IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2017 6330

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 60(1)

Section 67 of the Coroners Act 2008

(Amended pursuant to section 76 of the Coroners Act 2008)

Deceased:	Sarah Michele Kajoba (nee Farmer)
Delivered on:	15 September 2021
Delivered at:	Coroners Court of Victoria, 65 Kavanagh Street, Southbank
Hearing dates:	Inquest: 3 and 4 June 2020
Findings of:	Coroner Paresa Antoniadis Spanos
Counsel assisting the Coroner:	Senior Constable Premala Thevar from the Police Coronial Support Unit
Representation:	Ms S. Manova appeared on behalf of Manningham City Council Ms K. Hammill appeared on behalf of the Kajoba family

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INTRODUCTION

1. Saran Michele Kajoba (nee Farmer), born on 19 June 1980, was a 37-year-old married woman who is survived by her husband Felix and their two daughters, as well as her parents Dale and Heather Farmer, and two older brothers Christopher and David Farmer.

2. Ms Kajoba was raised in Warrandyte where she attended pre-school, primary school and secondary school making life-long friends along the way. Ms Kajoba commenced study for a Bachelor of Business in Hospitality and Tourism at Latrobe University before interrupting her studies to visit the USA on a working holiday program. This experience instilled a love of travel and after completing her tertiary studies, Ms Kajoba travelled extensively throughout the USA and Canada, at times working in ski resorts where she could also indulge her love of skiing.

3. On returning to Australia Ms Kajoba reconnected with Felix who she had met before travelling overseas and they began dating. They married in 2007 and had two daughters, [redacted] born in 2009 and [redacted] born in 2015. Mr Kajoba was from Zambia and together they made two trips to his birthplace, Ms Kajoba forming a strong bond with her husband's family.

4. Shortly after the birth of [redacted], Ms Kajoba joined the staff at Latrobe University working in administrative roles in various departments. She also completed Certificates 3 and 4 in Fitness to become a qualified personal trainer and Certificate 4 in Human Resources. In 2016, after the birth of her second daughter, Ms Kajoba started working part-time with Tupperware to supplement her income.

5. Ms Kajoba had a wide circle of friends and despite leading a busy life always made time to keep in touch with them and her family. She is remembered as a caring, capable person with a fun-loving personality and infectious laugh. Ms Kajoba is greatly missed by her family who were astonished by the number of people who attended her funeral.

6. It was Ms Kajoba's employment with Tupperware which brought her to a Christmas Party on 16 December 2017 at the home of Sales Directors Chris and Yvonne Nunn at 8 Balinga Court, Doncaster East.

7. Ms Kajoba, then aged 37, was one of two women who died when the balcony attached to the kitchen/family room area of the residence collapsed as party goers gathered for a group photo. After the collapse, Ms Kajoba was taken by ambulance to the Royal Melbourne Hospital where she succumbed to traumatic injuries a few hours later. The other woman was Cheryl Taylor, aged 58, who died at the scene. A finding in identical terms, save for personal particulars, will be delivered in relation to the death of each woman.

8. At the outset, I wish to convey my sincere condolences to the families of Ms Kajoba and Ms Taylor and to recognise all the others who were injured during the balcony collapse and/or distressed by what they witnessed as the Christmas party descended from a celebration to a multi-trauma scene. My thanks also to all those who provided their recollections of the traumatic events in statements included in the coronial brief, comprehensive enough that they were not required to attend the inquest to testify.

INVESTIGATION AND SOURCES OF EVIDENCE

9. This finding is based on the totality of the material the product of the coronial investigation of the deck collapse. That is, the comprehensive brief of evidence compiled by Detective Senior Constable Adam Pongho from the Manningham Crime Investigation Unit (**CIU)** of Victoria Police, including statements from family members, other people at the Christmas Party, members of Victoria Police and forensic officers involved in the investigation, airwing footage of the scene, reports from treating clinicians, reports from experts in building and construction, and the reports of the forensic pathologist and toxicologist from the Victorian Institute of Forensic Medicine (**VIFM**).

10. All of this material, together with the inquest transcript, will remain on the coronial file.[1] In writing this finding, I do not purport to summarise all the material and evidence but will only refer to it in such detail as is warranted by its forensic significance and the interests of narrative clarity.

PURPOSE OF A CORONIAL INVESTIGATION

11. The purpose of a coronial investigation of a *reportable death*[2] is to ascertain, if possible, the identity of the deceased person, the cause of death and the circumstances in which death occurred.[3] Ms Kajoba's death clearly falls within the definition of reportable death, specifically section 4(2)(a) of the Act which includes (relevantly) a death that appears to have resulted, directly or indirectly, from an accident or injury.

[1] From the commencement of the ***Coroners Act 2008*** (the Act), that is 1 November 2009, access to documents held by the Coroners Court of Victoria is governed by section 115 of the Act. Unless otherwise stipulated, all references to legislation that follow are to provisions of the Act.

[2] The term is exhaustively defined in section 4 of the ***Coroners Act 2008*** [the Act]. Apart from a jurisdictional nexus with the State of Victoria a reportable death includes deaths that appear to have been unexpected, unnatural or violent or to have resulted, directly or indirectly, from an accident or injury; and, deaths that occur during or following a medical procedure where the death is or may be causally related to the medical procedure and a registered medical practitioner would not, immediately before the procedure, have reasonably expected the death (section 4(2)(a) and (b) of the Act). Some deaths fall within the definition irrespective of the section 4(2)(a) characterisation of the 'type of death' and turn solely on the status of the deceased immediately before they died – section 4(2)(c) to (f) inclusive.

[3] Section 67(1).

12. The *cause* of death refers to the *medical* cause of death, incorporating where possible the *mode* or *mechanism* of death. For coronial purposes, the *circumstances* in which death occurred refers to the context or background and surrounding circumstances but is confined to those circumstances sufficiently proximate and causally relevant to the death, and not all those circumstances which might form part of a narrative culminating in death.[4]

13. The broader purpose of any coronial investigations is to contribute to the reduction of the number of preventable deaths through the findings of the investigation and the making of recommendations by coroners, generally referred to as the *prevention* role.[5]

14. Coroners are empowered to report to the Attorney-General in relation to a death; to comment on any matter connected with the death they have investigated, including matters of public health or safety and the administration of justice; and to make recommendations to any Minister or public statutory authority on any matter connected with the death, including public health or safety or the administration of justice.[6] These are effectively the vehicles by which the coroner's prevention role can be advanced.[7]

15. Coroners are not empowered to determine the civil or criminal liability arising from the investigation of a reportable death and are specifically prohibited from including in a finding or comment any statement that a person is, or may be, guilty of an offence.[8]

IDENTITY

16. Sarah Michele Kajoba (nee Farmer), born 19 June 1980 was identified by her husband Felix Chalwa Kajoba who signed a formal Statement of Identification to this effect before a member of the clinical staff of the Royal Melbourne Hospital on 17 December 2017.

