

SOUTH



AUSTRALIA

## FINDING OF INQUEST

*An Inquest taken on behalf of our Sovereign Lady the Queen at Adelaide in the State of South Australia, on the 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> days of December 2003 and the 30<sup>th</sup> day of January 2004, before Wayne Cromwell Chivell, a Coroner for the said State, concerning the death of Gary William Burton Woodcock.*

*I, the said Coroner, find that, Gary William Burton Woodcock aged 36 years, late of 23 Payneham Road, College Park, South Australia died at the Royal Adelaide Hospital, North Terrace, Adelaide, South Australia on the 30<sup>th</sup> day of January 2001 as a result of an anaphylactic reaction due to multiple bee stings.*

### **1. Introduction**

- 1.1. Gary William Burton Woodcock operated a business known as 'Jay Clancy Chimney Sweep'. He had performed several jobs at St Peter's College over the years. On 18 January 2001 the Property Officer of the school, Mr Kevin Jacka, contacted Mr Woodcock about the removal of a wood combustion heater from a building known as the Old School House. The school was installing air conditioning, and the flue from the heater needed to be removed to allow a space for the pipework to be installed in the chimney.
- 1.2. Mr Woodcock attended the school on 23 January 2001. Mr Jacka thought that he was accompanied by Mr Paul Chadwick on that occasion, but Mr Chadwick denied this and I accept his evidence about that.
- 1.3. When Mr Woodcock inspected the heater, he noticed a number of bees inside the firebox. Mr Jacka said that you could see them through the glass door (Exhibit C9a, p3). Mr Woodcock declined to do any work until the bees had been eradicated.

- 1.4. Mr Jacka telephoned Mr Peter Bourne of Bourne Pest Control and he attended the school that afternoon. A hole had been made in the side of the chimney in the attic of the building by the air-conditioning contractors. When Mr Bourne looked through the hole he could see bees on the outside of the heater flue. There were also several bees on the windows of the attic. He said that he did not look inside the heater (T62). He looked to the top of the chimney, but was unable to locate the hive.
- 1.5. Mr Bourne decided to use an Emperor Smoke Generator. This device generates smoke which carries an insecticide called Permethrin which is lethal to bees. Mr Bourne lit the wick of the Emperor, and placed it within the hole in the side of the chimney, and then covered the hole with cardboard.
- 1.6. Mr Bourne went downstairs to the common room on the ground floor, and noted that smoke was pouring from the fireplace into the room. This was an indication that there may have been a blockage, and that less smoke and Permethrin were reaching the top part of the chimney.
- 1.7. Mr Bourne said that he saw large numbers of dead bees at the bottom of the chimney, either side of the firebox. Presumably these bees had fallen in front of the fascia board which had been installed around the heater.
- 1.8. Mr Bourne left the school that afternoon and took no further action in relation to the bees. He advised Mr Jacka to keep a lookout for bees and to call him back if necessary. I will discuss the precise terms of his advice to Mr Jacka in more detail later.
- 1.9. On 24 January 2001 Mr Woodcock returned to the school with Mr Chadwick and started removing the heater. Mr Chadwick said that it was not until he removed the fascia to the heater that he could see the thousands of dead bees which had fallen either side of, and on top of, the heater. Mr Chadwick said he removed several buckets full of bee carcasses.
- 1.10. The two men removed the heater and seven sections of the flue, but it became apparent that the remaining sections needed to be removed from the top. Mr Jacka then made arrangements for the painting contractors, who had been on the site for several weeks, to provide a 'cherry picker'.

- 1.11. The cherry picker was made available on Tuesday, 30 January 2001. Mr Woodcock and Mr Chadwick attended at around 8:00am. After the initial procedures were attended to, Mr Woodcock and the operator, Mr Stephen Moore, went up to the top of the chimney. Mr Moore's statement graphically records what happened when they reached the top:

'As I was veering to the left, I noticed a couple of bees hovering around above the flue. Gary hesitated for a few seconds & just looked at the flue. Before he grabbed the flue, I made a comment about the two bees hovering around. Gary said that it was just a couple of stragglers. He seemed to hesitate after I made the comment about the bees. He then grabbed the flue & it lifted off very easily. There didn't seem to be anything holding it back.

