STATE CORONER'S COURT
OF NEW SOUTH WALES

Inquest:	Inquest into the death of Bradley Hope
Hearing dates:	19 – 21 October 2022
Date of findings:	3 March 2023
Place of findings:	Byron Bay
Findings of:	**State Coroner, Magistrate Teresa O'Sullivan**
Catchwords:	CORONIAL LAW – manner of death, volatile substance use, chroming, drug education, roundtable
File number:	2019/00386164
Representation:	Counsel Assisting the Coroner: Ms Emma Sullivan instructed by Ms Francesca Lilly (Crown Solicitor's Office) Family: Ms Sophie Anderson instructed by Ms Katherine Driscoll (Carroll & O'Dea) Unilever: Ms Georgia Huxley instructed by Mr Angus Hannam and Mr Robert Wyld (Johnson Winter Slattery) Woolworths: Mr Bruce Hodgkinson SC and Ms Kirsten Edwards instructed by Ms Jacqui Brinckmann and Ms Lea Constantine (Ashurst) NSW Police: Mr Bradley Dean instructed by Mr Aurhett Barrie Ministry of Health: Ms Elizabeth O'Brien

Non publication order:	Non publication orders were made on 31 August 2022 and 19 October 2022, prohibiting the publication of certain evidence contained within the coronial brief of evidence, with a particular reference to media guidelines for the reporting of Volatile Substance Misuse. The orders can be obtained on application to the Coroners Court registry. Non publication orders and pseudonym orders were made on 3 March 2023.
Findings:	**Identity**: The deceased person was Bradley John Hope. **Date of death:** Bradley died at approximately 1:18am on 8 December 2019. **Place of death:** Bradley died at The Tweed Hospital, Tweed Heads, NSW. **Cause of death:** The cause of Bradley's death was cardiac arrythmia or hypoxia in the setting of hydrocarbon inhalation. **Manner of death:** Bradley died as a consequence of complications associated with the inhalation of hydrocarbon chemicals in the context of engaging in volatile substance use. His death was accidental

Recommendations:	**<u>To the NSW Ministry of Health:</u>** A. That the NSW Ministry of Health convene a 'round-table' forum with stakeholders in NSW in relation to the issue of Volatile Substance Use (VSU) in NSW, including as to the misuse of aerosol deodorants and also 'nangs', informed by the approach adopted by the 'Inhalants Roundtable' convened by the Queensland Government, and chaired by the QLD Chief Health Officer in December 2019 (NSW VSU Roundtable). B. That the NSW VSU Roundtable participants – in addition to the Department of Health - include relevant stakeholders such as: i. the NSW Police Force; ii. the NSW Department of Education; iii. the NSW Education Standards Authority; iv. the NSW Ambulance Service; v. the NSW Department of Communities & Justice; vi. industry participants, including the Aerosol Association of Australia and Unilever Australia Limited; vii. all major retailers of aerosols (including Coles, Woolworths and pharmacies); viii. the retail associations (including the National Retail Association and the Australian Retailers Association); ix. Community youth and AOD services (including NGOs); x. First Nations health agencies; xi. an advisory expert panel (including academics in the VSU field);

	xii. any other organisations or individuals of relevance; C. That key themes of the NSW VSU Roundtable include consideration of: i. Prioritising the collation of data across agencies in NSW to obtain better statistical evidence relating to VSU use in NSW (including the use of aerosols and 'nangs'), including as to the prevalence of VSU in NSW; 1. data trends in VSU within NSW; 2. potential 'hotspots' within NSW; and 3. mortality (deaths) and morbidity (harms) associated with VSU within NSW. ii. A review of the NSWPF P79A Form with respect to capturing sufficient information which may indicate the need for specific toxicity testing; iii. Arrangements and channels of communication for sharing such data between agencies and stakeholders (including at a national level) so as to better monitor, respond to and report upon, VSU (including outbreaks or 'hotspots'); iv. Ensuring adequate training of first responders (including police, NSW Ambulance officers and social and youth workers) in identifying VSU and the risks associated with it; v. The formulation of an appropriate public health education program to address VSU, informed by an expert focus group, including:

	1. Whether VSU should be addressed in school-based prevention programmes; 2. Teacher education including as to the signs of VSU, the risks of VSU and how to deal with young people who may be engaging in VSU, whether recreationally or as chronic users; 3. Parental education including as to the signs of VSU, the risk of VSU and how to deal with young people who may be engaging in VSU, whether recreationally or as chronic users; 4. Providing harm reduction education for regular users of VSU; 5. Promotion of links to reputable sources of information, such as the Australian Drug Foundation (and others); 6. First aid training for children and young people responding to emergencies involving illicit substances, including education on the benefits of a timely medical response; 7. Peer to peer education amongst adolescent and older users; vi. The potential utility of introducing legislation in NSW regulating the sale of volatile substances/inhalants by retailers where there are reasonable grounds to believe/suspect that the products may be abused (such as s. 23 of the *Summary Offences Act 2005* (Qld) and s. 206 of the *Criminal Code Act Compilation Act 1913* (WA);

vii. The inclusion of basic life support training within the high school curriculum, so as to equip young people with basic skills to deal with medical emergencies arising from VSU;

viii. Collaboration with the Department of Health and Aged Care (Cmth), and other state agencies and stakeholders (including youth organisations and health agencies) as to the potential resurrection of the National Inhalants Information Service website (previously operative until 2014);

ix. Exploration of non-volatile compressed gas propellants as an alternative to hydrocarbon propellants in aerosol deodorants.

To the Aerosol Association of Australia (AAA):

D. That the AAA collaborate with other aerosol industry participants (including Unilever) to retain an appropriate expert to conduct an evaluation of the efficacy and impact of warning labels on aerosol containers regarding inhalant abuse/VSU in Australia;

E. That the AAA update its publication 'Aerosol Association of Australia – AEROSOL LABELLING – An introduction' (July 2018) to include guidance to industry participants on labelling and warnings against VSU, to the effect that:

i. all aerosols should carry a warning against deliberate inhalation;

ii. suggesting the 'SACKI' (Solvent Abuse Can Kill Instantly) or 'IMCKI' (Inhalant Misuse Can Kill Instantly') warnings, or another warning to the same effect;

	1. That the AAA liaise with Committee PK-013 and the Council of Standards Australia regarding Australian Standard AS 2278.1 (2022) re ‘Aerosol Containers’ as to the inclusion of mandatory VSU warnings in the labelling section.

Table of Contents

Introduction

1. Bradley John Hope (**Bradley**) was 16 years old when he died on the morning of Sunday, 8 December 2019 in Tweed Heads Hospital from complications arising from having inhaled chemicals from an aerosol deodorant can some hours prior at a friend's home in Tweed Heads.

2. From 19 to 21 October 2022, I presided over an inquest into Bradley's death. The focus of the inquest, which it appears was the first of its kind, was upon aerosol deodorant inhalation (volatile substance use), and the related public health and safety issues.

3. In the preparation of these findings, I have been assisted by the written submissions of Counsel Assisting, Emma Sullivan, together with the submissions of counsel for the interested parties.

4. At the outset, I extend my sincere condolences to Bradley's family, acknowledging in particular, the contribution of Bradley's mother, Ms Corinne Mair ("Corinne"), who has played an active and valuable role in this inquest. I would also like to thank Bradley's father, Mr Troy Hope, brother, Mr Koby Hope ("Koby"), stepfather, Mr Joel McDermott, and aunt, Ms Kim McDermott, for their attendance throughout the hearing, as well as all those friends and family who joined us via audio visual link.

5. The heartache of Bradley's loss continues to be felt daily by his family. It is hoped that from this inquest process, some small measure of solace can be taken by the family, given that these proceedings are a step towards reform to prevent the occurrence of another similar tragedy.

The purpose of an inquest and role of the Coroner

6. This inquest is held for the purposes of a public examination into the circumstances of Bradley's death.

7. Of course, it is trite to state that the purpose of an inquest is not to blame or punish anyone for a particular death. Instead, a coronial inquest is an inquisitorial process, in the nature of a fact-finding and truth-telling exercise.

8. To frame those matters in terms of the *Coroners Act 2009* (NSW) (**the Act**), pursuant to section 81, the role of a Coroner is to make findings as to the identity of the person who died, and the date, place, cause and manner of their death.