17. Ms Kajoba's identity was not in issue and required no further investigation.

CAUSE OF DEATH

18. Ms Kajoba's body was brought to the Coronial Services Centre where Forensic Pathologist Dr Paul Bedford from the Victorian Institute of Forensic Medicine (**VIFM**) reviewed the Victoria Police Report of Death to the Coroner (**VP Form 83**), post-mortem CT scanning of the whole

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[4] This is the effect of the authorities – see for example *Harmsworth v The State Coroner* [1989] VR 989; *Clancy* v *West* (Unreported 17/08/1994, Supreme Court of Victoria, Harper J.)

[5] The 'prevention' role is now explicitly articulated in the Preamble and purposes of the Act, compared with the *Coroners Act 1985* where this role was generally accepted as 'implicit'.

[6] See sections 72(1), 67(3) and 72(2) regarding reports, comments and recommendations respectively.

[7] See also sections 73(1) and 72(5) which requires publication of coronial findings, comments and recommendations and responses respectively; section 72(3) and (4) which oblige the recipient of a coronial recommendation to respond within three months, specifying a statement of action which has or will be taken in relation to the recommendation.

[8] Section 69(1). However, a coroner may include a statement relating to a notification to the Director of Public Prosecutions if they believe an indictable offence may have been committed in connection with the death. See sections 69 (2) and 49(1).

body undertaken at VIFM (**PMCT**), and the medical records and medical deposition from the Royal Melbourne Hospital (**RMH**). Having done so, Dr Bedford performed an external examination on 18 December 2017 and provided a written report of his findings and opinion as to the cause of death dated 14 February 2018.[9]

19. Relevantly, on review of the PMCT, Dr Bedford found the skull and neck intact; cerebral oedema, sacroiliac changes, no obvious rib fractures, small pneumothoraces (air within the chest cavity) and intercostal drain tubes in situ.

20. On review of the medical records and medical deposition, Dr Bedford noted that the deceased was admitted to hospital with severe traumatic brain injury and chest injuries; a markedly decreased Glasgow Coma Score (a measure of consciousness) was 3; and fixed dilated pupils. Investigations at RMH showed hypoxic ischaemic changes in the brain, undisplaced rib fractures (consistent with known pneumothoraces) and evidence of copious vomiting and aspiration. Ms Kajoba made little progress and treating clinicians deemed her injuries catastrophic.

21. On external examination, Dr Bedford noted multiple signs of medical intervention in the form of drains and intravascular access devices, and also noted findings consistent with some degree of mechanical asphyxia with suffusion of the head and neck region and the conjunctivae.

22. Routine toxicological analysis was undertaken on post-mortem samples taken from Ms Kajoba's body on admission to RMH and detected no alcohol or any other commonly encountered drugs or poisons apart from fentanyl (a strong analgesic commonly used by paramedics), and midazolam and lignocaine at levels consistent with normal therapeutic use.

23. Dr Bedford expressed the opinion that Ms Kajoba's death was caused by *1(a) multiple injuries* and commented that the findings of suffusion are also consistent with some degree of mechanical asphyxia, that is that Ms Kajoba was unable to breathe due to the weight bearing down on her chest.[10]

24. I accept Dr Bedford's opinion as to the cause of death. This was not contentious, and Dr Bedford was not required to give evidence at inquest.

[9] Dr Bedford's report, including his formal qualifications and experience, is at page 281-284 of the brief.

[10] I note that Dr Bedford was referring to Ms Kajoba being pinned by the refrigerator that fell from the deck as it collapsed which was the early intelligence about what happened to Ms Kajoba available to him in the VP Form 83. By the time the brief of evidence was finalised it was apparent and not controversial that the refrigerator was not implicated in Ms Kajoba's death in this way. Rather it was the sheer weight of several other individuals who fell on top of her and could not move for some time that likely restricted her breathing to the point of asphyxia. See paragraphs 32 and following below.

CIRCUMSTANCES IMMEDIATELY PROXIMATE TO DEATH

25. As already mentioned, Ms Kajoba and Ms Taylor and Ms Kajoba were attending a Christmas party for Tupperware staff at the home of Sales Directors Chris and Yvonne Nunn at 8 Balinga Court, Doncaster East, a private rental property where they had resided since about May 2016.

26. The home was an irregular shaped brick veneer construction, double storey at the front and single storey at the rear corresponding to the upwards slope of the land towards the rear. The ground or basement level consisted of a double garage, bedroom, bathroom and several storage rooms. The upper level consisted of three bedrooms, lounge, rumpus room, dining/kitchen and family open plan area leading directly to a timber deck/balcony (hereinafter referred to as **the balcony**) attached to the southern and eastern external walls of the home.

27. The balcony was of timber construction and will be described in more detail below. Suffice for present purposes to say that it was an irregular pentagon in shape with two sides attached to the home in a L-shaped configuration and the remaining three sides forming the outside of the balcony and having timber railings. The balcony was approximately 40 square metres in area and, at its highest point, was 2.7 metres above the ground. Beneath the balcony was a concrete paved area abutting an area of gravel.

28. At all material times, there were a number of heavy items on the balcony:

    a. A large commercial grade two door refrigerator on the southwest corner of balcony, hard up against the corner of the home that weighed 123 kilograms when empty and had been topped up before the party with two slabs of beer, bottles of wine and (later) with leftover food. According to Mr Nunn, the refrigerator had been in the same position on the balcony since they had moved in.

    b. A six-burner barbeque and gas cylinder which weighed approximately 82 kilograms were located in the southeast corner of the balcony against the balcony railings.

    c. A medium-sized pizza oven which weighed approximately 50 kilograms was located in the southeast corner of the balcony against the balcony railings, next to the six-burner barbeque.

    d. Three Eskies containing drinks and ice were lined up against the kitchen wall which formed the western side of the balcony, immediately to the north of the sliding door that led from the kitchen to the balcony.

    e. Towards the middle of the balcony was a trestle table, an outdoor three-seater lounge, ottoman and three single armchairs, as well as a hanging chair.