That's when the bees flew at us, they just came straight out. We we (sic) just fighting the bees. When the flue was lifted off I noticed that it seemed very bright, the sun was shining off the honeycomb.

I started to boom away, straight away, Gary was saying "Get me out of here" or "Get me down". Gary was fighting the bees off very violently. I remember looking at him & seeing the back of him. There were bees on him, on his back & they seemed to be swarming around him. They were also on me, around my face, around my neck & they were going down my chest. I told Gary to squat down in the bucket & I tried to drive the bucket away but I had to stop moving the bucket as I had too many on my face, I was concerned about being stung in the eyes. I removed the bees off my face & then I kept lowering the bucket.

We were about level with the gutter, about third of the way down when Gary yelled out for antihistamine. When he did this he stood back up & leaned over the front a bit. I'm not sure who he was yelling this out to. He squatted down back into the bucket. I squatted down for a while. About halfway down the bees started to back off. I had to stand back up to see where I was going. Gary was yelling out "Oh God get off me".

Gary got out of the bucket. I can't remember if I got out or whether he got out. He got his harness off & he fell to his knees. I ripped my overalls off, came round the other side of the truck to get away from the bees that were still around us. When I got around the other side, I saw Gary dry-retching & he was having trouble breathing going blue he was on his hands and knees. I remember seeing a lady in yellow who I now know to be the School Nurse. She assisted Gary. I saw Gary on his side, the nurse was supporting Gary on this side while he was on the ground. Paul, his offsider was checking his mouth. Paul either cleared his airway or it was already clear. They then rolled him back onto his back. I think the nurse mentioned something about no pulse & that's when the nurse did heart massage and Paul gave mouth to mouth.'

(Exhibit C11, pA021907-8)

- 1.12. An ambulance was called and Mr Woodcock and Mr Moore were taken to the Royal Adelaide Hospital, arriving at about 9:10am. Dr David Holden noted that Mr

Woodcock had been treated with adrenalin by the ambulance officers, and had been ventilated and an intravenous line inserted. He was in full cardio-respiratory arrest.

1.13. Dr Holden and the staff at the Royal Adelaide Hospital took further aggressive measures to try and resuscitate Mr Woodcock, but they were unable to restore a satisfactory cardiac output. His life was declared extinct at 9:22am.

1.14. Cause of death

A post-mortem examination of Mr Woodcock's body was performed by Dr R A James, Chief Forensic Pathologist, on 31 January 2001. Dr K Riches, Registrar in Pathology, was also present.

1.15. Dr James noted that there were a number of bee stings still on the head:

'Multiple bee sting sites remained on the face and scalp. One bee sting was noted lateral to the left eye. One bee sting was present in the skin anterior to the right hairline. One bee sting was noted lateral to the right eyebrow. Four bee stings were present in a line on the back of the left neck at the collar line. A blood filled blister, about 3mm in diameter, was noted on the left pinna (ear flap).'

(Exhibit C15, p2)

He also noted 'obvious oedema (swelling) of the glottic inlet' and mild oedema of the lungs.

1.16. An analysis of Mr Woodcock's blood serum disclosed that he was allergic to bee venom. Further testing at the Hunter Immunology Unit at the Royal Newcastle Hospital disclosed that the serum had a tryptase level greater than 2000 µg/l (a normal reading is less than 13.5).

1.17. Dr James commented:

'The grossly high tryptase of >2000 indicates an overwhelming histamine response with anaphylaxis to the multiple bee stings. While only 7 bee stings remained in the body it is thought he had been stung between 40 and 50 times before the cherry picker could return him to the ground for assistance. The serology tests and the oedema of his larynx leave no doubt of the mechanism of his death.'

(Exhibit C15, p4)

1.18. I accept Dr James' conclusions and find that Mr Woodcock died as a result of anaphylactic reaction due to multiple bee stings.

