

IN THE CORONERS COURT  
OF VICTORIA  
AT MELBOURNE

Court Reference: COR 2003 1838

**FINDING INTO DEATH WITH INQUEST**

*Form 37 Rule 60(1)*

*Section 67 of the Coroners Act 2008*

**Inquest into the Death of: HAYDEN CURTIS**

Delivered On:	5 June 2013
Delivered At:	Level 11, 222 Exhibition Street Melbourne 3000
Hearing Dates:	11-13 and 19 April 2011
Findings of:	JANE HENDTLASS, CORONER
Representation:	Mr Trevor Wraight for WorkSafe Mr David Neal SC and Mr Rob O'Neill for Feature Homes Mr Samuel Stafford for the City of Yarra Mr Robert Taylor for the Building Commission
Police Coronial Support Unit	Leading Senior Constable Remo Antolini assisting the Coroner

I, JANE HENDTLASS, Coroner having investigated the death of HAYDEN MARCEL CURTIS

AND having held an inquest in relation to this death on 11-13 and 19 April 2011

At MELBOURNE

find that the identity of the deceased was HAYDEN MARCEL CURTIS

aged 20 years

and the death occurred on 11 June 2003

at Royal Melbourne Hospital, Grattan Street, Parkville 3050

**from:**

1 (a) ACUTE BLOOD LOSS (INTRAOPERATIVE DEATH)

1 (b) EXTENSIVE CRUSH INJURY TO TORSO FOLLOWING AN INDUSTRIAL ACCIDENT

**in the following circumstances:**

1. Hayden Marcel Curtis was 20 years old when he died. He lived with his parents, Michael and Vicki Curtis, and other family members at 42 Batman Road in Eltham.
2. Mr Curtis had previously worked as a labourer for a demolition company in Richmond. He had also completed a full-time course at the TAFE College at Heidelberg. Accordingly, the Building Commission allowed him to commence his full-time building apprenticeship as a second year apprentice.
3. Mr Curtis worked as a third year apprentice carpenter for JNME Constructions.
4. Michele (Michael) Ciavarella was the proprietor of JNME Constructions.<sup>1</sup> He also sub-contracted labour for residential extensions and renovations to Feature Homes Pty Ltd.
5. Mr Ciavarella confirmed that Mr Curtis had previously assisted him on a number of demolition sites. In his statement, Mr Ciavarella said:

*“Hayden Curtis and I have done demolition work and renovations we have done. I found Hayden to be excellent, capable and careful in his work. He is a very well mannered, well behaved and very responsible apprentice.”*

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<sup>1</sup> In April 2005, JNME Constructions was deregistered with the Australian Securities and Investments Commission.

6. On 10 June 2003, Mr Ciavarella sub-contracted Mr Curtis and his friend and co-worker, Andrew Struve, to assist Anthony (Tony) Mario Quattrochi with the early demolition stage of a domestic building project at 624 Park Street<sup>2</sup> in Carlton North (“624 Park Street”).<sup>3</sup> This property also has rear access at 70 Lang Street.
7. The property at 624 Park Street is within the municipal district of the City of Yarra.
8. Mr Quattrochi was the principal contractor of Feature Homes Pty Ltd (“Feature Homes”). He was registered in the Register of Building Practitioners and had more than 20 years experience as a domestic builder.
9. Feature Homes was a proprietary company limited by shares owned by Quattrochi family members and based in Mernda.<sup>4</sup>
10. The original single floor dwelling at 624 Park Street was built in 1906. When it was built, it had at least five fireplaces: one in the front room now designated the study<sup>5</sup>, one in the lounge room in the middle of the south wall, one in the north west corner of the room south of the lounge room which is now designated Bedroom 2<sup>6</sup>, one in the north east corner of room north of the lounge room which is now designated Bedroom 1<sup>7</sup>, and one in the kitchen.
11. In 1957, the roof sheeting over the majority of 624 Park Street and the ceilings in the study and bedroom 1 was replaced because the roof leaked.
12. In 1971, the then owner, Frank Jones, commissioned an architect, Robert Vincent, to design renovations including a second storey Hardiflex extension and alterations in the kitchen and laundry area. An experienced builder, George Spark, performed these renovations at 624 Park Street.

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<sup>2</sup> This property was previously known as 385 Park Street.

<sup>3</sup> Mr Quattrochi was not called to give evidence in the Inquest. He declined to give a statement to police investigating Mr Curtis’ death for the Coroner on the grounds of self incrimination. However, he recorded a record of interview with an investigator for the Building Commission that was provided to the Court. I have relied on the relevant information he provided in that interview to obtain his views about what happened on 11 June 2003.

<sup>4</sup> In June 2007, Mr Quattrochi applied to have Feature Homes Pty Ltd voluntarily deregistered with the Australian Securities and Investments Commission.

<sup>5</sup> Bedroom 1 in Mr Vincent’s plans.

<sup>6</sup> Bedroom 3 in Mr Vincent’s plans.

<sup>7</sup> Bedroom 2 in Mr Vincent’s plans.

13. On 19 February 2000, Richard & Caterina Riccio purchased the property at 624 Park Street from Frank & Veronica Jones. At the time of purchase, the City of Yarra indicated that no Building Approvals had been issued in the last ten years.
14. The dwelling at 624 Park Street was subject to Heritage Overlay pursuant to the Yarra Planning Scheme. The provisions of this Heritage Overlay included protection of existing chimneys that were visible from the street.
15. Further, a brick chimney remained intact above the wall between the lounge room and Bedroom 2 and looked similar to one on an adjacent dwelling. This chimney was about 3.8 metres above roof height<sup>8</sup> and would have been visible from Lang Street.
16. On 14 May 2002, Mr Riccio lodged an application for a Planning Permit with City of Yarra. This application was accompanied by plans for the proposed partial demolition, extension and alteration at 624 Park Street.
17. These plans did not show or refer to the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2. Further, there is no suggestion that there was any intention to demolish this brick chimney above the wall between the lounge room and Bedroom 2.
18. On 23 December 2002, the City of Yarra granted Mr Riccio's application for a Planning Permit.
19. On 3 June 2003, Mr Quattrochi lodged an application on behalf of Mr Riccio for a Building Permit for the whole of the proposed brick veneer extension to the existing building located at 624 Park Street with Wayne Gray, Municipal Building Surveyor at the City of Whittlesea.
20. This Building Permit was never issued.
21. On 9 June 2003, Mr & Mrs Ricchio and Mr Quattrochi signed a standard Master Builders Association of Victoria Home Improvements Contract in relation to extension and renovation of the existing dwelling at 624 Park Street including building a brick veneer extension upstairs with a deck over the existing Bedroom 2 and a new kitchen and laundry downstairs. Mr Riccio

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<sup>8</sup> A standard brick is 76 mm high x 230 mm long x 110 mm wide. Allowing 0.2 metres for mortar.

was to pay Mr Quattrochi \$195,000.00 for this work. The work was expected to take 180 days. Demolition work was excluded from this contract.

22. On 10 June 2003; Mr Riccio and Mr Quattrochi also signed a separate standard Master Builders Association of Victoria Building Contract for demolition work at 624 Park Street. Part 1 of this Building Contract specified that the task included demolition of the rear part of the dwelling and clearance ready for construction of the extension to commence. Mr Riccio was to pay Mr Quattrochi \$5500.00 for this part of the work. This demolition work was expected to take 15 days.
23. On 10 June 2003, Mr Quattrochi commenced work at 624 Park Street.
24. Mr Quattrochi told a Building Control Commission investigator, Sergio Perna, that he knew he did not have a Building Permit when he commenced work but he wanted to help Mr Riccio. He also said that the person at the City of Whittlesea with whom he lodged the application for Building Permit told him it would be ready in not more than a week.
25. Mr Quattrochi also told Mr Perna that he rang the City of Whittlesea, on 9 June 2003. The person he spoke to assured him that the Building Permit would be issued either the next day or the day after.
26. On their first day of work at 624 Park Street, Mr Curtis, Mr Struve and a Feature Homes employee, Dion Bonafede, assisted Mr Quattrochi to demolish the second story bedroom and the kitchen at the site.<sup>9</sup>
27. At 7.00am on 11 June 2003, work re-commenced on the ceiling and roof of the ground floor at 624 Park Street.
28. Mr Quattrochi directed Mr Curtis and Mr Struve to remove corrugated iron sheets and hand them down to Mr Bonafede. Mr Bonafede then collected the sheeting and placed it in the skip at the rear of the property.
29. An electrician, Craig Court, was also working on site turning off the power to the areas of the building requiring renovation.<sup>10</sup>

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<sup>9</sup> Mr Struve and Mr Bonafede were not called to give evidence in the Inquest.

<sup>10</sup> Mr Court was not called to give evidence in the Inquest.

30. At about 8.45am on 11 June 2003, Mr Quattrochi left the site. Mr Curtis, Mr Struve and Mr Bonefede kept on working.
31. At about 9.25am on 11 June 2003, Mr Quattrochi returned to 624 Park Street with morning tea.
32. After Mr Quattrochi returned to the site, Mr Curtis sat on a ceiling joist above the now exposed ceiling of Bedroom 2 and made a phone call while Mr Struve waited for him.
33. Mr Struve says that, after Mr Curtis completed his call, he stood up, put his phone in his pocket and walked two or three steps towards the ladder that provided access to the roof space close to the chimney they had already discussed. Mr Curtis seems to have been walking on the ceiling joists.
34. Mr Struve says he then saw Mr Curtis start to lose his balance and fall backwards through the lathe and plaster ceiling of Bedroom 2 which was 3.5 metres above the floor.
35. A short time after Mr Struve saw Mr Curtis fall through the ceiling of Bedroom 2, Mr Struve saw the brick chimney start to lean toward the direction Mr Curtis had fallen. He heard timber creaking as he saw the chimney falling. He then saw that the chimney had disappeared through the ceiling into the rooms below.
36. Roof damage included broken Oregon rafters, broken ceiling joists and a television aerial. Rubble was left on the floor of Bedroom 2 and into the adjoining bathroom. This included bricks, lathe and plaster pieces and plaster board consistent with a 3.8 metre high chimney falling over almost intact until it hit the material constituting the ceiling of Bedroom 2 and the adjoining bathroom.<sup>11</sup>
37. Some of the bricks from the chimney had fallen on top of Mr Curtis in Bedroom 2 on the ground floor of the building.
38. At 10.06am, Mr Curtis was extricated from the rubble on the floor of Bedroom 2 and transported by ambulance to the Emergency Department at the Royal Melbourne Hospital.