29. In total, some 37 people attended the party including Tupperware sales staff, their partners and managerial staff. The party commenced at 6.30pm and most people arrived by 7.30pm. The party was mostly held on the balcony, with people moving freely between the kitchen/dining/family area and the balcony in the course of the evening to help themselves to food and drink.

30. At approximately 10.00pm, everyone gathered out on the balcony so that Mr and Ms Nunn could make their end of year speeches and present staff with Christmas presents to thank them for their work during the year. At this time, guests were scattered throughout the balcony.

31. At approximately 10.30pm, after speeches had concluded and presents had been exchanged, someone suggested that they gather for a group photograph. People started making their way to the southern end of the balcony adjacent to the family room and positioned themselves between the refrigerator to the west and the pizza oven and barbeque to the east.

32. According to various witness accounts, at this time, Ms Kajoba and Ms Taylor were sitting on the outdoor lounge chairs some two metres from the family room wall towards the centre of the balcony. As people were slowly getting themselves in position for the photo, without warning, a section of the timber floor of the balcony collapsed. The section measured 6.1 metres in width and 2.7 metres in length and was the most southerly section of the balcony, abutting the family room.

33. At the time of the collapse, most guests reported hearing a large cracking sound; others reported hearing two separate cracking sounds, while some others said they heard nothing. In terms of sensations, some guests reported feeling like they experienced a short fall followed by a moment of brief suspension before the entire section of the balcony gave way beneath them. As the balcony collapsed, it formed a ramp leading roughly down and towards its centre with its northernmost section remaining more or less intact. Guests described feeling the balcony totally give way from under them, a feeling like the balcony was collapsing in on itself.

34. Taking the various witness accounts in combination, 28 people fell with the collapsed portion of the balcony. Two people were inside the house. One woman was attending to her baby on the opposite end of the balcony and another five people remained on the part of the balcony which remained intact. Ms Kajoba and Ms Taylor fell from the central portion of the collapsed section of the balcony about 2.7 metres to the concrete paved area below.

35. Calls were made to emergency services at 10.37pm and Ambulance Victoria (**AV**) paramedics and Victoria Police members responded a short time later.

36. Ms Kajoba was stabilised by AV paramedics and transported to the Royal Melbourne Hospital where a CT of the brain revealed hypoxic ischaemic changes to the brain. Investigations also revealed a chest injury and multiple other traumatic injuries. Following discussions between treating clinicians and the family, all active treatment was withdrawn, and Ms Kajoba was kept comfortable until she passed away and was pronounced deceased at 6.40am on 17 December 2017.

37. Ms Taylor was pulled out from the collapsed area after others on top of her were freed by emergency responders or were able to extricate themselves. She was carried to the gravel path area to the side of the house by AV paramedics who found her to be unconscious and not breathing. Paramedics attempted cardiopulmonary resuscitation, but despite their efforts, Ms Taylor could not be revived and was pronounced deceased at the scene by one of the paramedics.

THE FOCUS OF THE CORONIAL INVESTIGATION AND INQUEST

38. The primary focus of the coronial investigation and inquest into the deaths of Ms Kajoba and Ms Taylor was on the way the balcony was constructed and how it failed. The focus was threefold and required the calling of expert evidence:

    a. Whether the balcony as originally built and certified fit for occupation (as part of the residence) was built in accordance with the building code applicable at the time;

    b. Whether the balcony complied with the requirements of the building code in place as at the date of its collapse; and

    c. Exploration of the feasibility of a rating system for balconies so that occupiers are informed about maximum safe load capacity to minimise the risk of deaths (and injuries) in the future.

EXPERT EVIDENCE ABOUT THE CAUSE OF THE COLLAPSE

39. Russell Mills is employed by Manningham City Council as a Municipal Building Surveyor and was the first expert witness called at the inquest. Mr Mills attended the scene of the balcony collapse on the morning of 17 December 2017 immediately after the collapse, and then again on 21 December 2017, both times to inspect and photograph the scene in the presence of Victoria Police members. Mr Mills produced a detailed report of his findings and opinions, helpfully augmented by photographs, plans and diagrams, and attended the inquest to testify.[11]

[11] Exhibit A, Mr Mills' nineteen-page report is at page 413 of the coronial brief. Mr Mills is a qualified and registered Unlimited Building Surveyor (BS-U1265) and Unlimited Building Inspector (BS-U1386) with the Building Practitioners Board of Victoria.

40. According to council records, building approval was issued on 22 October 1986 for the construction of a two-storey brick veneer dwelling and garage. The building approval was issued to the owners of the property at the time and included constructions of an elevated timber decking associated with the dwelling. Building works commenced in December 1986 and a Certificate of Occupancy was issued on 27 April 1987. It follows that the balcony was approximately 31 years old when it collapsed[12] and that being constructed of timber, had weathered.

41. On inspection, Mr Mills observed that the decking had completely fallen away from the rumpus room external wall in two main sections, each measuring approximately 3.0m by 2.7m. The collapsed section of decking had been supported by a 245mm by 45mm Oregon bearer (**the bearer**) spanning approximately 2.6m between the rumpus room external wall and a timber support post. The floor joists were running parallel to the rumpus room external wall and were butt-joined to the centre bearer and to the east end external side beam. At the family room end, the floor joists were supported directly on the brickwork.

42. The failed bearer was resting below the fallen refrigerator on the ground. A large irregular shaped section had broken away from the end of the bearer that was originally supported in a brick slot in the centre of the rumpus room wall. A small portion of the bearer remained in the slot in the brickwork. These three sections accounted for the whole length of the bearer.[13]

43. On closer inspection (and reconstruction) of the bearer, Mr Mills found it was very light in weight, dry and brittle. The loss of moisture and weight signified a commensurate loss of strength in the timber.[14] An existing shrinkage and/or stress crack ran the entire length of the bearer about one third down from the top of the bearer as originally installed. According to Mr Mills, this too resulted from the beam drying out and shrinking due to weathering over time and possibly even due to the load it was bearing.