9. Section 82 of the Act governs the making of recommendations, conferring such power where it is necessary or desirable to do so in relation to any matter connected with the person's death which is the subject of the inquest. This power allows the Coroner to consider whether anything should or could have been done to prevent the death, and to recommend the necessary changes to prevent a similar death from occurring in the future. For a matter such as this, an important aspect of the Coroner's role is death prevention – to speak for the dead to protect the living – in the context of broader public health and safety issues.

The proceedings

10. The hearing of the inquest into Bradley's death was held at Byron Bay Local Court from 19-21 October 2022.

11. I extend my gratitude to Bradley's family and to all the parties, representatives and others involved in this inquest for their valuable participation, hard work and collaboration. The inquest proceeded smoothly and efficiently, and the constructive approach of all parties involved is to be commended.

12. I would also like to thank the witnesses who appeared and gave valuable evidence that greatly assisted in my findings and recommendations. I am hopeful that this inquest is a significant step towards preventing another family going through the terrible tragedy of Bradley's death.

Bradley's life

13. Whilst much of the inquest focussed upon the use and misuse of volatile substances and consideration of issues through the prism of potential recommendations, it must be remembered that Bradley is truly at the heart of these proceedings.

14. Bradley was born on 18 July 2003 to Corinne Jayde Mair ("Corinne") and Troy Ryan Hope ("Troy"). Bradley had one sibling: an older brother named Koby Jay Hope ("Koby").

15. Bradley grew up in the Tweed area, raised predominantly by Corinne alongside Koby, and spending weekends with Troy, and with his grandparents. Bradley also had a stepfather, Joel McDermott ("Joel").

16. Bradley had a happy childhood; he loved his family, and was very much loved by them in return.

17. A kind child, he grew into a kind young man, who loved animals and nature. He enjoyed diving, fishing, and underwater photography. He played social sports, including Rugby League, loved music, and, like many teenage boys, played Xbox.

18. Bradley was very close to his older brother, and had a strong circle of friends, who were very important in his life. He was known for being extremely loyal. He was popular (and popular with the girls, given his handsome looks), but he would also "stick up for the little guy".

19. Bradley had a healthy lifestyle and had no health issues.

20. Throughout the inquest, the tremendous pain and grief of Bradley's loss for his family, friends and indeed, all in his orbit, was palpable. He was a sparkling, charismatic and loving young man, with a bright future. Bradley's mother, Corinne has shown extraordinary and single-minded determination, in seeking to ensure that the death of her beloved son is not in vain.

21. Against that background, I turn to consideration of the relevant factual findings and the central issues in this inquest.

PART A – RELEVANT FACTUAL FINDINGS

Volatile substance use – matters of terminology

22. Volatile substance use (VSU) is the deliberate inhalation of substances which produce a vapour or gas at room temperature. There are a number of household items which can be, though the focus of these proceedings was upon on aerosol deodorants.

23. On 19 October 2022, I made a non-publication order in relation to this inquest, informed by various media guidelines around reporting on volatile substance misuse.

24. Different terms have been used to describe the practice, including volatile substance abuse, volatile substance misuse, solvent abuse, and inhalant misuse, among others. Expert witnesses gave evidence at the hearing as to the issues associated with the various terminology. A/Professor Sarah MacLean and A/Professor Amy Peacock noted the importance of avoiding terms such as "abuse" other than in a clinical capacity, and to avoid pathologising people using these products. Whilst I recognise the issues associated with nomenclature, accepting that there are "legitimate" uses for products such as aerosol deodorants, I find the matters raised by those experts to be compelling, and have accordingly determined to adopt the term "volatile substance use" ("VSU") in my findings.

Events of 7-8 December 2019

25. I am grateful for the agreed statement of facts prepared by those assisting me, with the contributions of the interested parties, which helped the proceedings to focus on the broader issues, and prevented the calling of witnesses who no doubt carry traumatic memories of the events of Bradley's death.

26. I have relied upon this document, together with the material in the brief of evidence upon which it is based, to formulate the following summary of the facts.