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<sup>11</sup> Bedroom 2 was 3 metres wide; the bathroom was 2.5 metres wide.

39. On presentation at the Emergency Department, a primary medical survey indicated that Mr Curtis was suffering from massive chest injuries, a lacerated liver and a dislocated hip. An ultrasound indicated accumulation of blood in the stomach and chest.
40. Mr Curtis was transferred to the operating theatre for exploratory surgery. Consequently, the surgeon diagnosed an inoperable ruptured vena cava and further medical intervention was abandoned.
41. At 12.23pm on 11 June 2003, Hayden Curtis died.
42. The forensic pathologist who performed the autopsy formed the opinion that the cause of death was acute blood loss (intraoperative death) and extensive crush injury to torso following an industrial accident.
43. Toxicological analysis detected morphine which had been administered as part of the emergency response.
44. Accordingly, I find that Hayden Curtis died from acute blood loss and extensive crush injury to torso following an industrial accident.
45. Mr Curtis' death was investigated by Jim Chasser from Workcover.
46. Mr Chasser is qualified as an electrical mechanic. He is not qualified and has not worked as a builder or a structural engineer or anything of that nature.
47. On 9 May 2005, on the basis of Mr Chasser's investigations, Worksafe charged Feature Homes Pty Ltd with offences under sections 21(1), 21(2)(a), 21(2)(c), 21(2)(e) and 22 of the *Occupational Health and Safety Act 1985*.
48. The particulars of these charges included:
  - Failure to have systems in place to prevent employees falling from a height;
  - Failure to examine the timber structure of the roof for soundness prior to stripping the roof;
  - Failure to install adequate perimeter protection on the roof;

- Failure to conduct hazard identification and risk assessment in relation to stripping the roof;
  - Failure to provide adequate information as to the nature of the work to be performed including the provision of job safety analysis to employees; and
  - Failure to provide adequate supervision to employees to ensure adequate safety procedures were followed whilst stripping the roof.
49. Charges against JNME Constructions Pty Ltd were similarly particularised. However they also included failure to inspect the premises for its safety prior to sending employees to the site. These charges were withdrawn on 15 April 2005 when that company was deregistered.
50. On 15 December 2005, the charges against Feature Homes Pty Ltd proceeded as a contested plea of guilty in the Magistrates Court.
51. Counsel for Worksafe at the Inquest confirmed that the facts that supported Mr Quattrochi's plea of guilty to charges under sections 21(1) and 21(2)(e) *Occupational Health and Safety Act 1985* included a conversation in which Mr Curtis warned Mr Struve about their unsafe workplace:
- "when, if you accept Mr Struve's evidence, the problems were identified there was no system in place to say stop work, get off the roof and if you take it at absolute face value Mr Struve was told by Hayden, "Look there's an unsafe beam here and the chimney doesn't look like it's very safe either." That's what underpins in terms of Charge 3 and that is what Mr Quattrochi pleaded guilty to."*
52. The magistrate convicted Feature Homes Pty Ltd and imposed an aggregate fine of \$30,000.
53. Although not specified in the Prosecution Result Summary provided to me, Mr Quattrochi's counsel advised me that, although the Crown has never alleged that there was a causal relationship between Mr Quattrochi's breach of the *Occupational Health and Safety Act 1985* and Mr Curtis' death, the severity of this sentence was influenced by the Magistrate's finding that Mr Quattrochi's admitted breaches of the *Occupational Health and Safety Act 1985* contributed to Mr Curtis' death.



54. Accordingly, Feature Homes Pty Ltd appealed the severity of the sentence handed down in the Magistrates Court.<sup>12</sup> This appeal was heard *de novo* on the basis of an agreed prosecution summary and was uncontested.

55. In his sentencing remarks on 18 August 2006, His Honour Judge McInerney confirmed that Count 1 and Count 3 had no relation whatsoever to Mr Curtis' death.

56. In determining the seriousness of this admitted breach of sections 21(1) and 2(e) of the *Occupational Health and Safety Act* 1985, His Honour Judge McInerney again commented that there was no suggestion that this breach led to the fatality. He also took into account the fact that that Feature Homes had no prior offences in 20 years of operation and Mr Quattrochi's personal circumstances.

57. His Honour also said:

*"The Crown do not allege a causal connection between such failures as I have been detailing of the company and such death. Clearly such is the province of the Coroners Court or a civil court. However, to the extent that I have been able to make observation, tragically Mr Curtis was the victim of a combination of circumstances which coincided approximately 30 years after the latent defect in the structure of the chimney was created."*

58. On 2 March 2004, the Building Control Commission (the "Commission") referred concerns about Mr Quattrochi's professional behaviour to the Practitioner Compliance Unit of the Building Commission. On 27 February 2008, the Practitioner Compliance Unit issued a Notice of Inquiry alleging that Mr Quattrochi had carried out partial demolition of a dwelling at 624 Park Street when a Building Permit for that work had not been issued.

59. On 26 March 2009, the Building Practitioners Board reprimanded Mr Quattrochi and imposed a fine of \$3000.

60. Further, the Commission noted that:

*"The Building Commission considers the commencement of works without a building permit as one of the more serious offences that can be committed by a building practitioner. The*

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<sup>12</sup> Noted by His Honour in his costs determination on 14 September 2006.

*ramifications of work without a building permit can be far reaching and can be catastrophic to the extreme. It is conceivable that the death of Mr Hayden Curtis may have been the result of previous works being undertaken without relevant permits being in place, and had those permits been obtained, then this site would not have been left in an unsafe state.*

*The penalty of a fine and reprimand reflects the severity of the offence and was determined to impress upon the practitioner the critical importance of the building approval system.”*

61. This Finding will now analyse the information available to me to determine the most likely mechanism of the incident in which Mr Curtis died.<sup>13</sup>
62. Then, it will focus on the systems associated with design of demolition work at 624 Park Street and the reasons why the risks associated with the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 were not identified before work commenced.
63. Finally, it will comment and make recommendations intended to prevent other deaths occurring for the reasons that Mr Curtis died.

#### **Mechanism of the incident in which Mr Curtis died**

64. In 1957, the corrugated iron roof at 624 Park Street was replaced because it leaked. Although the ceilings in the study and bedroom 1 were also replaced, there is no evidence that the ceiling in Bedroom 2 had been altered since the house was built in 1906.
65. At 8.45am on 3 June 2003, Mr Curtis and Mr Struve were removing corrugated iron sheets from the roof above the bathroom and Bedroom 2 at 624 Park Street when Mr Quattrochi left the site.
66. After Mr Curtis and Mr Struve had removed another two sheets of corrugated iron sheeting from the roof over bedroom 2 and the lounge room, Mr Curtis told Mr Struve that one of the ceiling joists was rotten and not to stand on it. He pointed the joist out and put his foot on it to show how it moved.<sup>14</sup>

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<sup>13</sup> This information includes the agreed summary tendered in the plea before the County Court, statements and oral evidence of witnesses heard in the inquest and documents and photographs included in the WorkSafe brief of evidence or tendered during the inquest.

<sup>14</sup> Adopted as fact by His Honour Judge McInerney on 18 August 2006.

67. Mr Curtis also showed Mr Struve that the chimney was overhanging the supporting brick wall between the lounge room and Bedroom 2 by about 200mm. He said it was unsafe and there was really nothing holding it up.<sup>15</sup>
68. After a short time, Mr Curtis and Mr Struve continued to remove two further sheets of corrugated iron sheeting from the roof around the chimney above the wall between the lounge room and Bedroom 2.<sup>16</sup>
69. At about 9.35am on 11 June 2003, Mr Quattrochi returned to the site. By then, Mr Curtis and Mr Struve had removed the sheets on the south, east and north sides of the chimney above the wall between the lounge room and Bedroom 2.
70. Accordingly, it is likely that the conversation between Mr Curtis and Mr Struve about the risks of the rotten ceiling joist and the overhang of the chimney occurred when they were removing the sheet of corrugated iron on the south side of the chimney. This is also the time when the base of the chimney would have become partially exposed.
71. At about 9.40am on 11 June 2003, after his telephone conversation, Mr Struve saw Mr Curtis take two or three steps on the ceiling joists above Bedroom 2 towards the ladder that provided egress from the roof of 624 Park Street.
72. Mr Struve then saw Mr Curtis start to lose his balance and fall backwards through the lathe and plaster ceiling of Bedroom 2 which was 3.5 metres above the floor.
73. In the context of subsequent events, I have formed the view that Mr Curtis either stood on a ceiling joist which broke or he broke at least one ceiling joist during his fall. However, I am unable to say whether he walked on the ceiling joist he had previously expressed concern about.
74. A short time after Mr Struve saw Mr Curtis fall through the ceiling of Bedroom 2, Mr Struve saw the brick chimney above the wall between the lounge room and Bedroom 2 start to lean toward the direction Mr Curtis had fallen. He heard timber creaking as he saw the chimney falling. He then saw that the chimney had disappeared through the ceiling into the rooms below.

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<sup>15</sup> Adopted as fact by His Honour Judge McInerney on 18 August 2006.

<sup>16</sup> Adopted as fact by His Honour Judge McInerney on 18 August 2006.

75. Chimney bricks and ceiling material fell on to Mr Curtis in Bedroom 2 at 624 Park Street and through the exposed ceiling of the bathroom.
76. Mr Curtis' injuries do not disclose sufficient detail to allow me to determine whether Mr Curtis would have survived his fall if bricks from the chimney had not subsequently fallen on him in Bedroom 2.
77. Mr Struve described the intact chimney as similar to that on the house next door.
78. Photographs of the next door chimney indicate that this chimney was about 3.8 metres high and 0.35 metres square.<sup>17</sup> The bottom metre was rendered to extend the width by about 0.2 metres. The top metre was corbelled to extend the width by about 0.5 metres.
79. Further, a photograph taken in the ceiling above Bedroom 2 by Mr Riccio on 12 February 2003 shows the chimney supported underneath by the brick wall between the lounge room and Bedroom 2. The chimney in the roof space was not rendered.
80. At its base, the chimney is nine or ten bricks long and two bricks wide. The height of the chimney between the ceiling and the roof ranges from two to eight bricks high. The east side of this part of the chimney is corbelled.
81. The western edge of the chimney intersects with the corrugated iron roofing at the height of two courses of bricks above the wall between the lounge room and Bedroom 2. The corrugated iron sheeting slopes at an angle so that it intersects with the third course of bricks when it is two bricks in from the outer edge.
82. Further, there are two wooden bearers supporting the corrugated iron roofing, one on each side of the chimney. There are also two wooden bearers supporting the ceiling on each side of the chimney. These four bearers all appear to be close to or against the chimney.
83. Photographs taken on 15 September 2003<sup>18</sup> show that the corrugated iron sheeting had been removed from all three sides of the chimney. Further, all the corbaling on the east side of the chimney within the ceiling and the wooden bearer that supported the roof on the south side of the chimney had disappeared.