44. He observed that the bearer had fractured approximately in line with this crack and continued around a large knot at the end of the bearer where it was supported by slotting into brickwork. Mr Mills also testified that the large knot was itself implicated in the failure of the bearer and that the knot was in the worst position it could be in a supporting bearer.[15]

45. The same end of the bearer had a 60mm notch cut out of the bottom side to allow it to fit into the brickwork slot, reducing the overall depth of the bearer to approximately 185mm at its junction

[12] Exhibit A page 3.
[13] Exhibit A pages 3-7.
[14] Transcript page 56.
[15] Exhibit A pages 8 and 18 and transcript page 63 and following.

with the brickwork. According to Mr Mills, while notching up to one quarter of the depth of a beam was permissible, this would reduce its load-bearing capacity to some degree. He agreed with other evidence that the need for notching apparently arose from the incorrect slots in the brickwork designed to fit the bearer which were too high in relation to floor level.[16]

46. By reference to Manningham City Council records, Mr Mills testified that the balcony as constructed (at least as inspected by him in December 2017) deviated from the plans submitted to council for the building permit to issue on 22 October 1987. According to Mr Mills, council records did not contain a building permit for the multiple deviations noted.[17]

47. These deviations are detailed in Mr Mills' statement and were addressed in his evidence at inquest.[18] Significantly, the support posts, support beams and floor joists were in different locations from those shown in the plans; the bearers and joists were running in the opposite direction, or perpendicular to what was shown in the plans; and, while a number of the support bearers and floor joists have been replaced with laser cut treated pine (at some stage), the majority of the floor joists and supporting beams in the collapsed section were made of Oregon.[19]

48. By reference to the "Timber Decks - Design and Construction Manual" (**the Manual**)[20] in currency when the balcony was built in the 1980s, Mr Mills expressed the opinion that at 2.65m in length and 45mm in width the failed bearer was approximately 550mm over span or undersized for a structure that was higher than one metre off the ground. It follows that this inadequacy was in addition to any weakening of the bearer over time due to the effects of weathering, aging and/or stress. According to Mr Mills, the failed bearer was also undersized by reference to current manuals.[21]

49. In his report, Mr Mills concluded that six factors combined to cause the balcony collapse:

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[16] Exhibit A page 8. Transcript pages 21-22, 45, 49 and 56-58. See Mr Jones' evidence in which he expresses the contrary view at transcript pages 166 and following. Another observation made by Mr Mills was that there was a 100mm by 45mm length of treated pine fixed to the bottom of the failed beam in an apparent attempt to strengthen it. The weight of the evidence from the experts was that this would not have provided any additional support.

[17] Transcript pages 47-48.

[18] Exhibit A pages 22-23 and transcript pages 32 and following, page 39-43.

[19] Exhibit A pages 9-11 and transcript 40. Image 14 on page 11 is a helpful diagram overlaying the plans as submitted and approved with the balcony as constructed and inspected. In short, the beams including the failed Oregon beam were running north-south rather than east-west as in the plans. See transcript pages 22, 38-39. The diagram also shows the extent of a subsequent extension of the balcony (to the extent of about four-square metres) for which no building permit was apparently sought. That said, the weight of expert evidence was that the expansion was irrelevant to the structural failure of the Oregon beam and the balcony collapse. See transcript pages 32 and 45 for Mr Mills' evidence in this regard.

[20] According to Mr Mills' evidence at inquest, the Manual accords with engineering principles and with Australian Standards 1720.1 and 2, the timber structures code and loading code respectively. Exhibit A pages 12-13 and transcript pages 23-24, 34.

[21] Transcript page 34.

a. Aged-related weathering and splitting that reduced the strength of the bearer;

b. Inadequate maintenance of the balcony support structure whereby only some of the original weathered Oregon bearers had been replaced;

c. An inadequate attempt to strengthen the bearer (inferred from the addition of a treated pine bearer beneath it);

d. The notch cut out of the bearer and the existence of a large knot at the location of the fracturing which compounded its age-related weakness;[22]

e. The bearer was undersized when assessed against the Manual; and

f. The concentration of load placed on the bearer at the time of the collapse.

50. At inquest, although Mr Mills accepted that the last in the timeline of failures leading to the balcony collapse was the additional load created when the group gathered for a photo, he was reluctant to identify a "primary cause" of the collapse. When invited to identify the most important of the six factors contributing to the collapse, Mr Mills said it was hard to do so, but he leaned toward the idea that the bearer should have been replaced when the deck required maintenance some years ago and the treated pine beam had been added.[23]

51. The second expert witness was Peter Raymond Jones, a Structural Engineer commissioned by the court to provide an independent structural investigation of the balcony collapse and did so following an inspection of the site on 17 December 2017 and a briefing from Mr Mills and the Coronial Investigator.[24]

52. Mr Jones testified that the bearer was under-sized by reference to applicable standards at the time, both as notched, and in its full depth capacity, that is even absent the notching. He agreed that notching up to 25% of the depth of a beam was permissible under the Manual but stressed that notching would reduce the capacity of a bearer roughly pro rata.[25] He testified that if the bearer had been the appropriate size, notching up to 25% of the depth *"would most likely have*

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[22] There was some controversy in the evidence about the significance of notching in the bearer. This was ultimately resolved with all witnesses deferring to the opinion of Mr Jones. See paragraph 65 below.

[23] Transcript page 36 – *"the inadequate maintenance is poking out to me as being the most weighty, in my mind, that it just should have been replaced. It was – it was well past its use by date and it had been in place for a long time, subject to weather existing cracking running along it, instead of replacing it, the deck and removing all the timbers, um that was by placing that piece of pine at the bottom, I – I think that was the time it should have come out."*

[24] Exhibit B is Mr Jones' report dated 23 February 2018 and attachments at page 427 and following of the inquest brief. Note that Mr Jones refers to a "bearer" as it properly was, but for consistency, I have referred to the structural member throughout as a beam as it was referred to at the inquest.