## 2. **Issues arising at inquest**

### 2.1. Did Mr Woodcock know he was allergic?

There was evidence from Mr Moore, the cherry picker operator, that Mr Woodcock told him he was allergic to bees. He said that Mr Woodcock told him this as they were ascending in the cherry picker (T107).

2.2. Mr Moore's evidence was that when they reached the top of the chimney, and he saw the two bees hovering around and pointed them out, Mr Woodcock said that they were 'just a couple of stragglers' and, after a moments hesitation, proceeded to lift the cap. This apparently casual attitude to the presence of the bees would be surprising if Mr Woodcock knew he was allergic.

2.3. Mr Woodcock's request, as they were descending in the cherry picker, that somebody get antihistamines suggests some knowledge of allergic reactions and their treatment (although such medication would not have been useful to Mr Woodcock in this instance).

2.4. Ms Helen Chadwick, who lived with Mr Woodcock, told Inspector Mary Nizamis from Workplace Services that Mr Woodcock was not allergic to bees, and that he had recently been stung on the hand by four bees with no ill affect (Exhibit C81, p9).

2.5. Dr Karen Riches, the Pathology Registrar who assisted Dr James at the post-mortem examination, told me that there are usually between two and four deaths per year in Australia from bee stings. The most common mechanism of death is anaphylaxis, as here. Other mechanisms include mass envenomation, where the victim is stung 500 times or more, and airway obstruction when a bee might have been inhaled (T195).

2.6. Dr Riches explained that anaphylaxis is an allergic reaction, in a person who has been previously sensitised, involving the release of antibodies which leads to loss of blood pressure, swelling and blockage of the airway, airway spasm and sometimes heart failure (T196).

2.7. Dr Riches said that even though Mr Woodcock was allergic to bee venom, he may not have been aware of it. She said that reactions were unpredictable, and that a severe reaction can follow a minor reaction, and vice-versa as in the third example described

in the research paper 'An autopsy approach to bee sting-related deaths' (Riches, Gillis and James, 34 Pathology [2002], p 257-62 - Exhibit C15a).

2.8. From all of the above, I find that Mr Woodcock was allergic to bee venom, and that it is unlikely that he was aware of it. It is therefore not surprising that he was not carrying an 'Epipen' or other device in case he was stung.

2.9. Role of Pest Exterminator

I have already mentioned that Mr Bourne was aware of the fact that the bee extermination he undertook on the afternoon of 23 January 2001 may not have been optimal, because the smoke which blew back down the chimney indicated that there may have been a blockage at the top, and that the insecticide may not have reached the entire length of the flue in sufficient quantities.

2.10. Mr Bourne said that he told Mr Jacka that the smoke generation method was less than optimal, although he was vague as to the extent to which he conveyed this (T70-71). He said that he told Mr Jacka that he could expect to see bees in the area for the rest of that day, but if he saw more after that he should give him a call (T80).

2.11. Mr Jacka on the other hand, said that he was left with the impression that the smoking method was satisfactory, and that if Mr Bourne had told him that he needed a cherry picker to do the job properly, there was one available on site. He said that the subject was not pursued (T49). He agreed that Mr Bourne left on the basis that if they needed him to come back, they should give him a call.

2.12. Mr Jacka said he and his staff continued to look out for bees over the next few days, and did not see any (T27). Since the top of the chimney was (on my estimate) 16-20 metres above the ground, it seems unlikely that they would have been able to see bees there anyway.

2.13. Mr Bourne said that he did not look in the combustion heater on the ground floor (T62). He conceded that having regard to the position in which he placed the smoke generator, smoke would not have killed any bees inside the combustion heater or the flue which went all the way to the top of the chimney. The smoke would have been inside the chimney, but on the outside of the flue. As it transpired, the hive, and many of the bees, were inside the flue and would not have been affected by the smoke (T72).

