IN THE CORONERS COURT
OF VICTORIA
AT HAMILTON

Court Reference: COR 2012 001074

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)
Section 67 of the ***Coroners Act 2008***

I, Mr Jonathan G Klestadt, Coroner, having investigated the death of Georgia Griffin Wilson

without holding an inquest:
find that the identity of the deceased was Georgia Griffin-Wilson
born on 2nd December 2003
and the death occurred 23 March 2012
at
from:

1a EFFECTS OF FIRE

Pursuant to section 67(2) of the **Coroners Act 2008** there is a public interest to be served in making findings with respect to **the following circumstances**:

Georgina and Kaden Griffin-Wilson, aged eight and three years respectively, died tragically when the house in which their family was living was destroyed by fire in the early hours of Friday the 23rd of March 2012.

The Griffin-Wilson family were living in a house on the property known as "Devon Park" on the Blackwood-Dunkeld Road, Dunkeld. The property consists of 6000 acres of farming land owned by the WJT Clarke Testamentary Trust and has four dwellings on it, the main homestead, a bluestone cottage and a wooden cottage in reasonably close proximity to the homestead, and the manager's house some distance away.

The Griffin-Wilson family had moved into the wooden cottage between Christmas and New Year 2011 as a result of their good relations with Mrs. Susan Clarke who lived in the homestead. Mr Aaron Wilson was casually employed on the property.

The cottage was constructed of timber that had had external vinyl cladding applied in the 1980's. At about the same time most of the original timber framed windows were replaced with aluminium framed items. The house itself sat east-west, with the "front" of the house facing east with a veranda. A central door on the veranda opened directly into the lounge room, with a bedroom to the left in the south east corner of the house. This was occupied by Georgia. Proceeding straight ahead a door from the lounge opened into a dining room of approximately equal size to the lounge. To the southern side of the dining room was another bedroom occupied by the children's parents. From the south western corner of the dining room a doorway lead to a passageway through to the rear of the house. To the left was Kaden's bedroom with the bathroom beyond it, and to the right was the kitchen.

On the northern wall of the house a common fireplace and chimney sat between the lounge and the dining room. It was made of bluestone and brick, was probably original, and served both the dining and lounge rooms. The hearth in the dining room was blocked off, and a slow combustion wood heater occupied the angle into the lounge. There had been a fire in the chimney of this fireplace in approximately 2002 when heat from the flue of a previous wood heater ignited grass and detritus, probably from nesting birds. The damage was repaired and the wood heater replaced with a gas heater. This in turn was removed in about 2006 and it reverted to an open wood burning fireplace, before a new "Coonara" style wood heater was installed in approximately 2006.

The installation was done by the then occupant of the cottage who was a certified plumber who had experience in this type of work. He utilised a single skin flue through the existing chimney and capped it with an appropriate fitting. On the evidence before me I am satisfied that the installation was done in accordance with general practices at the time and that the heater operated without incident until the night of the 22nd of March 2012. The Griffin-Wilson family had used he heater approximately 10 times before that night.

At the time of the renovations before 2002 two smoke alarms had been fitted to the house, although it is unclear if they were mains or battery powered. The evidence of the previous occupier of the house was that the unit installed in the lounge was inoperative, but Ms. Tanya Griffin, the deceased's mother says that the second unit, situated in the passage between the kitchen and the third bedroom was operational, having set it off when cooking.

On the night of the 22nd of March nothing untoward had happened before the children went to bed at about 9 to 9.30 pm. The children's mother went to sleep at about 12.15am on the 23rd after checking the children and noticing that the wood heater was still burning, having been banked up earlier against the cold. At about 1.00am the children's father moved Kaden from his bedroom, which he described as the coldest in the house, into Georgia's bed. He then in turn went to sleep.

Shortly after 2.00 am Ms. Griffin was awoken by Kaden's screaming and was aware of the smell of smoke and the fumes of the burning vinyl cladding. She describes seeing the glow of the fire in the dining room through the open bedroom door, and on exiting the bedroom the roof and doorway to her right into the lounge was already well alight and throwing out intense heat such that it was impossible to move towards the front of the house.

She woke Mr. Wilson but they were unable to approach the lounge room. They escaped through the passage and out through the back door, but were thereafter unable to quell the fire. While Mr. Wilson ran to alert others Ms. Griffin re-entered through the back door but was beaten back by the heat and smoke. The house was totally destroyed in the blaze before any assistance from CFA or others could be brought to bear. The children perished in the blaze.

Following an investigation of the scene by a scientist from the Victorian Police Forensic Services Centre it was determined that within the chimney cavity there were *"...substantial deposits of grass and small twigs, which appeared to be the remains of bird nests. There were similar materials in the gaps between the bricks. There was a ledge at about head height, where the fireplace narrowed and became a chimney, where there were further substantial deposits of partly burnt grass and twigs."*

His conclusion was that *"...the fire probably started in the chimney, either actually inside the chimney or in the combustible material in or on the brickwork. The source of the ignition was probably the hot flue, although I was unable to determine exactly where this had occurred."*

From the above conclusion it appears that the cause of this blaze was substantially the same as that which had occurred previously.

After the police investigation of the fire was concluded I asked the Coroners Prevention Unit (CPU) to investigate whether there had been similar fires, that is fires in chimney cavities caused by flues from wood heaters, in Victoria or elsewhere in the recent past.

The CPU undertook an extensive review of records kept by the Metropolitan Fire Brigade, the Country Fire Authority, and the Australian Fire Incident Reporting System. The data disclosed that there were at least 48 fires in Victoria between 2003 and May 2013 where a wood heater flue was probably the source of ignition for a fire. Among these 48 fires, 15 were probably associated with faulty flue installation, and 6 fires probably started when the heat of the flue ignited accumulated detritus.