[25] Mr Jones was recalled after hearing Mr Capello's evidence to provide copies of the Australian Standards and to comment on aspects of the latter's evidence. Ultimately, he maintained that notching of beams was permissible to a depth of 25% and that was allowed for in the framing code/Manual so that it was not the case that the beam should be treated as reduced overall by the extent of the notching for the purposes of determining the capacity of the beam – see transcript pages 166-177.

been acceptable". The bearer was spanning too great a distance given its height and depth. Alternatively, to span the 2.6m length between the brickwork of the rumpus room wall and the central timber post, applicable standards required a bigger bearer.[26]

53. By Mr Jones' calculations, immediately prior to the balcony collapse, the combined total weight bearing on the beam was approximately 22kN (2220kgs) or approximately 5.5kPa (550kg/m^2) which significantly exceeded the minimum design capacity of 4kPa (400kg/m^2) applicable at the time.[27] Based on the dimensions of the balcony, this would equate to a design shear capacity at the brick wall support of approximately 17kN (1720kg).[28] Moreover, based on the dimensions of the balcony, this would equate to a design shear capacity at the brick wall support of approximately 17kN (1,720kg). According to Mr Jones, the reported load at the time of collapse exceeded the 1981 code's safe working load and therefore the balcony and bearer were overloaded; and, as the statutory load requirements are in excess of the determined bearer capacity, the as-built bearer was under-designed from the outset.

54. Mr Jones also reviewed the existing design against current standards which require balconies to support only 2kPa (200kg/m^2), effectively half the previous capacity, and again found the as-built beam to be insufficient and the reported loads too large.[29]

55. At inquest, Mr Jones testified that the weight of the refrigerator and other static items on the balcony would have had *some* influence on the balcony collapse but not a significant influence due to their locations on the balcony and the distribution of the weight to other structural members. Mr Jones agreed with Mr Mills' evidence that the treated pine beam affixed to the bearer at some later time might have made some small improvement in the flexion and bounce of the bearer but made no improvement to the structural integrity of the beam.[30]

56. Mr Jones also gave evidence about the large knot at the notched end of the bearer where it was supported in the brickwork. Although he agreed that the knot was in an unfortunate position and

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[26] Mr Jones referred to the "framing code", but it was clear that this was the same document that Mr Mills referred to as the Manual in his evidence. I have referred to this document as the Manual throughout for consistency. Transcript pages 73-74

[27] Note that Mr Shaw gave different evidence about this – see footnote 30.

[28] Exhibit B at page 459 of the brief and transcript pages 76-81. The reference to the standard applicable at the time is to AS1170, Part 1-1981 which stipulates that all balconies must have a minimum design capacity of 4kPa (400g/m^2).

[29] Exhibit B at page 459 of the brief and transcript page 81. See also cross-examination by Ms Hammill and Ms Manova at pages 81-95. At inquest, Mr Shaw was exercised by a difference between his interpretation of the Australian Standards and Mr Jones' (transcript pages 207-209). On reviewing the exhibits and transcript, AS1170-1981 (Figure 5 attached to Mr Jones' statement Exhibit B, page 466 of the brief) clearly stipulates that balconies carry a minimum floor live load of 4.0 kPa uniformly distributed load, which accords with Mr Jones' evidence of the standard applicable at the time of construction.

[30] Transcript pages 74-75. He added that to reinforce the Oregon beam, the pine beam would have had to be longer and connect to the supporting elements at each end (the brick wall at one end and the timber post at the other) and would have had to have a more robust connection with the Oregon beam than it did.

weakened the bearer, based on his theoretical analysis, the bearer was significantly undersized such that the failure that led to the balcony collapse was likely to occur even in the absence of the knot.[31]

57. Robert Capello is a civil engineer commissioned to provide a report for AAMI for the purposes of their "policy and response", presumably as insurers of the Balinga Court property at the material time.[32] Mr Capello provided a written report and testified at inquest.[33]

58. In his report, Mr Capello observed that the south side of the balcony decking was supported upon a single central bearer slotted into the north facing brickwork of the home and extending in a north/south direction supported upon a post to the underside of the decking. Visual inspection of the damage and debris indicates that the collapse was initiated by the failure of this bearer. As a result, the south side of the balcony has collapsed resulting in the supporting deep joists pulling away from the east side beam and pulling away and sliding out from the east facing brickwork.[34]

59. Except that he does not refer to the Manual or identify that the bearer was under-designed or undersized from the outset,[35] Mr Capello's conclusions about contributing/causative factors echo and are broadly in keeping with the evidence of both Mr Mills and Mr Jones.

60. Specifically, Mr Capello noted that the bearer was in a very dry condition and had weathered cracking and splintering which indicated that it was pre-existing and had been present for several years;[36] the bearer had several knots within the grain of the timber that he described as imperfections and points of weakness;[37] the end of the bearer was notched to reduce its height to 190mm, in his opinion, to fit given the incorrect height of the slots made in the brickwork at construction;[38] and there was a rudimentary and ineffectual attempt to strengthen the structure by addition of a pine bearer under the failed bearer, again indicating a pre-existing defect or issue that was known at an earlier time.[39]

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[31] Transcript page 99 and pages 166 and following, especially at page 184.
[32] Transcript page 100.
[33] Exhibit C is Mr Capello's 15-page report dated 29 December 2017 (under letterhead from MCS Independent Specialist Technical Consultants, Melbourne Office) at page 452 of the brief. In the preamble, Mr Capello describes the purpose of the report as *"to comment on the cause of the balcony collapse for the purposes of assisting the insurer in determining the property claim under the policy conditions."* In his conclusions, he states his instructions were to provide an engineer's report on causation of the balcony collapse. See pages 1 and 14 of the report.
[34] Exhibit C, at page 452 of the brief under the heading "Observations and Discussion".
[35] The explanation for this discrepancy may be at transcript page 133-135 where, among other things, Mr Capello testifies that *"he didn't do any design analysis"* in response to a question about spanning issues and the extent to which the bearer/beam exceeded the allowable span.
[36] Transcript pages 102-103, 120-121.
[37] Transcript page 122-125.
[38] Transcript pages 104 and following.
[39] Exhibit C, at pages 453-454 and 464 of the brief. Transcript pages 101-102.