- 2.14. Notwithstanding this, Mr Bourne did not check inside the combustion stove after the smoke had dissipated (T72). It would only have been if the flue did not reach all the way to the top of the chimney, and if smoke had spilled over the top of the flue and then down inside it, that it would have killed any bees inside (T74). Mr Bourne gave a most unsatisfactory explanation as to why he did not place another smoke generator within the firebox of the combustion heater so that the smoke would go up the flue and kill any bees within it (T98-99). I find it surprising that he was content to leave on the basis that he would be called back if workers saw more bees, in the light of such a strong possibility that the hive was within the flue.
- 2.15. Mr Bourne explained his adoption of a less than optimal method of eradication on the basis that he had the impression that the work needed to be done that day, and so he did not press for the use of a cherry picker so that he could approach the job from the top (T61). There is no evidence that Mr Jacka insisted that the less optimal method be adopted. He told me, and I accept, that he relied upon Mr Bourne's statements that the smoking method was appropriate.
- 2.16. It was Mr Bourne's 'wait and see' approach which was criticised by the other pest exterminators who gave evidence. Mr Bourne conceded that he should have adopted a more positive follow-up procedure before the area was made available to workmen. In cross-examination by Mr Algie, counsel for the family of the deceased, the following exchange took place:
- 'Q. Did you tell Mr Jacka 'Look, there is a problem here, you shouldn't let people work on this chimney or on this flue until I can come back and make sure that the bees are gone'.
- A. No, unfortunately I didn't make that clarification. I left it to him to monitor, rather than myself monitoring.' (T94)
- 2.17. Mr Terry Hutt is the State Manager of Adam's Pest Control, and was the person called in to eradicate the bees after the tragic incident involving Mr Woodcock. He exterminated the bees by travelling to the top of the chimney in the cherry picker and applied Permethrin dust using a hand operated blower similar to a large syringe.
- 2.18. Mr Hutt was not critical of Mr Bourne's use of a smoke generator in these circumstances, although he would have preferred to deal with it from the top of the chimney (T150). Mr Hutt said that if there were bees inside the heater, then this was an indication that the hive could be within the flue and so, if the smoke generator

method was being used, it would be necessary to put smoke inside the flue as well as outside the flue within the chimney (T160).

2.19. Mr Hutt said that if he had been asked to do the job, he would have travelled to the top of the chimney and inspected the site. He would not have initially removed the capping, even in full protective clothing, because of the risk that he might be attacked by a swarm of bees. He said that he would have tried to apply dust under the shroud of the capping, or used smoke from underneath. He would then have allowed time for these measures to operate, and then would have returned to the top of the chimney to see if they had been effective. Only then might he have removed the shroud and the hive from the chimney (T158).

2.20. Mr Hutt's evidence could be summarised as follows:

'Q. I guess maybe the alternatives, from what you have told me, are these: either a possibility might have been that you would drill a hole into the side of that metal cap.

A. That's correct.

Q. To see what was in there.

A. Yes, that's right.

Q. Or, alternatively, smoke from the bottom.

A. That's right.

Q. Or possibly from two-thirds or higher up.

A. And/or even higher up, yes.

Q. Plus you put one inside the -

A. I would have utilised the flue. If there were bees inside the actual fire place itself, yes, definitely.

Q. But even with all that you wouldn't guarantee that you'd got them all.

A. Definitely not, not at that height, no.

Q. So you would have advised them not to allow work in the area until you had been back to check to see -

A. And cleared it, yes.

Q. And when you came back the next day you might then have taken the cap off.

A. That would be right.

Q. And that would be the only way of ensuring that it was safe to proceed.

A. For sure, yes.' (T167-169)

- 2.21. Mr David Lavendar, the State Manager of Globe Australia, the company who act as distributors for the pest control products used here gave similar evidence (T182-185). In particular, he said:

'Definitely, because eradication is a very big word in pest control it's very hard to achieve, so I call it integrated pest management, which means that you have the insects down to a control that is comfortable. Complete eradication is very difficult to do, so you would really need to inspect - and knowing there were people going back the following day to do that job, I would certainly go back and wish to inspect it before I release people back into that workplace area.' (T188)