27. By way of general background, like countless other teenagers and young people, Bradley and his friends experimented with recreational drugs, including cannabis and MDMA. Bradley was not unique in this regard, as such experimentation with drugs and alcohol is common. Bradley's experimentation included VSU; it appears he had been engaged in this practice on occasions for some 8 to 12 months in the lead up to his death.

28. Bradley's older friends, Sam (a pseudonym) and John (a pseudonym), were aware of the dangers of VSU, including the risk of death. In approximately October or November 2019, John had warned Bradley about these risks, following the death of his friend Phoenix Werner in Geelong, Victoria in 2016.

29. On Saturday 7 December 2019, Bradley spent the day with his mum and brother, watching a film at home. In the late afternoon, Bradley drove with Corinne to the home of his friend Ron (a pseudonym) at Ron's family home.

30. Bradley, Ron and their friend Kris (a pseudonym) played Xbox for a time, before deciding to buy cannabis. As they were unable to buy cannabis, the decision was then made to engage in VSU (or to 'chrome', as it is colloquially known). The boys travelled to Woolworths at The Strand, Coolangatta, Queensland, where they purchased two aerosol deodorants and various snacks.

31. The boys returned to Ron's family home. There, they watched films in Ron's bedroom and began to engage in VSU in the evening. None of the three boys consumed alcohol or any other drugs that night. Kris soon ceased VSU and went to sleep in another room, while Bradley and Ron continued to engage in VSU.

32. It seems that Bradley may have continued with VSU after Ron fell asleep, although this cannot be confirmed. A short time after Ron fell asleep (potentially around 10 minutes later), he was awoken by Bradley flinging his arms wide. Ron saw that Bradley's chest was puffed out, and he was gasping for breath. Bradley did not appear to be conscious; his eyes were rolling back, his limbs were spasming and he was visibly struggling to breathe.

33. Ron attempted to wake Bradley by tapping him and speaking to him. Bradley was unresponsive. Bradley rolled about on the bed, and then fell off the bed. Ron continued to try and wake Bradley. Bradley's face changed colour from his usual complexion to purple.

34. Ron sought help from Kris, who came from the adjacent bedroom to try and help wake Bradley. The two boys picked Bradley up and put him back on the bed, before telephoning an older friend (then aged 19), Sam for help. This was around 11:30pm. Ron told Sam that they had been "chroming", that Bradley was not breathing; he asked for help, and may have requested that Sam contact emergency services.

35. Shortly after, Bradley took one deep breath and stopped breathing, his whole body relaxed and turned pale. It is unclear if this occurred before or after Ron telephoned Sam.

36. Ron and Kris were very distressed; they carried Bradley downstairs to the front door.

Assistance from friends

37. At the time of receiving the phone call from Ron, Sam was at the home of his then partner with a number of friends including John. The group immediately drove the 2-3 minute car journey to Ron's home.

38. Whilst *en route*, John used Sam's mobile phone to contact emergency services to request an ambulance.

39. The friends arrived minutes later, and found Ron and Kris crying as they were carrying Bradley downstairs. Despite the distressing scene, Sam commenced CPR under guidance from the telephone operator, while John went upstairs to wake Ron's mother, Nattallee Allan ("Nattallee") and her partner, who were asleep.

40. Nattallee is a Registered Nurse, who had worked in mental health for the ten years prior to Bradley's death. Nattallee took over CPR from Sam and performed airway checks. She observed froth or foam at his mouth; he was blue and purple in colour, and also floppy and unresponsive.

41. Emergency physician Dr Daniel Bodnar, who provided a report and gave oral evidence at the hearing as an expert witness, commended the actions of Sam and Nattallee, noting the challenges of performing resuscitation on a loved one. I also acknowledge and commend their courageous efforts in the distressing circumstances that presented.

Resuscitation attempts by NSW Police and Ambulance

42. Around one minute after Nattallee took over CPR, at 11:45pm, NSW Police Force officers arrived on scene and took control of resuscitation attempts. Approximately one minute later, NSW Ambulance Paramedics arrived. Bradley's friends vacated the area to ensure the first responders had the necessary space to perform their duties. The paramedics were advised that Bradley had been "chroming".