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<sup>17</sup> A standard brick is 76 mm high x 230 mm long x 110 mm wide. Allowing 0.2 metres for mortar.

<sup>18</sup> In evidence, Mr Chasser confirmed that the photographs taken on 15 September 2003 showed the ceiling damage similar to that he saw on 11 June 2003.

84. The wooden bearer that supported the roof on the north side of the chimney and the two bearers supporting the ceiling on each side of the chimney remained *in situ*.
85. Two complete courses and a small part of the third course of bricks from the chimney remained within the roof space of 624 Park Street still supported by the brick wall between the lounge room and Bedroom 2. The west and north sides of this residual chimney were in line with the levels of the remaining corrugated iron roofing sheet. All of the rest of the chimney had disappeared.<sup>19</sup>
86. Roof damage included broken Oregon rafters, broken ceiling joists and a television aerial. Rubble was left on the floor of Bedroom 2 and into the adjoining bathroom. This included bricks, lathe and plaster pieces and plaster board.
87. This spread of the damage from the chimney to the ceilings of Bedroom 2 and the bathroom is consistent with the 3.8 metre high falling over while at least three metres of it was still effectively intact until it hit the material constituting the remaining ceiling of Bedroom 2 and the exposed ceiling of the adjoining bathroom.<sup>20</sup>
88. The residual part of the chimney remaining within the roof space of 624 Park Street after the chimney fell also included the 200mm section of brick work that was unsupported by the brick wall between the lounge room and Bedroom 2.
89. Therefore, it seems that the instability of the chimney structure was limited to two or three courses of bricks at or about the point where the chimney was integrated with the corrugated iron roof.
90. Accordingly, it is likely that the place at which the chimney broke reflected some deterioration or different mortar composition related to the nexus between the corrugated iron sheeting and the chimney.
91. Possible explanations for this site of instability include structural weakness associated with the way in which the corrugated iron was recessed into the chimney mortar to prevent water entry. Alternatively, the mortar on these two or three courses of bricks may have deteriorated over time differently from the rest of the chimney above and below the entry point to the roof.

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<sup>19</sup> Mr Court states that he moved some loose bricks around the remaining chimney in the roof space.

<sup>20</sup> Bedroom 2 was 3 metres wide; the bathroom was 2.5 metres wide.

92. Mr Curtis' fall and breaking of the ceiling joist was followed by collapse of the 3.8 metre high chimney above the wall between the lounge room and Bedroom 2 that was intact above the ceiling of Bedroom 2 and had been, until then, visible above the roof.
93. The sequence with which these events occurred over a short period of time suggests that Mr Curtis' fall was a factor in precipitating the chimney falling, probably because the ceiling joists broken during his fall were part of the remaining support for the chimney after the corrugated iron had been removed and/or the ceiling joists transferred movement within the structure back to the already unstable chimney.
94. However, given the chimney did not collapse under its weight but rather fell over from a site two or three brick courses above the wall supporting it and the 200mm unsupported overhang, there is no evidence that further support under the chimney would have changed the outcome.

#### **Design of the building works at 624 Park Street**

95. The designs for renovations at 624 Park Street included:
  - Alterations made prior to 1971 identified by reference to Mr Vincent's plans;
  - Mr Vincent's plans for alterations and extensions made in 1971;
  - Mr Aitken's plans for partial demolition, extension and alteration used to obtain a Planning Permit in 2002;
  - Mr Prvcic's plans used in the application for a Building Permit in June 2003;
  - Mr Balmaceda's plans; and
  - Mr Quattrochi's responsibility to prepare a demolition plan.

#### Alterations made prior to 1971

96. In a statement prepared as part of the Worksafe investigation of the incident in which Mr Curtis died, Mr Jones confirmed that the roof sheeting over the majority of 624 Park Street and the ceilings in the study and bedroom 1 were replaced in 1957 because the roof leaked.

### Mr Vincent's plans

97. Mr Jones also confirmed in his statement that he commissioned Mr Vincent to design renovations at 624 Park Street in 1971 ("Mr Vincent's plans"). These renovations were to include removal of two fireplaces in the study and Bedroom 1 and two chimneys, one servicing the fireplaces in the study and Bedroom 1 and the other servicing the fireplace in the kitchen.
98. Mr Vincent's plans also refer to removal of the fireplace in Bedroom 2. However, in his statement, Mr Vincent thought that the fireplace in Bedroom 2 was already inoperable.
99. Mr Vincent's plans show that the 1971 renovations at 624 Park Street included:
- Building a new second storey bedroom with stairs through the existing kitchen,
  - Replacing the oil heater in the lounge room with a new gas heater and demolishing the chimney,
  - Re-using the existing gas fire in the kitchen,
  - Demolishing the chimneys servicing the fireplaces in the study and Bedroom 1, and
  - Demolishing the chimney servicing the fireplace in the lounge room.
100. Mr Vincent's plans included diagonal dotted lines consistent with a diagonal fireplace in the study. In his statement, he said that this corner fireplace possibly shared the same chimney stack with the fireplace in Bedroom 1. These fireplaces would have been required to be flued separately.
101. Mr Vincent's plans also referred to demolition of the chimney associated with the fireplaces in the study and Bedroom 1. Therefore, I accept that the fireplaces in the study and Bedroom 1 were removed in 1971. I also accept that the chimney servicing those fireplaces was decommissioned in 1971.
102. Further, as an aside, I note that photographs taken on 15 September 2003 show that the chimney that serviced the fireplaces in the study and Bedroom 1 and was removed in 1971 remained visible above the roof on 624 Park Street. It seems to have been cut off at a height two bricks above the roof and painted at the same time as the roof was painted. I am unable to

say whether or to what degree this chimney was supported within the roof space or whether any changes have been made since then to secure that chimney.

103. Mr Vincent's plans also included diagonal dotted lines consistent with a diagonal fireplace in the north west corner of Bedroom 2. In his statement, he said that these markings indicated that the fireplace was to be removed.

104. Mr Vincent also stated that this corner fireplace possibly shared the same chimney stack with the fireplace in the lounge room. These fireplaces would have been required to be flued separately and the flue in the fireplace in the lounge room was maintained to service the new gas heater.

105. However, in a statement prepared as part of the Worksafe investigation of the incident in which Mr Curtis died, Mr Spark said that he did not recall doing any works involving removal of fireplaces or chimney stacks at 624 Park Street. He also said:

*"I do not think I did any works involving fireplaces and chimney stacks within this dwelling. I can recall in detail the building work I carried out on this job. I was present on this site though to its completion."*

106. Therefore, it is unclear how the fireplace in Bedroom 2 was removed in 1971 and what, if any, arrangements were made to secure the part of the shared chimney that had serviced the fireplace in Bedroom 2.

107. Further, in a statement prepared as part of the Worksafe investigation of the incident in which Mr Curtis died, Mr Vincent said that the only inspections he made were to measure the dwelling at 624 Park Street. He did not inspect the chimney that would have serviced the fireplace in Bedroom 2 and the lounge room.

108. Accordingly, I have formed the view that, despite the 100 year old, 3.8 metre high, intact, brick chimney visible above the wall between the lounge room and Bedroom 2 and indicators that there had previously been a fireplace in Bedroom 2, neither Mr Vincent nor the builder, Mr Spark, checked the status of this chimney or whether any further structural arrangements were required to maintain its safety.



## Mr Aitken's plans

109. In September 2001, Mr Riccio asked DWH Aitken and Associates to supply him with a concept design for a proposed addition and alteration at the dwelling on 624 Park Street.
110. Grant Aitken was the director of DWH Aitken and Associates. He is a building design and building surveyor. Mr Aitken was registered in the Register of Building Practitioners and in the categories of Building Inspector – Unlimited, Building Surveyor – Unlimited, Draftsperson – Building Design (Interior), Draftsperson – Building Design (Services).
111. On 4 September 2001, Mr Aitken inspected the site. He told the Court:
- “I would have walked into each room and had a look at it, then we would have sat down and done a design based on what we were looking at... .*
- There was no evidence of the chimney breast inside the room (Room 2) so there was no hearth or chimney breast when we measured...”*
112. On 11 September 2001, Mr Aitken's draftsperson measured the site to assist Mr Aitken to draw conceptual sketches for further discussion with Mr Riccio.
113. There was no brick work projecting into Bedroom 2 to indicate the previous existence of a chimney. However, photographs taken after Mr Curtis died show markings on the floor and a join in the skirting board consistent with the previous hearth denoted in Mr Vincent's plans.
114. Further, Mr Court, the electrician on site on 11 June 2003, subsequently confirmed that he noticed that this brick work from the chimney above the north west corner of Bedroom 2 seemed to project about 250-300mm overhanging Bedroom 2 and there was nothing to support it on the south side of the brick wall between the lounge room and Bedroom 2.
115. The existing floor plans arising from Mr Aitken's work (“Mr Aitken's plans”) show a single fireplace on the south wall of the lounge room. However, they do not refer to any of the other fireplaces in Bedroom 1 or Bedroom 2 or the kitchen. They do not include any reference to any chimneys.
116. The existing floor plans prepared by Mr Aitken also show that the demolition required to achieve his planned renovations included the first floor bedroom and the back of the ground floor including the verandah, laundry and kitchen areas.

