supplied and it is very clear from the wording on the box that the alarms are a two in one alarm combining both photoelectric and ionisation technology. That is what The Housing Corporation the Fire Service and I thought about the alarms even up to the hearing date. However at the request of Rhonda Tokona I obtained evidence from Mr Adrian Butler who said that was not so.

[27] Mr Adrian Butler described himself as a former fire fighter who now works as a fire extinguisher supplier in Australia. He also indicated that for the past approximate 25 years he has in a voluntary and an unpaid way researched the workings of smoke detector fire alarms. He claims to have great expertise. It was his evidence that the alarms that were

fitted in the house while purporting to be dual technology alarms were in fact only ionisation alarms. He pointed to a copy of various pages of a supplier's manual and a New Zealand Consumers Institute test to back up his claims. The Consumer Institute test indicated that the alarm tested by the Consumer's Institute gave a very poor response to a smouldering fire and the manufacturer's instructions manual clearly referred only to ionisation alarms.

[28] As a result of the concerns raised at the hearing about the type of fire alarms installed at Exeter Crescent the Fire Service undertook some further enquiry and a Mr Peter Gallagher a Senior Specialist Fire Investigator provided me with additional evidence. He said that the importer of the iophic alarms installed at 15 Exeter Crescent had confirmed to the Fire Service upon enquiry that the alarms do not have ionisation and photoelectric sensors. They are not dual alarms as was initially thought by the Housing Corporation and by the Fire Service and I might say also by me. Mr Gallagher went on to say that the confusion arose because of the suppliers packaging which states that the alarm combines the benefits of both photoelectric and ionisation alarms. He said that the importer said that this was a reference to improved technology and performance of this type of late model ionisation alarm rather than a direct statement about the type of sensors used. The alarms that were installed were ionisation alarms only.

The Type of Fire

[29] The Fire Service Investigator (Mr Finucane) who investigated the fire stated that he believed the fire most likely started as a fast flaming fire – for which ionisation alarms are equal to or better than photoelectric alarms. However because of the behaviour of modern furnishing materials in a fire situation very soon after starting as a flaming fire large volumes of smoke were produced for which a photoelectric alarm is better as a detection device.

[30] Mr Finucane said that he thought that if an alarm had been placed in the living room but near the kitchen it would probably have sounded quite quickly after the fire started as a fast flaming fire and before there was much smoke generated. It is of course not possible to determine how long after the fire started it was before the alarms were activated and from there before whanau members awoke. However I think it was highly probable that there was a significant delay before the smoke alarms were activated. My reasoning is that the alarms are designed and intended to give a warning and to wake people from a sleep. – refer para 12. While the whanau members may have slept through the noise of the alarms for some time I think it is more likely than not that they awoke – or at least some of them awoke quite quickly to the sound of the alarms. That is only common sense. Certainly by the time the whanau members made their escape from the house the fire was well underway and there was a lot of smoke suggesting that the fire had well and truly taken hold. This in turn suggests that the alarms did not activate for some time after the fire started.

[31] Mr Gallagher informed me that the New Zealand Fire Service now recommends photoelectric alarms although it does not follow that the service regards ionisation alarms as ineffective or inherently flawed (his words). My take on all this is that if the Fire Service is now recommending photoelectric alarms it must surely follow that the service believes these alarms are better or more effective than ionisation alarms. The complete answer might be to have both types of alarms installed but if only one type is going to be installed this should surely be the photoelectric alarms.

[32] I suspect that to many people a fire alarm is a fire alarm and no distinction is taken between the various types of alarms. That was certainly my own view and I have replaced the alarms in my house (which were somewhat old and dated) with photoelectric alarms solely because of the additional information that I now have as a result of the tragic events at Exeter Crescent. Should media choose to publish details of this decision I can see a direct and immediate benefit.

Why Did Bessie and Eunice Not Escape the Fire?

[33] It is not possible for me to determine why Bessie and Eunice were unable to escape the fire. All that can be said with reasonable certainty is that they were the two most vulnerable whanau members one being reasonably elderly and the other being reasonably young and as such they in particular needed help from other whanau members and – or – a very clear escape plan. Had there been an escape plan it would likely have included at least two other whanau members tasked to see to the safety of others. However the fundamentals of an escape plan would have been to direct everybody to get outside the house as quickly as possible. The plan would probably have failed simply because by the time anyone realised the house was on fire it was full of dense smoke and the internal stairway exits were blocked. It is possible that if the alarms had been photoelectric rather than ionisation alarms they may have sounded earlier and whanau may have responded earlier and had that happened Bessie and Eunice may have been able to make their escape. I cannot take the position any further than that.

Post Mortem

[34] Post-mortems were undertaken in respect of both Bessie and Eunice by Dr Kate White at Palmerston North. She concluded that both had died from the effects of the fire.

New Alarms

[35] I am now advised – on behalf of the Housing Corporation that its smoke alarm policy was reviewed in 2015. It is recognised that smoke alarm technology has (over time) changed and improved. As a result a roll out programme to replace alarms started in February 2016. This roll out effects 64000 Housing Corporation houses nationwide. It is intended to replace existing alarms with a new technology combined photoelectric and thermal alarm – ST620 Fire Angel.

[36] Also and as a consequence of the fire at Exeter Crescent The Housing Corporation has reviewed fire safety options in respect of 74 properties (nationwide) that are two storied and with six or more bedrooms. Individual alarms (in these properties) will be replaced with interconnected alarms so that when one alarm is triggered every alarm will sound. The intention is that there will be a superior early warning system.

Finding

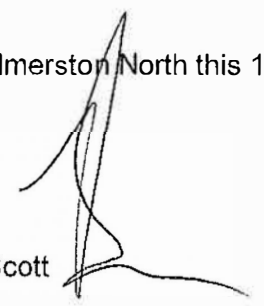
[37] Bessie Tehuia Tokona, a 61 year old beneficiary and Eunice Rebecca Jean Felton, a 6 year old infant, both living at 15 Exeter Crescent Palmerston North died at that address on the morning of Thursday the 3rd of September 2015 from the effects of fire and in circumstances outlined in this decision.

Conclusions

[38] I thank the police in particular for their assistance to me in respect of my inquiry but also The Housing Corporation of New Zealand the Fire Service of New Zealand and Mr Butler for their evidence and assistance.

[39] I offer my sincere condolences and sympathy to all members of the Tokona and Felton whanau.

Dated at Palmerston North this 19th day of December 2016.



Coroner T Scott