- 2.22. On the basis of that evidence, I find that the pest exterminator, Mr Bourne did not achieve complete eradication of the bees as a result of his actions in the afternoon of 23 January 2001. I find that he was aware that this less than complete outcome was likely, having regard to the fact that smoke from the smoke generator flowed down the chimney and into the common room. This alerted him to the fact that the smoke from the smoke generator may not have reached the top of the chimney.
- 2.23. In those circumstances, I consider that it was most unwise of him to leave the workplace on the rather vague understanding that if Mr Jacka and his employees saw further bees they should call him back. In my opinion, he should not have indicated that it was appropriate that work could proceed until he had inspected the premises again to ensure that the eradication had been successful. His failure to do that was a failure to fulfil his responsibilities as a certified and experienced pest controller.
- 2.24. Mr Algie submitted that Mr Jacka was also partly responsible for this tragic outcome on the basis that he placed Mr Bourne under pressure of time to complete his task, and that he acquiesced in adopting a less than optimal method of eradication on the basis that it would save time. I do not consider this criticism is justified. It was not suggested to Mr Jacka that he placed Mr Bourne under such pressure. Mr Jacka said that if Mr Bourne had asked for a cherry picker so that he could deal with the bees from the top of the chimney then he was in a position to supply one. He acted on the basis that Mr Bourne told him that the smoke generator method was adequate for the task. He accepted that advice and accepted Mr Bourne's indication that it was appropriate to allow work to proceed on the basis that if further bees were encountered he should call Mr Bourne back. In my opinion, he was entitled to rely on Mr Bourne's expertise and experience.

### 3. **Recommendations**

- 3.1. Following these tragic events, both St Peter's College and Bourne Pest Control Consultants SA were issued with a 'Letter of Statutory Obligation' reminding them of their responsibilities pursuant to the Occupational Health, Safety and Welfare Act 1986 (see the report of Inspector Mary Nizamis, Exhibit C8a, p12).
- 3.2. In August 2001, a 'Hazard Alert' was issued by the Workplace Services Division of the Department of Administrative and Information Services which referred to this incident. The preventative methods suggested in that Hazard Alert were as follows:

'In order to prevent a similar incident occurring, employers must ensure that:

- hazards are identified before starting tasks. What this means is to try to work out what could go wrong and what factors could cause things to go wrong. You will need to check the work area, the equipment, the chemicals, your systems of work and the competence of the operator. You will need to speak to the client about any site specific hazards that you may not have noticed;
- when you know what the hazards are, you can conduct a risk assessment. This involves working out the potential for loss or injury as a result of working with the identified hazards. You are trying to work out the potential for something to go wrong and the consequences if it does. A workplace risk assessment must be performed prior to the commencement of any work;
- When you have assessed the risks you must bring in appropriate controls. These controls are put in place to eliminate the risks or reduce them to acceptable levels;
- Material Safety Data Sheets must be obtained for any pest control chemical to determine the level of risk associated with its use;
- a risk assessment of the work practices associated with the use of the selected pesticide should be undertaken;
- a Hazardous Substances Register should be developed for all hazardous substances being used at the workplace;
- advise all clients prior to commencing work that a hazardous substance is being used;
- ensure that there are no other persons present who may be exposed to the hazardous substance; and
- monitor the site after the bee control has been undertaken to ensure that the control has been effective.'

(Exhibit C13, Section 4)

- 3.3. It seems to me that this was a detailed and appropriate response to the incident which occurred and, if followed by technicians working in the area, should avoid such tragedies in future.
- 3.4. On the basis of that action taken, I consider that it is not necessary to make any further recommendations pursuant to Section 25(2) of the Coroners Act 1975.

*Key Words: Workplace Injury, Bee Sting, Pest Control, Anaphylatic Reaction*

*In witness whereof the said Coroner has hereunto set and subscribed his hand and*

*Seal the 30<sup>th</sup> day of January, 2004.*

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*Coroner*