61. As I understood Mr Capello's report, his focus as regards the cause of the collapse was on the poor age-related condition of the bearer, the presence of several knots which constitute imperfections and points of weakness, and the notched and reduced height of the bearer. At inquest he testified that notching of the beam had as a significant impact on its strength and was probably the primary cause as the beam should only be notched within the span, not at the ends or points of support at all. Mr Capello relied on his interpretation of the 1980 Floor Framing and Flooring Manual, to this effect.[40]

62. This appeared to be at odds with earlier evidence to the effect that notching of the beam where it was supported in the brickwork was permissible but only up to one quarter of the depth of the beam. Mr Jones was recalled in relation to this issue. Ultimately, a consensus was reached between Mr Jones, Mr Mills and Mr Shaw that notching of the bearer immediately above/over supports was permissible as this was adjacent but not within the critical zone from the perspective of shearing force. Mr Capello did not agree with the interpretations of the standards as expounded by Mr Jones but indicated that he would defer to the latter as a structural engineer.[41]

63. John Shaw is the Principal Technical Advisor at the Victorian Building Authority (**VBA**). He provided an eleven-page statement addressing the questions directed to him, a supplementary statement incorporating information in additional documents[42] and gave evidence at inquest.[43]

64. Mr Shaw set out the building approval process in 1987, and currently. In summary, the process both in 1987 and currently, involves three stages. Firstly, the issuing of a building approval (as it was known in in 1987 and currently called a building permit) after assessment of documents

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[40] See Exhibit C, at page 453 of the brief where Mr Capello opines that *"The notched and reduced height of the bearer has fractured and splintered at the notched portion of the dry Oregon beam, resulting in the complete loss of support and sudden collapse to the decking area*." Transcript page 104 and following and page 110. Exhibit D was a four-page extract of the Floor Framing and Flooring Manual produced by Mr Capello.

[41] Transcript pages 118-119 and 152-153.

[42] Exhibit I is Mr Shaw's statement dated 19 July 2019, at page 489.1 of the brief and the undated supplementary statement and attachments was Exhibit J. Transcript pages 188-190. I note, in particular, a paper presented by Richard J. Drew, Partner, Drew Rudd Engineers, to the Australasian Structural Engineering Conference, 25-28 September 2018 entitled "*The factors contributing to the collapse of domestic timber deck structures: Implications for design standards, durability design and asset management."* The paper echoes much of the evidence in this case as the following excerpt from the abstract demonstrates – *"…Often such collapses are associated with timber structures which are subject to: (i) deterioration of the structural components over time, (ii) overload, (iii) inadequate initial structural design provision, and/or (iv) construction defects or material substitutions. Timber decks are potentially the most heavily loaded structures associated with a dwelling, and at the same time are the most exposed to environmental degradation and deterioration over time. Yet while presenting a significant risk in terms of hazard to life, timber decks arguably receive the least engineering and documentation attention in residential design and construction. As with many catastrophic incidents, the causality of collapse is often multifactorial in nature…Domestic timber decks represent a substantive class of assets with effective lifespan potentially much less than the greater structure with which they are associated, and so raise questions on the methodology in designing for durability, regulatory measures and the provision for inspections and maintenance in management of structural assets…"*

[43] Transcript page 188 and following.

submitted with an application for the approval, such as plans, specifications, reports and other material which demonstrates that the building will comply with the relevant legislative and regulatory requirements.[44] Next, the carrying out of mandatory inspections at various stages of construction, namely footings, frame and final inspection. If any aspect of the construction was found to be non-compliant with the building approval, either the breach would be rectified, or revised plans would need to be submitted for approval. Finally, a certificate of occupancy would be issued indicating that the building was suitable for occupation.[45]

65. According to Mr Shaw, the building process in 1987 and currently is essentially the same in all material respects. One notable difference between the process in 1987 and currently is that whereas the relevant council was responsible for building approvals, since 1994 a property owner can now appoint a private building surveyor to issue a building permit. Currently, the vast majority of domestic building permits are issued by private registered building surveyors.[46]

66. Mr Shaw testified that he did not inspect the balcony himself and relied on the evidence of other experts to address questions about the compliance of the balcony. Having done so, he testified that it was not possible to express an authoritative and accurate opinion about whether the balcony as depicted in the plans submitted to council complied with the applicable standards.[47]

67. His opinion about the as-built balcony was in accordance with the opinions of Mr Mills and Mr Jones. He agreed that a combination of factors combined to cause the balcony to collapse. Like Mr Mills, he considered inadequate maintenance as the most important aspect.[48]

68. Mr Shaw noted that while the floor joists were well in excess of and therefore complied with the applicable standards, the failed bearer was undersized and exceeded the maximum allowable span by 550mm.[49] He stressed in evidence that as the floor joists were supported on the bearer, their excess capacity did not compensate structurally for the inadequacy of the bearer.[50]

69. In his statement, Mr Shaw testified that notching of the bearer significantly reduced its load bearing capacity to the extent that even if only notched at its ends where it was supported, for the purposes of assessing structural capacity, the entire bearer should be treated as having been

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[44] Exhibit I, page 489.3 of the brief and reference to section 17 of the Building Control Act 1993.
[45] Exhibit I, pages 489.2-489.3 of the brief. Note that the certificate of occupancy (or certificate of final inspection) is evidence that the building is suitable for occupation but not evidence that all aspects of the work fully comply with the Act and Regulations as the approvals process is not able to ensure all elements of the building work comply given the mandatory inspections are only conducted at certain stages.
[46] Transcript pages 201-202.
[47] Exhibit I, pages 489.3-489.4 of the brief and transcript page 193, 210. Also Exhibit J, Mr Shaw's undated one-page statement and attached plans/diagrams.
[48] Transcript pages 192-193, 209 and 220. See also Mr Capello's evidence at transcript page 159.
[49] Exhibit I, page 489.6 of the brief.
[50] Transcript page 210.

reduced in depth commensurately. Having discussed the matter with Mr Jones and Mr Mills at my request to see if they could reach a consensus about the "notching" issue, Mr Shaw retracted this aspect of his statement and deferred to Mr Jones in relation to the effect of notching to a permissible depth on the structural integrity of the bearer.[51]

70. Mr Shaw gave evidence about the limitations of the mandatory inspections during the building process, in terms of the likelihood that structural deficiencies in this balcony and balconies in general would be detected. At the frame stage inspection, the balcony (and any other balcony designed to be supported on brickwork) would not have been constructed yet and therefore not be there to be inspected. At the final stage inspection, it is possible that while the balcony would be constructed in its entirety, all structural members may not be visible.[52]

THE CASE FOR CHANGES IN THE REGULATORY REGIME

71. At inquest, each witness was invited to comment on need for further regulation of the construction of balconies and the form that might best take, as were the parties in their final submissions.