43. Ron telephoned Koby and told him of Bradley's condition. Koby drove with Corinne to Ron's family home, where they waited outside whilst resuscitation attempts continued.

44. Further assistance arrived in the form of additional police officers, paramedics and an intensive care paramedic, the latter soon taking control of Bradley's care and treatment. Bradley's treatment on scene involved CPR, intubation to assist with breathing, oxygen, IV access and a series of different medications including adrenaline and Hartmanns solution.

45. Bradley was confirmed to be in cardiac arrest with no palpable pulse and unrecordable blood pressure. He was initially in a Pulseless Electrical Activity ("PEA") rhythm, and after intervention, went into refractory Ventricular Fibrillation.

46. Police assisted in preparing the ambulance for unhindered departure, and at 12:25am, around 40 minutes after the first responders arrived on scene, the ambulance departed for hospital, with a police officer driving to enable the four paramedics to continue to treat Bradley enroute.

47. Attending police drove Corinne and Koby to the Tweed Hospital at the same time.

48. Staff at the Tweed Hospital were advised of Bradley's condition and approach ahead of his arrival, and prepared accordingly. The ambulance arrived at 12:35am.

Care and treatment at The Tweed Hospital

49. Upon Bradley's arrival at approximately 12:35am, he was triaged as Category 1, (requiring immediate medical assistance) and taken to the resuscitation room. CPR was continued by Hospital staff, who maintained Bradley's airways, and took blood samples for analysis.

50. The nursing notes show that rhythm checks were conducted 18 times between 12:40am and 1:17am, each time showing either asystole or PEA.

51. Bradley's treatment included: administration of adrenaline; administration of normal saline; placement of a femoral arterial line to facilitate monitoring of intra-arterial blood pressures; administration of calcium gluconate (2.2mmol IV) and magnesium sulphate (10mmol IV) in an attempt to correct any QT prolongation; administration of 150mg intravenous amiodarone in an attempt to correct the ventricular fibrillation.

52. Dr Hussain Kadim ("Dr Kadim"), the on-duty emergency medicine advanced trainee, telephoned the Poisons Hotline and spoke with Dr Geoff Isbister ("Dr

Isbister"), the on-call Toxicologist. Dr Isbister advised that ventricular fibrillation can be seen in cases of hydrocarbon inhalation as a result of myocardial excitation, but that there is no specific antidote.

53. Dr Kadim then spoke with the Intensivist Dr Geoffrey Ramin ("Dr Ramin") at The Tweed Hospital, who opined that Bradley's prognosis was grave. The possibility of extra corporeal membrane oxygenation ("ECMO") was discussed. ECMO involves the pumping of blood outside of the body to a heart-lung machine that removes carbon dioxide and sends oxygen-filled blood back to tissues in the body. Unfortunately, Dr Ramin indicated that this treatment was not a viable option in Bradley's case.

54. Notwithstanding, Bradley's treating team also sought advice from Dr James Winearls ("Dr Winearls"), the Intensivist at Gold Coast University Hospital, the local ECMO service. Sadly, Dr Winearls advised that ECMO would not be possible due to the absence of an ECMO retrieval team and Bradley's unstable condition. He further indicated that Bradley's prognosis was grave.

55. Despite ongoing resuscitation efforts, and the dedicated care of Bradley's treating team, Bradley's condition continued to deteriorate.. Bradley could not be resuscitated. Tragically, he was pronounced deceased at 1:18am on 8 December 2019.

PART B – EVIDENCE FROM THE HEARING

56. In addition to written statements, the agreed statement of facts, and other documentary evidence including expert opinions tendered into evidence on 19 and 21 October 2022 and relevant literature, the Court heard oral evidence from:

    a. Ms Jeanette Fenske, the Director of Stores for Woolworths Supermarkets. Amongst other matters, Ms Fenske gave evidence regarding the extensive measures undertaken by Woolworths to address the issue of VSU;

    b. Daniel Bodnar, emergency physician, who gave evidence regarding the physiological effects of VSU and related matters;

    c. David Cadogan-Cowper, Acting President of the Aerosol Association of Australia (**AAA**), who gave evidence on behalf of the industry body in relation to alternatives to propellants, potential modification of aerosol