117. These plans included modification of the bathroom adjacent to Bedroom 2 and a new bedroom on the first floor over this bathroom and second floor decking over Bedroom 2. This would require removal of the roofing over Bedroom 2. However, the proposed demolition plans did not indicate that the lounge room or Bedroom 2 were part of the planned building works.
118. Further, despite the 100 year old, 3.8 metre high, intact, visible, brick chimney that was intact above the ceiling of Bedroom 2 and indicators that there had previously been chimneys to service the fireplaces in the lounge room and Bedroom 2, Mr Aitken did not check the status of the chimney or whether any further structural arrangements were required to maintain its safety.
119. On 14 February 2002, Mr Aitken supplied Mr Riccio with a fee proposal to design extensions to and renovations of the dwelling at 624 Park Street. On 19 February, Mr Riccio accepted Mr Aitken's fee proposal.
120. On 14 May 2002, Mr Riccio accepted Mr Aitken's plans for submission to the City of Yarra for a Planning Permit.
121. On 14 May 2002, DWH Aitken and Associates submitted an application for a Planning Permit to the City of Yarra on behalf of Mr Riccio. DWH Aitken and Associates accompanied the application for a Planning Permit with a letter indicating that the existing first floor addition and existing amenities at the rear of the dwelling would be demolished. They also addressed the Heritage Overlay issues pertaining to the effect of the planned alterations on the streetscape. However, this letter does not mention a chimney.
122. None of the plans and drawings submitted to the City of Yarra with the application for a Planning Permit included any reference to the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2. None refer to any other chimney or fireplace other than the fireplace in the lounge room.
123. Further, in the course of assisting Mr Riccio to prepare and submit his application for a Planning Permit, Mr Aiken did not check the status of the ceiling joists or the wall between the lounge room and Bedroom 2 or the chimney above that wall or whether any further structural arrangements were required to maintain safety during the demolition required to perform the planned extensions and renovations.

124. Mr Aitken told the Court that he would not have been concerned about the chimney if he had known it was there:

*“From a structural point of view at that early stage, no, we would expect that down a track an engineer would take care of that part so we would assume it's going to be demolished but we wouldn't at the concept stage be concerned about it, no.”*

125. However, Mr Aitken's presumption that the chimney would be demolished does not take into account the application of the Heritage Overlay to demolition of existing chimneys. Therefore, I do not accept his explanation for not including it in the plans he submitted to the City of Yarra to support Mr Riccio's Application for a Planning Permit for proposed demolition, alteration and extension at 624 Park Street.

126. On 19 July 2002, Mr Aitken subsequently amended the plans as directed by Mr Riccio to comply with the requirements of the City of Yarra. The amendments did not include any changes to the second floor decking over Bedroom 2 or the wall between the lounge room and Bedroom 2.

127. On 26 November 2002, the City of Yarra issued a Planning Permit for partial demolition, extension and alteration of the dwelling at 624 Park Street. On 26 December, the amended plans were endorsed by the City of Yarra.

128. On 12 January 2003, Mr Riccio asked Mr Aitken to amend the plans including raising the roof above the lounge room. It is unclear whether these amendments were ever submitted to the City of Yarra.

129. On 30 January 2003, Mr Aitken submitted a further fee proposal for continuation of their design work. Mr Riccio did not accept this proposal.

#### Mr Prvcic's plans

130. On 14 February 2003, Mr Riccio engaged Design Edge Associates Architects to provide new working drawings for the proposed extensions and alterations. However, Mr Aitken refused release of copyright to allow another professional to use their design.

131. Branko Prvcic was the director of Design Edge Associates. He is an architect who is registered under the *Architects Act* 1991.

132. Mr Prvcic used the endorsed town planning drawings for proposed demolition, alteration and extension at 624 Park Street prepared by Mr Aitken to inform his drawings to accompany Mr Riccio's application for a Building Permit ("Mr Prvcic's plans"). He says these drawings only related to the proposed additions and extensions and did not include the retained existing northern part of the dwelling.
133. Further, Mr Prvcic did not inspect the site. He told the Court that he offered to re-measure the site but Mr Riccio declined his offer.
134. In Court, Mr Prvcic agreed that although the planned demolition stopped at the south wall of Bedroom 2, the planned new roof structure and deck extended up to, and abutted the roof above the lounge room so that the existing roof over Bedroom 2 also required demolition before the renovation could commence.
135. Mr Prvcic also agreed that subsequent photos of Bedroom 2 included evidence that there had previously been a fireplace in the north west corner of Bedroom 2. However, he said that his becoming aware of this may not have triggered further investigation because:
- "...generally you assume that if something's been there it's been all demolished. You wouldn't assume that someone would demolish a fireplace and leave a chimney in place."*
136. Further, Mr Prvcic interpreted Mr Aitken's plans dated 12 March 2003 to indicate that there was no intention to change the operation of the existing fireplace in the lounge room and, accordingly, no intention to demolish any of the structure surrounding that chimney or the roof above the lounge room.
137. Mr Prvcic told the Court that, in the absence of specific instructions, he agreed that the builder or demolisher would be expected to comply with AS2601-2001 when undertaking demolition work.
138. Mr Prvcic also said that, since he became aware of Mr Curtis' death, he has reviewed the standard "Demolition Notes" that his company puts on plans to tell the builder that he or she needs to make himself fully aware of the site before doing any demolition.
139. Mr Prvcic also told the Court that he now has a general practice of entering the roof space and inspecting it for chimneys and other structural issues not visible from the ground if he is doing renovations.

140. Further, Mr Prvcic told the Court that he had changed his practice in relation to chimneys. Now, he would tell the owner of any property with a chimney like that seen in the photograph taken by Mr Riccio on 12 February 2003 that he ought to get it assessed by a structural engineer.
141. Accordingly, despite the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 and indicators that there had previously been a fireplaces in Bedroom 2, Mr Prvcic did not check the status of the chimney or whether any further structural arrangements were required to maintain its safety.
142. Further, in the course of assisting Mr Riccio to prepare and submit his application for a Building Permit, Mr Prvcic did not check the status of the ceiling joists or the wall between the lounge room and Bedroom 2 or the chimney above that wall or whether any further structural arrangements were required to maintain safety during the demolition required to perform the planned extensions and renovations.

#### Mr Balmaceda's plans

143. On 12 March 2003, Mr Prvcic asked CGB Consulting Engineers for a soil report for 624 Park Street. On 18 March 2003, Mr Balmaceda produced a site investigation report for the proposed new extension. This report deals with footings required for the proposed extension and alteration works.
144. On 15 April 2003, Mr Prvcic subcontracted the structural engineering works for 624 Park Street to CGB Consulting Engineers. He sent Mr Balmaceda three pages of drawings: a proposed ground floor plan, west and south elevations, and an eastern elevation. These drawings relate to the proposed demolition, extension and alteration at 624 Park Street. They do not include the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2. None refer to any other chimney or fireplace other than the fireplace in the lounge room.
145. Carlos Balmaceda was the director of CGB Consulting Engineers. He is a civil structural engineer registered in the Register of Building Practitioners and in the categories of Domestic Builder – Unlimited, and Engineer – Civil.

146. Mr Balmaceda says that the scope of his works did not include any structural assessment of the existing premises that did not form part of the proposed works. The chimney in the lounge room was to remain unaltered. He was unaware that a fireplace had previously been removed from Bedroom 2.
147. Further, Mr Balmaceda had no conversations with Mr Prvcic or Mr Quattrochi about the proposed extensions. He did not inspect the site.
148. Mr Balmaceda also said he was not concerned with the demolition because he was a structural engineer not a demolition engineer.
149. Mr Balmaceda believed that a demolition engineer would be involved for a project of this size but he did not know who that was. Mr Balmaceda also said that, in the absence of a nominated demolition engineer, he expected that the building surveyor would follow that issue up before they issued a Building Permit.
150. Mr Balmaceda's plans for the extensions included a shaded area to indicate the part of the house that would be affected by the renovations. This area included the wall between Bedroom 2 and the lounge room.
151. On 28 April 2003, CGB Consulting Engineers prepared and provided working drawings and specifications to Design Edge Associates and Mr Riccio ("Mr Balmaceda's drawings").
152. Drawing Number 02 of Mr Balmaceda's drawings also includes prominent "Demolition Notes" which state:
- i. *"Demolition contractor not to proceed with any demolition works until all demolition procedures & instructions as specified by the structural engineer have been read, understood and complied with.*
  - ii. *All structures shown dotted are to be demolished and all debris removed from the site.*
  - iii. *Builder to cut and seal all services to the satisfaction of the relevant service authority & building inspector.*
  - iv. *Builder to remove or "cut & fill" as required to achieve indicated levels."*

153. On my reading of Mr Balmaceda's drawings, the dotted structures include the wall between the lounge room and Bedroom 2. There were no instructions included in relation to the existing or any other chimney.
154. Accordingly, despite noting the existence of the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 and indicators that there had previously been a fireplace in Bedroom 2, Mr Balmaceda did not check the status of the chimney or whether any further structural arrangements were required to maintain its safety.
155. Further, in the course of assisting Mr Riccio to prepare and submit his application for a Building Permit, Mr Balmaceda did not check the status of the ceiling joists or the wall between the lounge room and Bedroom 2 or the chimney above that wall or whether any further structural arrangements were required to maintain safety during the demolition required to perform the planned extensions and renovations.

#### Mr Quattrochi's role in the partial demolition at 624 Park Street

156. On 3 June 2003, Mr Quattrochi applied for a Building Permit on behalf of Mr Riccio for demolition, extension and alteration of 624 Park Street to Wayne Gray who was the Municipal Building Surveyor of the City of Whittlesea.
157. Mr Quattrochi's application for a Building Permit included Mr Prvcic's plans which referred to a Demolition Plan. However, they did not include a Demolition Plan.
158. Mr Quattrochi told a Building Control Commission investigator, Sergio Perna, that he spoke to a building surveyor from the City of Whittlesea a week or two before he lodged the application for a Building Permit. This person told him that, because he was a registered builder, he did not need a separate permit for the demolition works associated with the extension and renovation of 624 Park Street and he did not need to involve a registered demolisher.
159. Further, Mr Quattrochi told Mr Perna that he always got his permits from the City of Whittlesea because he knew they always issued them within a week of receiving the application. Sometimes he got a permit within 2-3 days. He also said that the person at the

City of Whittlesea with whom he lodged the application for Building Permit confirmed it would be ready in not more than a week.