72. Mr Mills testified that Manningham Council does not offer an inspection service for people concerned about the integrity of any balconies or decks within the municipality. Rather, the council has obligations under the Building Act 1993 and does undertake enforcement action which is usually complaint driven. Typically, complaints are made by a neighbour or someone who has visited the residence and raises concerns about the safety of a structure.[53]

73. Aside from the costs involved in offering a broader council inspection service, including the need to employ or contract appropriately qualified personnel, Mr Mills anticipated problems in visualising all structural members adequately in order to assess compliance in the first place and ongoing structural adequacy.[54] He also noted that inspections would need to be done at intervals to be effective in identifying a need for maintenance, particularly of weathered timber elements.[55]

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[51] Transcript pages 190-192.

[52] Transcript pages 195-198, and 206. Note that in the current paradigm, a property owner relies on the architect/designer/builder designing a structure that complies with all relevant legislative/regulatory requirements; the building surveyor ensuring compliance of the design with those requirements; and the building surveyor ensuring at each inspection that the structure as built accords with the structure as designed. It follows that there is also a heavy reliance on the builder to ensure that the whole build accords with all aspects of the design as documented and approved/permitted. See also transcript pages 66-70 for Mr Mills' evidence in this regard.

[53] Transcript pages 27-28. According to Mr Mills, after the balcony collapse the subject of this investigation, complaints about balconies spiked and a lot of them were from neighbours who were concerned about parties.

[54] Transcript pages 27-29.

[55] Transcript page 59.

74. Mr Mills agreed that it would be feasible to certify a balcony and/or have a plaque affixed to a balcony indicating it was designed for a certain load only, on the basis of the 200kg per square metre standard as a distributed load. Such a scheme would not be without its challenges.[56] Moreover, Mr Mills also put Manningham City Council's position that as the building industry is regulated by uniform building regulations and, in turn, the National Construction Code, signage or alerts about the load limits of balconies or decks should most appropriately be incorporated within that Code.[57] I note that this approach would only apply to newly constructed balconies and would do nothing to address the structural safety of existing balconies and the need for ongoing maintenance.

75. At inquest, Mr Jones was asked to identify the person best placed to certify a balcony's capacity and said that either the engineer who designed the balcony, or the person who designed the balcony by reference to the Manual, would be the appropriate person to certify the balcony, or verify its compliance with the applicable standards and its consequent load capacity.[58] In terms of the content of any signage or alert to owners and occupiers, Mr Jones expressed the view that the messaging should be that the balcony was designed with a load capacity of 200kg per square metre as a distributed load.[59]

76. When asked who could certify balconies for particular loads, Mr Capello conceded he was not an expert in the area but suggested it would be the building surveyor who would sign off and the Victorian Building Authority would have an oversight role.[60] In relation to the discussion about signage or alerts for the benefit of owners/occupiers of balconies, he noted that any initial certification of load capacity would be dependent on proper maintenance.[61]

77. Given his role of Principal Technical Adviser, VBA, Mr Shaw was specifically asked to address the feasibility of a rating system for balconies in his statement[62] and did so and gave evidence expanding on his views at inquest.[63] In summary, Mr Shaw's opinion was that while a rating system *may* assist owners and occupiers by advising as to the balcony's maximum load bearing capacity, any signage or alerts would need to be expressed in language accessible to the lay person; should emphasise that the maximum load bearing capacity refers to a distributed rather than concentrated load; and presupposes regular inspections and competent maintenance.[64]

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[56] Transcript pages 29-31, 59.
[57] Transcript pages 59-61.
[58] Transcript page 84.
[59] Transcript pages 84-88.
[60] Transcript page 113.
[61] Transcript page 114.
[62] Exhibit I, page 489.7 of the brief and following.
[63] Transcript pages 194, 198-200, 214-217, 225-230.
[64] Transcript pages 228-229.

78. As to who should provide the certification underlying any signage or alert, Mr Shaw testified that self-certification by builders was problematic in his view and preferred to see certification done by an independent, third party engineer, that is not the engineer involved in the design of the balcony, if there was one.[65]

79. Mr Shaw also gave evidence about VBA practices and initiatives relevant to the issues before me – information sheets accessible through the VBA; an annual media campaign before the Christmas holidays each year about the need to check the safety of decks and balconies which are accessible on the VBA website for some time after release; and a proposal before the VBA to develop a specific standard for the design of exposed structures.[66] He conceded that information on the VBA website might not necessarily reach everyone who might benefit from the information available there and would take back to his organisation the suggestion that a more public media campaign might be worthy of consideration.[67]

FINDINGS/CONCLUSIONS

80. The standard of proof for coronial findings of fact is the civil standard of proof on the balance of probabilities, with the *Briginshaw* gloss or explications. [68]

81. Adverse findings or comments against individuals or institutions are not to be made with the benefit of hindsight but only on the basis of what was known or should reasonably have been known or done at the time, and only where the evidence supports a finding that they departed materially from the standards of their profession and in so doing caused or contributed to the death under investigation.

82. Having applied the applicable standard of proof to the available evidence, I find that:

    a. The identity of the deceased is Sarah Michele Kajoba, born on 19 June 1980, aged 37.

    b. Ms Kajoba died at the Royal Melbourne Hospital, Grattan Street, Parkville, Victoria 3052 on 17 December 2017.

    c. The medical cause of Ms Kajoba's death is multiple injuries.

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[65] Transcript pages 194-195.
[66] Exhibit I, pages489.8-489.10 and transcript pages 215, 225 and 227-230. See also footnote 42 above and the reference to the paper.
[67] Transcript page 216.
[68] *Briginshaw v Briginshaw (1938) 60 C.L.R. 336 especially at 362-363. "The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description, or the gravity of the consequences flowing from a particular finding, are considerations which must affect the answer to the question whether the issues had been proved to the reasonable satisfaction of the tribunal. In such matters "reasonable satisfaction" should not be produced by inexact proofs, indefinite testimony, or indirect inferences…"*

d. There is no evidence to suggest that there was any want of clinical management or care on the part of the emergency responders who tended to Ms Kajoba and the clinical staff of the RMH on 16-17 December 2017 that caused or contributed to her death.

e. Ms Kajoba's death was accidental, in the way that that word is commonly used, and it occurred in the circumstances outlined above.

f. That said, the bearer was undersized for the required span and load by reference to standards applicable at the time, and in combination with poor subsequent maintenance, provided inadequate support for the balcony which ultimately collapsed under load as Ms Kajoba and others gathered for a group photo.

g. Compliance with the system in place at the time of construction of the home and balcony should have revealed that the as-built balcony did not accord with the plans and building approval issued by Manningham City Council, and that the balcony was inadequately supported by reference to standards applicable at the time.

h. It follows that there was at least imperfect compliance with that system on the part of the councils employed building inspector/s at the time who identity has not been determined by this investigation.

i. Neither at the time of construction, nor at the time of collapse, was there was any legislative or regulatory requirement for certification of balconies as to maximum load capacity; for periodic inspection of balconies for structural integrity; or for prescribed or recommended maintenance of the structural members of balconies.