However, anomalies and inconsistencies in the recording of data prevented any firm conclusions being reached about the frequency of such events. For example, the CFA records for this fire did not include any information indicating that a wood heater or ignition point in the heaters flue. The CFA records identified a further 149 fires that may have been relevant, but for which insufficient details were available.

None of the recorded fires which were identified as possibly relevant involved a fatality.

A further line of investigation taken by the CPU at my request was to attempt to identify any "prevention focussed" recommendations that might come from this tragic event. In the course of this task staff at the CPU had extensive discussions with Mr. Kelleher from the Victoria Police Forensic Science Centre, a building surveyor, an investigator from the Metropolitan Fire Brigade and Legal Counsel from the Victorian Building Authority.

These discussions focussed on the cause of the fire and adequacy and compliance issues with the installation itself.

The outcome of these investigations and discussions have not produced any definitive consensus about the cause of the fire and the adequacy of the installation of the wood heater. However I am satisfied on the balance of probabilities that I should accept the opinion of Mr. Kelleher that the fire started in combustible material in the chimney cavity and that the source of ignition was the hot flue.

I am also satisfied that the installation of the flue was inadequate in that it failed to comply with the Australian/New Zealand Standard for the installation of domestic solid fuel burning appliances (AS/NZ 2918:2011). Clause 4.11 requires that,

> *For appliances discharging the combustion products through a chimney, the chimney shall be inspected for soundness and thoroughly cleaned before a flue pipe is installed* ***The air gap between the flue pipe and the chimney shall be open at the top of the chimney*** *to the extent that the total opening area is not less than 10,000 mm. The chimney exit shall be fitted with means to prevent significant ingress of water and debris...."l*

It is clear from photographs taken at the scene of the fire the following day (photos 48 & 49) that the flue exited from the chimney and that the chimney was capped without any air gap. This would have prevented the air between the flue pipe and the wall of the chimney from being vented through convection, causing a significant build up of heat within the chimney cavity, which ultimately led to the fire.

The deaths of Georgia Lee Griffin-Wilson and Kaden Thomas Griffin-Wilson have certain meaningful parallels with the earlier deaths of Chase Robinson and Tyler Robinson (20102037 and 20102038). Briefly, Chase and Tyler Robinson were brothers aged eight years and six years respectively who died in their home from carbon monoxide poisoning due to a gas heater that was poorly maintained. The parallels for the purpose of this discussion are:

The deaths were very rare events. The CPU identified no other similar Victorian deaths in the case of the Griffin-Wilson siblings, and two other similar deaths in the case of the Robinson brothers.

There was evidence of a greater frequency of non-fatal events. Data provided by the MFB and CFA in the Griffin-Wilson investigation showed a number of non-fatal Victorian fires occurred in circumstances where the ignition point was a wood heater flue. Data provided by EnergySafe Victoria (ESV) in the Robinson investigation showed a number of non-fatal Victorian carbon monoxide poisoning events involving gas heaters.

The deaths involved common household fixtures. A gas heater (Robinsons) and a wood heater flued through a chimney (Griffin-Wilsons) are fixtures found throughout tens of thousands of Victorian homes, and thus there is an ongoing risk across the state in both cases that poor maintenance might lead to more deaths.

In the cases of the Robinson deaths certain recommendations were made by the coroner to Energy Safe Victoria, the government body responsible for electricity and gas safety in Victoria. To draw attention to safety issues regarding solid fuel burning stoves and heaters the responsible body is the Victorian Building Authority (VBA), which is the successor to the Building Commission and Plumbing Industry Commission. The VBA produces information for consumers and industry on a range of safety issues encompassing balconies and balustrades, basketball rings, safety fences around pools and spas, smoke alarms, and so on, but does not appear to have produced any information on wood heater installation and maintenance.

COMMENTS

Pursuant to section 67(3) of the **Coroners Act 2008**, I make the following comment(s) connected with the death:

Accordingly I record the following comment:

Fire databases such as the Australian Fire Incident Reporting System (AIRS), and the CFA's internal Fire and Incident Reporting System (FIRS) are crucial resources to identify existing and emerging risks and hazards. The CFA, MFB and Victoria Police Forensic Services Centre should consider meeting to discuss how they can combine the results of their various investigations to ensure the fire databases contain the most detailed and useful data possible for prevention purposes.

Whilst much of this finding has set out and sought to resolve technical and factual issues about the installation of the wood heater in the cottage at Dunkeld, and the cause of the fire that occurred there in March 2012, it must not be forgotten that two young lives were lost in tragic circumstances. I wish to extend my deepest sympathy to Ms. Griffin and Mr. Wilson for their loss.

RECOMMENDATIONS

Pursuant to section 72(2) of the **Coroners Act 2008**, I make the following recommendation(s) connected with the death:

In all of the circumstances I recommend:

i) That the Victorian Building Authority produce a consumer information brochure on the importance of regular heater and flue maintenance for households where a wood heater is installed. The brochure should offer specific advice on the importance of checking chimney spaces around flues for detritus that might accumulate and cause a fire hazard.

ii) That the Victorian Building Authority produce a practice note offering detailed guidance to plumbers on appropriate installation and maintenance of wood heaters and associated flue systems. The practice note should offer specific guidance on processes such as inspecting chimneys to ensure they are appropriate for fitting single-skin flues, and checking whether detritus is accumulating around a flue installed in an existing chimney.

Signature:

Coroners Court of Victoria

Mr Jonathan G Klestadt

Date: 13/12/2013