160. Mr Quattrochi also told Mr Perna that he rang the City of Whittlesea on 9 June 2003. They told him the permit would be issued on either 10 or 11 June. Mr Riccio was desperate to start the work and he knew the permit was coming so he started the work without a permit.
161. Although the application for a Building Permit was addressed to Mr Gray, Barbara Carson was responsible for carriage of Mr Quattrochi's application between its filing on 3 June and 16 July 2003. Documents on file refer to Ms Carson as part-time, unqualified and Mr Gray's assistant.
162. Until 16 July 2003, neither of the Municipal Building Surveyors at the City of Whittlesea nor the City of Yarra was aware that Mr Quattrochi had lodged an application for a Building Permit in relation to and commenced building work at 624 Park Street.
163. Mr Curtis, Mr Struve and Mr Bonafede were not and never had been registered in the Register of Building Practitioners. Therefore, they were responsible to Mr Quattrochi for the demolition work they performed at 624 Park Street on 10 and 11 June 2003. As employees and as an apprentice, Mr Curtis and Mr Struve were also responsible to Mr Ciavarella.
164. On 10 June 2003, Mr Quattrochi worked with Mr Curtis, Mr Struve and Mr Bonafede to demolish the back section of 624 Park Street. This work was included in the Contract for Demolition signed by Mr Riccio on 10 June 2003.
165. On 11 June 2003, Mr Quattrochi directed Mr Curtis, Mr Struve and Mr Bonafede to remove corrugated iron sheet roofing on the roof above the bathroom and Bedroom 2 and around the chimney. This work was clearance ready for construction of the extension to commence and, accordingly, it was also included in the Contract for Demolition signed by Mr Riccio on 10 June 2003.
166. Further, Mr Quattrochi specifically told Mr Curtis, Mr Struve and Mr Bonafede that the chimney was not to be demolished. Therefore, Mr Quattrochi was aware that there was 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2.



167. Therefore, in entering the Contract for Demolition with Mr Riccio on 10 June 2003 and directing Mr Curtis, Mr Struve and Mr Bonafede to remove the corrugated iron sheet roofing on the roof above the bathroom and Bedroom 2 and around the chimney, on 11 June 2003, Mr Quattrochi was the registered builder responsible for the partial demolition of 624 Park Street on 1 and 11 June 2003.

168. However, there is no evidence to suggest that Mr Quattrochi's failure to obtain a Building Permit before he started demolition work at 624 Park Street had any causal relationship to Mr Curtis falling through the ceiling or the subsequent collapse of the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2.

## COMMENTS

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

1. Hayden Curtis was 20 years old when he died. He worked as a third year apprentice carpenter for JNME Constructions.
2. Michele (Michael) Ciavarella was the proprietor of JNME Constructions. Mr Ciavarella had run his own building business for over 20 years and he also sub-contracted employees to work for other builders.
3. Mr Curtis died when he was performing demolition work on the dwelling at 624 Park Street in Carlton North ("624 Park Street").
4. The dwelling at 624 Park Street was constructed in 1906. In 1956, the roof had been replaced
5. The original dwelling at 624 Park Street had at least five fireplaces including a fireplace in the south wall of the lounge room and a fireplace in the northwest corner to the adjacent room, now called Bedroom 2.
6. In 1971, the dwelling at 624 Park Street underwent major renovations. These included addition of a second storey bedroom and changes to the laundry and kitchen areas. They also included removal of the fireplaces in the study and Bedrooms 1 and 2.
7. None of the plans and drawings used for the renovations in 1971 include any reference to the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge

room and Bedroom 2. None refer to any other chimney or fireplace other than the fireplace in the lounge room and a gas fireplace in the kitchen.

8. In 2002, the owners of 624 Park Street, Richard & Caterina Riccio, commenced arrangements to renovate and extend the dwelling on the property. These alterations required complete demolition of the rear of the dwelling and removal of the existing corrugated iron roof above Bedroom 2.
9. Mr Aitken from DWH Aitken and Associates prepared the plans for submission to the City of Yarra for a Planning Permit. None of the plans and drawings submitted to the City of Yarra with the application for a Planning Permit included any reference to the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 or indicators that there had previously been a fireplace in Bedroom 2.
10. Mr Prvcic from Design Edge Associates and Mr Balmaceda from CGB Consulting Engineers provided further planning, working drawings and engineering advice to support an application to the City of Whittlesea for a Building Permit.
11. Neither Mr Prvcic nor Mr Balmaceda checked the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 or whether any further structural arrangements were required to maintain its safety.
12. Further, none of the plans and drawings submitted to the City of Whittlesea with the application for a Building Permit included any reference to the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 or indicators that there had previously been a fireplace in Bedroom 2.
13. On 3 June 2003, Mr Quattrochi lodged an application for a Building Permit addressed to the Municipal Building Surveyor at the City of Whittlesea, Wayne Gray. He paid the required fees to the City of Whittlesea and was issued with an application number by the City of Whittlesea.
14. This application was never granted.
15. Mr Quattrochi was the principal contractor of Feature Homes Pty Ltd ("Feature Homes"). He was registered in the Register of Building Practitioners and had more than 20 years experience as a domestic builder.

16. On 9 June 2003, Mr Quattrochi executed contracts with Mr Riccio for performance of the planned building works. He also arranged for Mr Curtis and his friend and colleague, Andrew Struve, to commence work at 624 Park Street on the following day.
17. On 10 June 2003, Mr Quattrochi, Mr Curtis, Mr Struve and another labourer, Dion Bonefede, commenced demolition work at 624 Park Street.
18. On the morning of 11 June 2003, Mr Curtis and Mr Struve were removing corrugated iron sheets from the roof of 624 Park Street. They handed them to Mr Bonefede on the ground.
19. Mr Struve told investigators that Mr Curtis expressed concern about the structural strength of a rotten ceiling joist above Bedroom 2 and showed him that it moved easily. Mr Curtis warned Mr Struve not to stand on that joist.
20. Mr Curtis also showed Mr Struve that the chimney was overhanging the supporting brick wall by about 200mm in that area. He said it was unsafe and there was really nothing holding it up. This overhang was confirmed by investigators after the incident.
21. At about 9.35am on 11 June 2003, Mr Curtis and Mr Struve stopped work for morning tea. Mr Curtis sat on a ceiling joist near the chimney to take a phone call. He then stood up and moved towards the ladder to go down stairs.
22. Mr Struve says that Mr Curtis appeared to stumble and then he fell through the ceiling of Bedroom 2. The chimney became unstable and fell across Bedroom 2 and the adjacent bathroom. The bricks fell through the ceiling on top of Mr Curtis on the floor of Bedroom 2 and on to the floor of the adjacent bathroom.
23. Mr Curtis died from injuries received in the incident.
24. From information included in the agreed summary tendered in Mr Quattrochi's plea of guilty to offences under the *Occupational Health and Safety Act* 1985 before the County Court, statements and oral evidence of witnesses heard in the inquest and documents and photographs included in the Worksafe brief of evidence or tendered during the inquest, I have formed the opinion that the most likely sequence of events comprising the incident in which Mr Curtis died is this:

- Mr Curtis identified a rotten ceiling joist and the unstable chimney at 624 Park Street after he and Mr Struve had removed the corrugated iron sheets on the roof to the south of the chimney but before they had removed the roofing sheets to the north of the chimney;
- Mr Curtis either stood on and broke a rotten ceiling joist or slipped between and broke a ceiling joist as he fell through the unprotected ceiling on to the floor of Bedroom 2;
- The 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 tipped over on to the ceilings of Bedroom 2 and the adjoining bathroom;
- The chimney tipped and broke at about the point where it exited the roof space through the corrugated iron roof which Mr Curtis and Mr Struve had removed;
- The bricks from the chimney fell through the unprotected ceiling on to Mr Curtis and on to the floor of Bedroom 2 and the adjacent bathroom;
- The sequence with which events occurred indicates that Mr Curtis' fall was a factor in precipitating the chimney tipping over, probably because the ceiling joists broken during his fall were part of the remaining support for the chimney when the corrugated iron was removed and transferred movement within the structure back to the already unstable chimney;
- None of the registered building practitioners involved in planning or commencing demolition at 624 Park Street identified the risks associated with removing the corrugated iron roofing around the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 or whether any further structural arrangements were required to maintain its safety;
- I am unable to say whether Mr Curtis would have died from his injuries if the bricks had not fallen on him after his fall.

25. Therefore, I have formed the view that chimneys that remain in place for a hundred years may develop weakness at the point where they intersect with the roofing material. Knowledge of this possibility places particular responsibility on all building professionals engaged to demolish a roof around an old brick chimney.

26. In Victoria, domestic building work<sup>21</sup> over \$5000<sup>22</sup> is subject to obligations imposed on municipalities, property owners, builders and other building professionals by the *Building Act* 1993 (the “Building Act”).
27. Together with the planning provisions of the *Planning and Environment Act* 1987, the Building Act was intended to improve the health, safety and amenity of people who use buildings together with significant cost savings to the government.<sup>23</sup>
28. Further, the Building Act was intended to extend inspection and upgrading of existing buildings beyond purely fire safety matters to include a broader range of public safety matters such as structural safety.<sup>24</sup>
29. In order to provide these improvements, the main purposes of the Building Act include:
- “(a) to regulate building work and building standards; and...*
- (c) to provide an efficient and effective system for issuing building and occupancy permits and administering and enforcing related building and safety matters and resolving building disputes; and*
- (d) to regulate building practitioners ....;”*
30. The Building Act is supported by the Building Regulations 1994. These were replaced by the Building Regulations 2006 (the “Building Regulations”). The objectives of these regulations include:
- “to prescribe standards for the construction and demolition of buildings”*
31. In my opinion, the risk associated with collapse of old chimneys during renovation and demolition of residential buildings is sufficient to justify special provision in the Building Regulations to prescribe adequate support when roofing material around them is being removed. **Recommendation 1**

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<sup>21</sup> Section 3 of the *Building Act* 1993 defines *building work* means work for or in connection with the construction, demolition or removal of a building.

<sup>22</sup> Reg. 5.1.6 Building Regulations 1994.