COMMENTS

Pursuant to section 67(3) of the ***Coroners Act 2008***, I make the following comments connected with the death/s, including matters relating to public health and safety or the administration of justice:

1. This case highlights the risks of complacency among building owners and occupiers when it comes to timber balconies or balconies with timber structural members and the potential gains that can be made by adopting strategies aimed at reducing the risk of similar incidents in the future.

2. At the conclusion of the inquest, I asked the Coroners Prevention Unit (**CPU**) to search data at their disposal to assist my assessment of the need for changes in the regulatory regime around building construction. A brief report dated 28 August 2020 was circulated to the parties with an invitation to make further submissions if they saw fit. None were forthcoming.

3. The CPU searched an in-house surveillance database of all deaths reported to the coroner in Victoria between January 2008 and 30 April 2020 to identify any other deaths due to balcony collapse. There were no such other deaths recorded.

4. The CPU then contacted the Victorian Injury Surveillance Unit (VISU) to ascertain the number of hospital emergency department presentations relating to non-fatal injuries associated with balcony collapses. They were advised that 34 people presented from 15 incidents with injuries from balconies collapsed during the period March 2004 to June 2019. Of those, 13 people or 38% were admitted to hospital for further treatment.

5. The CPU also searched the National Coronial Information System (**NCIS**)[69] for all Australian findings with recommendations containing the words 'deck', 'balcony', 'verandah/veranda' and reviewed the relevant findings to identify those deaths which were unintentional or accidental. For reasons that I will not labour here, the CPU investigator was not confident that the search yielded all relevant previous findings. Nevertheless, one other death was identified where a balcony collapsed[70] and two where a balcony railing gave way causing the deceased to fall from the balcony.

6. Of course, the data does not enable me to determine if the causal of contributory factors in those balcony collapses were on all fours with the balcony collapse the subject of this coronial investigation.

7. Even so, the data potentially adds rather than detracts from the case for prevention-focused recommendations to improve public safety by raising consciousness within the building sector of the need to ensure inspection of balconies as to their structural integrity and compliance with current standards; the need for more public education about ongoing inspection and maintenance of balconies, especially those with structural timbers members; and the potential for safety gains by alerting owners and occupiers about the maximum load bearing capacity of balconies.

[69] The NCIS is an internet-based data storage and retrieval system of all deaths reported to Coroners in Australia and New Zealand since 2000 and 2007 respectively. It comprises coded and free-text data and up to four dull text documents generated for the Coroner's investigation, namely the summary of text from the police report of death to the Coroner, the autopsy or inspection report from the pathologist, the forensic toxicology report and the Coroner's findings.

[70] The Queensland Coroner recommended that: (1) House occupiers of all residential dwelling consisting of a wooden deck or balcony, but particularly those built pre-WW2, have those constructions checked for their structural integrity generally, but in particular, to identify any structural concerns and for remedial work to be carried out. (2) The Building Services Authority, the Brisbane City Council and other Local Government Authorities, and Building Code and residential Building Association disseminate these recommendations to their member, stakeholders and the general public to highlight the need for an inspection of such buildings, to identify any structural concerns and for remedial work to be carried out.

RECOMMENDATIONS

Pursuant to section 72(2) of the ***Coroners Act 2008***, I make the following recommendations, including recommendations relating to public health and safety or the administration of justice:

1. That the Victorian Building Authority promotes among registered builders and building surveyors a practice of ensuring that balconies associated with residential premises are subject to mandatory inspections at either the frame stage or at the final stage and that the inspection is specifically directed to the compliance of the balcony with currently applicable standards.

2. That the Victorian Building Authority continues its efforts to improve public awareness of the need for regular inspections and competent maintenance of balconies, particularly where they are of timber construction or have timber structural members.

3. That the Victorian Building Authority continues its efforts to develop a specific standard addressing the design and durability of exposed structures in response to the 2018 paper referred to it by the Chair of the Building Regulations Advisory Committee.[71]

4. That the Victorian Building Authority considers developing a system for:

   (a) the certification of newly constructed balconies as to their maximum distributed load capacity;

   (b) requiring an alert to all users of newly constructed balconies in the form of signage to be permanently affixed to the balcony with an appropriately worded alert to owners and occupiers not to exceed that capacity and to be mindful of the need for regular inspection and competent maintenance.

[71] Exhibit I, page 489.9 of the brief. The Building Regulations Advisory Committee (BRAC) is established under the ***Building Act 1993*** with functions including accrediting building products, construction methods or designs, components or systems connected with building work. See also the paper attached to Mr Shaw's statement at page 489.12 and following of the brief and footnote 42 above.

PUBLICATION OF FINDING

Pursuant to section 73(1) of the Act, unless otherwise ordered by the coroner, the findings, comments and recommendations made following an inquest must be published on the internet in accordance with the rules. I make no such order.

DISTRIBUTION OF FINDING

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

The family of Ms Kajoba

Manningham City Council

Any other interested parties

Peter Raymond Jones

Robert Capello

Victorian Building Authority

The Honourable Shaun Leane, Minister for Local Government and Suburban Development

The Honourable Richard Wynne, Minister for Planning

Detective Senior Constable Adam Pongho c/o O.I.C. Manningham C.I.U.

Signature:

Paresa Antoniadis Spanos

Coroner

Date: 15 September 2021

NOTE: Under section 83 of the ***Coroners Act 2008*** ('the Act'), a person with sufficient interest in an investigation may appeal to the Trial Division of the Supreme Court against the findings of a coroner in respect of a death after an investigation. An appeal must be made within 6 months after the day on which the determination is made, unless the Supreme Court grants leave to appeal out of time under section 86 of the Act.