<sup>23</sup> Second Reading speech, Minister for Planning, Parliament of Victoria, 11 November 1993, Hansard p. 1689

<sup>24</sup> Second Reading speech, Minister for Planning, Parliament of Victoria, 11 November 1993, Hansard p. 1693

## **Building Control Commission**

32. Section 193 of the Act establishes the Building Control Commission (the "Commission") as the body responsible for oversight for the building control system in Victoria.
33. The Commission is made up of a single commissioner who is responsible to the Minister for Planning. It is funded from a levy on Building Permits.<sup>25</sup>
34. The functions of the Commission include:
- "(a) to monitor and enforce compliance with the provisions of this Act and the regulations relating to building and building practitioners;....*
  - (c) to monitor developments relevant to the regulation of building standards in Victoria;...*
  - (f) to disseminate information (including dissemination to consumers) on matters relating to building standards and the regulation of buildings and building practitioners;*
  - (h) to provide information and training to assist persons and bodies in carrying out functions under this Act or the regulations;*
  - (j) to promote the resolution of consumer complaints about work carried out by builders;...*
  - (l) to advise the Minister on the carrying out of the Commission's functions and powers under this Act and on any other matter referred to it by the Minister."*
35. The Commission also provides advice to the government on issues of legislative change.

## **Municipalities**

36. Section 212 of the Building Act and section 47 of the *Planning and Environment Act 1987* require municipalities to ensure enforcement and compliance with the planning and the building regulatory schemes in Victoria.
37. In relation to planning, the relevant municipal district is the responsible authority for issue of a planning permit for any planned alterations and extensions.

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<sup>25</sup> Second Reading speech, Minister for Planning, Parliament of Victoria, 11 November 1993, Hansard p. 1689

38. Accordingly, the City of Yarra is the relevant municipal district and the relevant responsible authority for 624 Park Street under the Planning Scheme.
39. Section 29A of the Building Act specifically requires the relevant building surveyor to ensure that there is a planning permit issued by a relevant responsible authority in relation to any intention to demolish a chimney that is visible from the street.
40. Although there was no plan to demolish the chimney that fell on Mr Curtis, proper inspection and inclusion of the chimney in the plans and drawings submitted to the City of Yarra in 2002 with the application for a planning permit would have provided an opportunity to identify the potential risks to the chimney associated with the planned demolition and the danger imposed by the weakened ceiling joists near the chimney over Bedroom 2.
41. Further, Mr Curtis' death demonstrates that 100 year old, 3.8 metre high, intact, visible, brick chimneys are inherently likely to be unsafe.
42. The Parliament intended that building work on dangerous buildings remain the responsibility of the municipal building surveyor in the relevant council. This issue could not be delegated a private sector building surveyor and a municipal council had the option of employing private sector building surveyors on a contract basis to perform the necessary functions, but the accountability was not transferable from the municipal council.<sup>26</sup>
43. Therefore, under the current building scheme, the only certain opportunity for the local municipal council to identify a dangerous chimney and retain responsibility for its planned demolition, alteration and/or extension occurs when an application is made for a Planning Permit. **Recommendation 2**
44. This opportunity for intervention would be maximised if Heritage Overlay provisions of the Building Regulations 2006 were amended to require a permit application for buildings built prior to, say, 1940 to include a safety assessment of all visible chimneys. **Recommendation 3**
45. In relation to the building scheme, the Building Act provides municipal councils with a range of options for how they exercise their building control responsibilities including maintaining responsibility for issuing Building Permits, contracting out the service to private building

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<sup>26</sup> Second Reading speech, Minister for Planning, Parliament of Victoria, 11 November 1993, Hansard p. 1693

surveyors or withdrawing from the administration of building control functions in its municipal district.<sup>27</sup>

46. Accordingly, Part 3 of the Building Act requires the person carrying out building work to hold a current building permit for that work issued by a municipal building surveyor or a private building surveyor appointed by the municipal council. This person is defined as the relevant building surveyor for the application.
47. Part 2 of the Building Regulations 1994 prescribed the process for obtaining a building permit. In particular:
  - Reg 2.1 prescribed the information to accompany applications including sufficient information to show that the building work complies with the regulations, three copies of drawings that show the details that are necessary to ensure compliance, three copies of the methods to be used in construction, and one copy of any reports necessary to demonstrate that building will comply with the regulations.
  - Reg 2.1.5(c) prescribed the information to accompany applications to demolish or remove part of a building including computations to show that the remainder of the building will comply with the regulations and a written description of the demolition or removal procedure and evidence that the demolisher has the necessary knowledge experience equipment and storage facilities to properly conduct the demolition process.
  - Reg 2.5 required the relevant building surveyor to give a copy of the application to the relevant reporting authority<sup>28</sup> within five business days of its receipt. In this case, the City of Yarra was a relevant reporting authority.
48. The relevant building surveyor must decide an application for a building permit after considering all the information available to him or her.

### **Building surveyors**

49. The Building Act defines *building practitioner* as including:

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<sup>27</sup> Second Reading speech, Minister for Planning, Parliament of Victoria, 11 November 1993, Hansard p. 1691

<sup>28</sup> Section 3 Building Act 1994 defines a *reporting authority* as a body or person (other than a municipal building surveyor or private building surveyor to whom an application is made) that is required by this Act or the regulations or by any other Act or regulations to report on or consent to an application for a permit.



*“(a) a building surveyor; or*

*(b) a building inspector; .... or*

50. Building surveyors are required to be registered by the Commission. The Commission may also recommend to a building surveyor that they take action specified by the Commission.
51. Further, in making their decisions, the relevant building surveyor must rely on the information provided to them by other registered building practitioners, by relevant municipal and other responsible authorities and by property owners.
52. Reg 5.6 of the Building Regulations 1994 required the relevant approved building surveyor to inspect and approve the precautionary measures taken by the builder in accordance with AS 2601-1991 Demolition of Structures (the “Australian Standard”) or to exempt minor demolition work if he or she forms the opinion that the nature of the demolition work does not warrant those measures, presumably before he or she issues a building permit.
53. Cl.1.1 of the Australian Standard described its scope as including minimisation of the risk to the public and site personnel.
54. The revised Australian Standard<sup>29</sup> has amended Cl.1.1 to include:

*“This Standard sets out requirements and provide guidance to planners, owners, engineers, contractors and interested parties on the planning and procedures for the demolition of a structure.*

*The Standard also provides advice and guidance on a range of controlled demolition methods so that the risk -*

*(a) to the health or safety of the public and site personnel and occupiers of adjoining property;*

*(b) of damage to the immediate environment; and*

*(c) of damage to adjoining premises will be minimised”*

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<sup>29</sup> AS2601 – 2001 The demolition of structures. Adopted in reg 607 Building Regulations 2006.

55. Therefore, the system for accountability of building surveyors is important in determining the best way to ensure safety during demolition, extension and renovation of old buildings.
56. Section 3 of the Building Act 1993 defines “*relevant building surveyor*” as including:
- “(a) in relation to an application to, or permit, approval, inspection, direction, notice or order issued or given by, a municipal building surveyor, means the municipal building surveyor; and*
- (b) in relation to an application to, or permit, approval, inspection, direction, notice or order issued or given by, a private building surveyor, means the private building surveyor; ....”*
57. On 3 June 2003, Mr Quattrochi lodged an application for a Building Permit addressed to the Municipal Building Surveyor at the City of Whittlesea, Wayne Gray. He paid the required fees to the City of Whittlesea and was issued with an application number by the City of Whittlesea.
58. Mr Gray was an approved building surveyor. Therefore, in accepting the application for a Building Permit, Mr Gray established himself as the relevant building surveyor in relation to the proposed building works at 624 Park Street.
59. If Mr Quattrochi had not commenced demolishing at 624 Park Street on 10 June 2003 before the Building Permit was issued, Mr Gray was the building surveyor who would have been required to enforce the safety issues associated with the planned demolition.
60. However, until 16 July 2003, Mr Gray was not aware that Mr Quattrochi had lodged an application for a Building Permit in relation to and commenced building work at 624 Park Street. Further, the Building Surveyor at the City of Yarra had not been notified that an application had been made.
61. Mr Quattrochi had 20 years experience as a builder. He told the investigator for the Commission that he always used the City of Whittlesea because they approved Building Permits within a week. Therefore, Mr Quattrochi’s decision to apply for a Building Permit from the City of Whittlesea rather than the City of Yarra could be interpreted as a valid form of forum shopping.

62. Further, Mr Quattrochi's application for a Building Permit did not include a Demolition Plan. He told the Commission investigator that the City of Whittlesea told him he did not need a specialist demolition engineer because he was a registered builder. The structural engineer, Mr Balmaceda said that, in the absence of a nominated demolition engineer, he expected that the building surveyor would follow up that issue before they issued a Building Permit.
63. Accordingly, I find it difficult to understand how the City of Whittlesea can routinely grant applications for Building Permits within a week if the applicant does not know to include a Demolition Plan in the application.
64. The Building Act provides for Building Permits to be issued by private surveyors. The Court of Appeal has also acknowledged that a municipal building surveyor is authorised to work outside his municipal district for personal reward.<sup>30</sup>
65. Further, in 2008 the Building Act was amended to clarify the position of a Municipal Building Surveyor acting outside the relevant municipal district.
66. On one hand, a municipal building surveyor of a council, with the consent of that council, may also be appointed to carry out most functions under the Building Act in respect of land outside the municipal district of that council or any other functions conferred on a private building surveyor by the Act or the regulations.
67. Accordingly, in accepting Mr Quattrochi's application outside the municipality in which the relevant property stands, Mr Gray seems to have been acting as a private approved building surveyor rather than in his role as the Municipal Building Surveyor at the City of Whittlesea.
68. A private building surveyor is required to work in a professional and impartial manner regulated by the Commission.
69. These provisions were intended to improve the skill levels of building surveyors as well as provide faster building permits.<sup>31</sup>

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<sup>30</sup> *Moorabool Shire Council & Anor v Taitapanui & Ors* (2006) 14 VR 55 [2006] VSCA 30 (24 February 2006)

<sup>31</sup> Second Reading speech, Minister for Planning, Parliament of Victoria, 11 November 1993, Hansard p. 1690

70. On the other hand, the municipal building surveyor of a council may, by instrument, delegate any of his or her functions under the Act or the regulations to any person employed or engaged by the council who is registered as a building surveyor (unlimited).
71. Mr Quattrochi's application was being managed by Barbara Carson who was an employee of the City of Whittlesea but was not qualified or registered as a building surveyor.
72. Therefore, Ms Carson's involvement in determining Mr Quattrochi's application between its filing on 3 June and 16 July 2003 when the municipal surveyor became aware of the application is inconsistent with the municipal building surveyor accepting responsibility for its determination during that period.
73. Further, Mr Quattrochi says he commenced work at 624 Park Street without a permit because an unspecified City of Whittlesea employee had assured him the permit would be approved in the next two days.
74. I am unable to say who at the City of Whittlesea spoke to Mr Quattrochi on or about 9 June 2003. However, without their assurance that the Building Permit would be available in two days, Mr Quattrochi would not have commenced work on 10 June 2003 and Mr Curtis would not have been at 624 Park Street on 11 June 2003.
75. The building at 624 Park Street was subject to a Heritage Overlay imposed by the City of Yarra. Therefore, it had special significance to the local area..
76. Further, Building Permits for Planning Permit for the demolition, renovation and extension of "dangerous buildings" must be issued by the municipality in which the building is located. This maintains responsibility for their management within the local area.
77. Inconsistencies between the legal arrangements for independent building surveyors and municipal building surveyors that influenced the issue of Planning Permit and the application for a Building Permit for demolition, extension and alteration for 624 Park Street contributed to the Mr Curtis' death and loss of a 100 year old, 3.8 metre high, intact, visible, brick chimney.
78. These would be overcome if the Municipal Building Surveyor in the municipality which issues the Planning Permit retained responsibility for issue of a Building Permit in areas that the municipality has determined are subject to Heritage Overlay. **Recommendation 4**

## Registered building practitioners

79. The Building Act also defines *building practitioner* as including:

“....

(d) *an engineer engaged in the building industry; or*

(e) *a draftsman who carries on a business of preparing plans for building work or preparing documentation relating to permits or permit applications; or*

(f) *a builder including a domestic builder;”*

80. There is no capacity in the Building Act for registration as a demolition engineer. Therefore, I presume that this is not considered a specialist craft but, rather, a sub-speciality of engineers engaged in the building industry.

81. This presumption is shared by the person from the City of Whittlesea who advised Mr Quattrochi that he did not need to involve a demolition engineer because he was a registered builder.

82. The Commission is empowered to enforce its regulatory role with power to refer non-compliant building practitioners to the Building Practitioners Board.

83. In particular, the Commission was responsible for ensuring the professional standards of Mr Quattrochi, Mr Aitken, Mr Balmaceda and Mr Connard but not Mr Prvcic.

84. The Commission has an audit program which is both random and targeted to audit registered building practitioners. With regard to safety, the Commission mainly looks at compliance with the Building Act and its associate regulations. They say that safety standards are built into those regulations. **Recommendation 5**

85. Grant Aitken is a registered building design and building surveyor. Therefore, he is a competent person in relation to demolition or, at least, in identifying issues that require involvement of competent person in relation to demolition.

86. Although Mr Aitken's work at 624 Park Street did not involve work as a building surveyor and was performed in relation to obtaining a planning permit, it is difficult to avoid the

possibility that, as a registered building surveyor, he carried extra responsibilities to the Commission.

87. Mr Aitken created the original concept design and plans for demolition extension and alteration of 624 Park Street for Mr Rizzio. He also submitted these plans to the City of Yarra to obtain a Planning Permit.
88. Mr Aitken's plans included modification of the bathroom adjacent to Bedroom 2 and a new bedroom on the first floor over this bathroom and second floor decking over Bedroom 2. This would require removal of the roofing over Bedroom 2.
89. Mr Aitken's plans also included an indication of the parts of the residence that would require demolition. However, the proposed demolition plans did not indicate that the lounge room or Bedroom 2 were involved.
90. Mr Aitken inspected the site as part of this work. However, he did not look at the roof or in the ceiling. Mr Aitken did not identify the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2. He did not notice the indicators of a previous fireplace in Bedroom 2. Further, he did not identify the other unsupported chimney or the other previous fireplaces without chimneys in the building.
91. Accordingly Mr Aitken did not consider the risks associated with the planned demolition, extension and alteration works at 624 Park Street. He did not identify any structural arrangements that may be required to maintain its safety. There is no reason to believe that he considered whether or not the building was a "dangerous building".
92. Branko Prvcic was the director of Design Edge Associates. He is an architect who is registered under the *Architects Act* 1991.
93. Section 24 of the Act provides for the relevant building surveyor to issue a building permit for work to be performed by a registered builder or an insured architect.
94. Therefore, Mr Prvcic is a competent person in relation to demolition or, at least, in identifying issues that require involvement of competent person in relation to demolition.
95. Mr Prvcic used the endorsed town planning drawings for proposed changes at 624 Park Street to prepare his drawings for building approval. These were, in effect, Mr Aitken's plans. Mr

Prvcic says these drawings only related to the proposed additions and extensions and did not include or consider the retained existing part of the dwelling.

96. Further, Mr Prvcic did not inspect the site. He told the Court that he offered to re-measure the site but Mr Riccio declined his offer.
97. Accordingly, Mr Prvcic did not identify the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 or whether any further structural arrangements were required to maintain its safety. Further, he did not identify any of the other unsupported chimneys or previous fireplaces without chimneys in the building.
98. Rather Mr Prvcic subcontracted the structural engineering assessment of the planned demolition, alterations and extension at 624 Park Street to Carlos Balmaceda.
99. Mr Balmaceda is a civil structural engineer. Therefore, he is a competent person in relation to demolition or, at least, in identifying issues that require involvement of competent person in relation to demolition. However, Mr Balmaceda's work did not include any structural assessment of the existing premises that did not form part of the proposed works. He did not inspect the site.
100. Mr Balmaceda also said he was not concerned with the demolition because he was a structural engineer not a demolition engineer.
101. Accordingly, Mr Balmaceda did not identify the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 or whether any further structural arrangements were required to maintain its safety. Further, he did not identify any of the other unsupported chimneys or previous fireplaces without chimneys in the building.
102. Mr Balmaceda told the Court that an investigation of this nature was within the work expected of a demolition engineer. He expected that a demolition engineer would be called in by the municipal building surveyor.
103. None of the registered building practitioners who prepared or contributed to the plans used in the applications for a Planning Permit and a Building Permit for the demolition extension and alteration of 624 Park Street identified the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 or whether any further

structural arrangements were required to maintain its safety. Further, they did not identify any of the other unsupported chimneys or previous fireplaces without chimneys in the building.

104. Mr Quattrochi was the registered building practitioner nominated in the application for a building permit for 624 Park Street as the builder. Therefore, he is a competent person in relation to demolition or, at least, in identifying issues that require involvement of competent person in relation to demolition.

105. Section 16 of the Act provides:

***“Building permit required***

*(1) A person must not carry out building work unless a building permit in respect of the work has been issued and is in force under this Act and the work is carried out in accordance with this Act, the building regulations and the permit.*

*Penalty: 500 penalty units, in the case of a natural person.*

*2500 penalty units, in the case of a body corporate.”*

106. An application for a building permit may be made to a municipal building surveyor or to a private building surveyor appointed under Part 6.<sup>32</sup>

107. Reg 5.6 of the Building Regulations 1994 required builders to take precautions before and during demolition in accordance with AS 2601-1991 Demolition of Structures (the “Australian Standard”) and no demolition can commence until the precautionary measures have been inspected and approved by the relevant approved building surveyor.<sup>33</sup>

108. The Australian Standard defined “demolition” as the complete or partial dismantling of a building or structure by pre-planned and controlled methods or procedures.

109. Therefore, removal of the corrugated iron roof of 624 Park Street constituted demolition for the purposes of the Australian Standard and the Building Regulations 1994.

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<sup>32</sup> See also Second Reading speech, Minister for Planning, Parliament of Victoria, 11 November 1993, Hansard p. 1690

<sup>33</sup> Reg 607 of the Building Regulations 2006 adopts the same provision as Reg 5.6 of the Building Regulations 1994 but imports the standards imposed by AS 2601-2001 Demolition of Structures published in 13 September 2001.



110. Further, Mr Quattrochi included these works in the contract for demolition that he executed with Mr Riccio on 10 June 2003. Mr Ciavarella also defined the work to be undertaken by Mr Curtis and Mr Struve as demolition when he subcontracted them to work with Mr Quattrochi on 10 June 2003.
111. Accordingly, in the circumstances facing Mr Quattrochi, where a Planning Permit for at 624 Park Street had been issued by the City of Yarra and the demolition work was subject to a separate contract for \$5500, he was required to hold a current Building Permit issued by the relevant building surveyor before he commenced demolition work at 624 Park Street.
112. In his interview with the investigator from the Commission, Mr Quattrochi admitted that he commenced work without the required Building Permit.
113. Further, both before and during the demolition, Mr Quattrochi was required to comply with the Australian Standard.<sup>34</sup> In other words, Mr Quattrochi was obliged to comply with the Australian Standard whether or not there was a Building Permit for the work.
114. Therefore, in directing Mr Curtis and Mr Struve to remove the roofing material from Park Street, Mr Quattrochi was directing them to undertake demolition procedures. Accordingly, the Australian Standard established the standard of performance required for their work on 10 and 11 June 2003.
115. Cl.1.7.1 of the Australian Standard required an initial investigation of the structure and the site before commencement of any demolition work.
116. Cl.1.7.2.2 of the Australian Standard also required this initial investigation to include as relevant:
- the type of structural system and the sequence of construction;
  - the elements and members essential for maintaining stability of the structure as a whole and of individual portions or members;
  - the condition of the structure and its fittings and fixtures with regard to their state of disrepair or deterioration; and

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<sup>34</sup> Reg 5.6 Building Regulations 1994.

- any other details of the structure regarding its strength, construction or contents which will influence the selection of demolition procedures given in the work plan.

117. Further, Cl.1.7.4 and Cl.2.1.1 of the Australian Standard required the work to be executed by or directly supervised by competent persons. A competent person is defined as:

*“ a person suitably qualified, adequately trained and appropriately experienced for the particular class or kind of work specified.”*

118. Section 2 of the Australian Standard established the requirements for planning and execution of stripping or demolition work that applied in 2003. Further, as relevant, the Australian Standard included a Demolition Checklist.<sup>35</sup>

119. These requirements include an initial investigation of the structure by a competent person<sup>36</sup> to determine potential hazards to the health of site personnel or the public if disturbed by the stripping or demolition.

120. Although Mr Quattrochi had worked on the demolition on 10 June 2003, he did not identify the risk associated with the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 or whether any further structural arrangements were required to maintain its safety.

121. However, Mr Quattrochi had reason to believe that he had met the requirement to perform a formal safety review when he saw the working drawings for the proposed extensions and alterations for the proposed extensions prepared for Mr Riccio by Design Edge Associates Architects.

122. Further, the Australian Standard specifically addresses the risks associated with demolition of chimneys and other masonry. However, it does not mention the risks associated with working around or removing support for masonry that is not intended for demolition.

123. Therefore, even if he had read the Australian Standard, Mr Quattrochi would not necessarily have understood the risks associated with removing support for a 100 year old, 3.8 metre, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2.

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<sup>35</sup> Appendix A AS 2601-2001 The Demolition of Structures.

<sup>36</sup> A “competent person” is defined as a person who has acquired through training qualification experience or a combination of these, the knowledge and skills enabling that person to perform the task required.

124. I note that Mr Curtis was able to identify deteriorating ceiling joists and unstable chimney, was aware of the safety issues associated with these issues and warned Mr Struve. I also assume that he learned these skills from his TAFE Course and his work with Mr Ciavarella.

125. Although the rotten ceiling joist should have been identified during preliminary assessment of the site or on 10 June 2003 when work began, it is likely that the instability in the chimney only became obvious when the corrugated iron sheeting had been removed.

126. Mr Ciavarella told the Court that in his opinion with over 20 years experience in the domestic building industry:

*“I don't think through the past experience that I've been in the industry and I've worked with lots of builders in the industry, Your Honour, I don't think if you're to ask, you know, like 80 per cent of those builders at that time, or have they ever read the (Australian standard)”*

127. Therefore, experienced builders need continuing practical assistance to ensure that they understand and comply with the provisions of the Building Act, the Building Regulations 2006 and the Australian Standard. **Recommendation 6**

128. Mr Curtis death was associated with two building practices known to be particularly risky: a fall from a height through a ceiling and collapse of old masonry.

### **Fall from a height**

129. Falling through a ceiling or roof is a well known risk in the building industry over a long period of time. Examples known to the coronial jurisdiction include:

- In 2002, the then State Coroner investigated the death of Michael Lee Ryan.<sup>37</sup> Mr Ryan was an apprentice working as a roof tiler during renovations. He was considered by his employer to be a keen worker who was always punctual and completed his work properly. Mr Ryan seems to have lost balance and fallen on to a concrete path.

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<sup>37</sup> Case No 533/01.

- In 2004, the then State Coroner also investigated the death of Ching Sum Chan.<sup>38</sup> Mr Chan died when he fell through fibreglass type corrugated roof sheeting on a pergola he was building.
- In 2009, I investigated the death of Robert John Ferbrache.<sup>39</sup> Mr Ferbrache was a professional builder. He died when he fell through the roof of a new pergola he was building on to the concrete floor.
- In 2009, I also investigated the death of Ton Truong.<sup>40</sup> Mr Truong died when he fell through the verandah roof that he was repairing on to the concrete floor. Mr Truong had no building qualifications.
- In 2010, I investigated the death of Carl Anthony Mazzone.<sup>41</sup> Mr Mazzone died when he fell from the roof of his home in bad weather on to the paved floor below.

130. WorkSafe Victoria has issued a number of publications relating to working at heights above two metres. These underline the importance of assessing fall hazards and providing a safe method of work.

131. In particular, WorkSafe Victoria advises:

*“The ultimate effectiveness of any risk assessment is dependent on the quality of the information available. Therefore, people carrying out risk assessments require the necessary information, knowledge and experience of the work environment and work processes.”<sup>42</sup>*

132. To the extent that written documents are useful in preventing falls in the building industry, compliance with the recommendations in these documents would have prevented Mr Curtis falling through the ceiling at 624 Park Street.

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<sup>38</sup> Case No 372/03.

<sup>39</sup> Case No 1176/07.

<sup>40</sup> Case No 606/08.

<sup>41</sup> Case No 1062/10.

<sup>42</sup> WorkSafeVictoria “Prevention of falls in general construction – Compliance Code” 18 September 2008.

## Collapse of old masonry

133. Collapse of old or unstable masonry is also a risk associated with demolition of old buildings.

Examples known to the coronial jurisdiction include:

- In 2002, Coroner Hender investigated the death of Scott Chapman.<sup>43</sup> Scott died when he was swinging from a basketball ring attached to the brick parapet of a garage. The parapet and slabs of brickwork from the garage wall collapsed on him.
- In 2004, Coroner Byrne investigated the death of Lennox Charles Game.<sup>44</sup> Mr Game was a builder. He died when a brick wall collapsed on to him when he was digging a trench.
- In 2010, I investigated the death of Linda Christian Gallagher.<sup>45</sup> Mrs Gallagher died when a brick wall of a pedestrian access courtyard collapsed in windy weather. The brick wall had been structurally non-compliant with States and Federal building regulations for 22 years.
- On 27 March 2013, a brick wall in Swanston Street collapsed and killed three people. Investigations of this incident continue.

123. Further, when viewing the photograph taken in the ceiling at 624 Park Street on 12 February 2003 for the first time in Court, a structural engineer, Mr Connard, identified brick work consistent with part of the subsequently collapsed chimney. He said this brick work would require some support to maintain its safety if there was nothing underneath in the room below. Mr Connard also said he could not identify from the photograph whether or not there was the required support.

124. However, Mr Connard also said:

*“you couldn't determine it by looking at the photo, you would have to look at the photo, you should also, you would have to look downstairs and then say, hold on, there's something - we*

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<sup>43</sup> Case No 951/02.

<sup>44</sup> Case No 3182/02.

<sup>45</sup> Case No 1337/08.

*need to confirm there's something supporting that brickwork before we start doing work on this area."*

125. Further, Mr Connard told the Court that, for the last 40-50 years, it has been standard practice to use steel rather than wooden supports for supporting brick masonry. There were no signs of any steel members which may have been used to support the fireplace when the chimney was removed.
126. In February 2008, WorkSafe Victoria issued "A Handbook for the construction regulations- Working safely in the housing construction industry". This document was intended to provide practical advice on how to meet the health and safety requirements imposed by the Occupational Health & Safety Regulations 2007.
127. This document identifies high risk construction work as including construction work involving demolition and construction work involving structural alterations where some sort of temporary support will be used to prevent the structure from collapsing.
128. On 13 May 2004, WorkSafe Victoria issued an alert, "Masonry structures - Instability Leads to Collapse."<sup>46</sup> This alert warned of the dangers of unstable or inadequately braced masonry walls and similar structures and provided guidance on preventative measures. This alert recommends builders assess the current stability of masonry structures and the effect that the works will have on these structures.
129. However, even if all the registered building practitioners involved in planning the demolition, extension and alteration of 624 Park Street had assessed the 100 year old, 3.8 metre high, intact, visible, brick chimney above the wall between the lounge room and Bedroom 2 prior to demolition commencing, there was no reason for them to suspect that the chimney was unstable until after the corrugated iron roofing had been removed and the structure under it had been exposed.
130. Therefore, it is important that registered building practitioners involved in designing and implementing demolition of old buildings should include review of the site as the structure of the building is exposed so that otherwise hidden risks such as rotten timber joists and deteriorating masonry can be managed appropriately.

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<sup>46</sup> This was accompanied by a one page document: "Preventing masonry structures from collapsing".

131. The Building Control Commission and WorkSafe Victoria seem to be in the best position to ensure that the communications about these safety issues are directed appropriately.

**Recommendation 7**

132. The Municipal Association of Victoria can also ensure that applicants for Planning Permits and Building Permits for demolition, extension and alteration of old buildings are provided with information about the hidden risks associated with exposure of rotten timber joists and deteriorating masonry. This information could be developed in cooperation with the Building Control Commission and Worksafe Victoria. **Recommendation 8**

**RECOMMENDATIONS**

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

I recommend that:

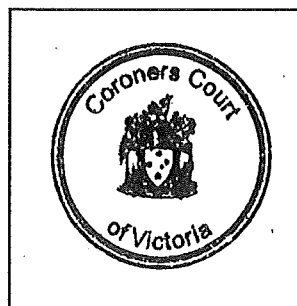
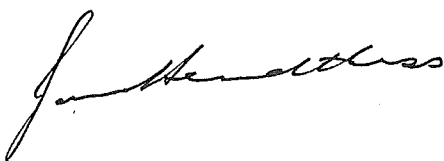
1. The Minister for Planning amend the Building Regulations 2006 to require builders to support chimneys when roofing material around them is being removed.
2. The Municipal Association of Victoria advise its members to require building surveyors who assess applications for a Planning Permit for planned demolition, alteration and/or extension of old buildings to inspect the property for visible chimneys and assess their associated risks.
3. The Minister for Planning amend the Heritage Overlay provisions of the Building Regulations 2006 to require the Planning Permit application for buildings built prior to 1940 to include a safety assessment of all visible chimneys.
4. The Minister for Planning amend the Heritage Overlay provisions of the Building Regulations 2006 to require the Municipal Building Surveyor in the municipality which issues the Planning Permit to retain responsibility for issue of a Building Permit in areas that the municipality has determined are subject to Heritage Overlay.
5. The Building Control Commission and Worksafe Victoria cooperate to expand their random and targeted audit programs to include registered building practitioners' identification of safety aspects of planned demolition, alteration and/or extension of buildings built prior to 1940.

6. The Building Control Commission and Worksafe Victoria provide registered builders with easy to understand interpretation of their responsibilities under the provisions of the *Building Act* 1993, the Building Regulations 2006 and the Australian Standard AS 2601-2001 Demolition of Structures.
7. The Building Control Commission and WorkSafe Victoria advise registered building practitioners involved in designing and implementing demolition of old buildings to include continuing review of the site as the structure becomes exposed so that otherwise hidden risks, such as rotten timber joists and deteriorating masonry, can be managed appropriately.
8. The Municipal Association of Victoria provide applicants for Planning Permits and Building Permits with information about the hidden risks associated with rotten timber joists and deteriorating masonry in buildings built prior to 1940.

I direct that a copy of this finding be provided to the following:

The family of Mr Hayden Curtis  
Minister for Planning  
Building Control Commission  
WorkSafe Victoria  
Municipal Association of Victoria

Signature:



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DR JANE HENDTLASS  
CORONER  
Date: **5 June 2013**