propellant formulas, and the technical and regulatory aspect of their work in the industry;

d. Associate Professor John Allan, Executive Director of the Mental Health Alcohol and Other Drugs Branch, Clinical Excellence Queensland, Queensland Health, who gave evidence on Queensland's 'Inhalants Roundtable' held in December 2019, a forum in which a number of interested parties participated to canvass various VSU issues, and workshop potential solutions;

e. Professor Johan Du Flou, forensic pathologist, who provided forensic evidence on the various harms related to VSU, including recent research on this issue;

f. Superintendent Samuel Crisafulli, New South Wales Police Force, who gave evidence in relation to the recording of VSU in COPS and subsequent data collection, amongst other matters; and

g. Richard Ward, Global R&D Director, Deodorants Format Design, Unilever, who gave evidence on the technical aspects of Unilever aerosols, attempts by Unilever to explore various alternatives to propellants and the differences of Unilever products to competitor brands; and

h. Scott Mingl, CCBT Lead and Marketing Director – Ice Cream ANZ at Unilever Australia, formerly CCBT Lead and Marketing Director – Deodorants ANZ, who gave evidence on the status of Rexona in the market, the warning labels on aerosol products and Unilever's prospective membership of the AAA.

57. Each of these witnesses also prepared a statement which was tendered into evidence.

58. Their oral evidence was of significant assistance to me in understanding the nature and scope of VSU as a general issue in the community, and as to potential options to address the problem.

Expert conclave

59. Six experts also gave evidence concurrently in a conclave conducted on 20 October 2022. Evidence was heard on a range of topics from a panel of academics, educators and health professionals, namely:

    a. Associate Professor Sarah MacLean, academic at La Trobe University in the School of Allied Health Human Services and Sport, who (amongst other matters), addressed the significance of education in the VSU space, and how to effectively implement VSU interventions;

    b. Mr Tristan Ray, Policy and Projects Manager at CAYLUS, who gave evidence of the CAYLUS youth substance misuse prevention program and its operations in remote and Indigenous communities, specifically Central Australia. Although CAYLUS was initially focussed on addressing primarily petrol sniffing, abuse of aerosol deodorants has increasingly become problematic, and required various other measures to combat the issue;

    c. Associate Professor Amy Peacock, Acting Deputy Director of the National Drug and Alcohol Research Centre (NDARC) at the University of New South Wales and adjunct researcher of psychology at the University of Tasmania, who provided information as to data collection and analysis, including trends in VSU;

    d. Mr Paul Dillon, drug education specialist and director of the Drug and Alcohol Research and Training Australia who gave evidence on VSU education for young people, schools and parents;

    e. Mr Anthony Rigney, psychologist and CEO of KYDS, who gave evidence on content delivery and effective modes of communicating with parents and young people in the context of substance use and mental health concerns; and

    f. Mr Daniel Madeddu, Executive Director of the Centre of Alcohol and Other Drugs within the New South Wales Ministry of Health, who provided evidence on the multi-modal policy approach necessary to address VSU, amongst other matters.

60. The expert conclave primarily canvassed themes identified in the Issues List, and included the following subjects:

    a. definitions of VSU;

    b. the nature of VSU as a complex and challenging public health issue;

    c. prevalence and trends in VSU;

    d. drivers of VSU use;

    e. education of the community, including teachers, parents and children/youths as to VSU;

    f. reliable information sources as to VSU;

    g. the efficacy of VSU interventions to date; and

    h. the utility of a proposed NSW "roundtable" with relevant stakeholders to formulate an approach to addressing VSU.

61. The conclave facilitated constructive exchanges between experts of varying specialities that identified both points of consensus and divergences of opinion. The evidence provided during this process has proved invaluable, and has been critical to informing my understanding of this complex area, and my consequent findings and recommendations.

62. Following the hearing, Counsel Assisting provided comprehensive written submissions, which included suggested findings and recommendations. The interested parties were given an opportunity to respond, and submissions were provided by Bradley's family, Unilever Australia, and the Woolworths Group. Other interested parties expressed support for the submissions of Counsel Assisting, as did Bradley's family, Unilever and Woolworths. In that context, I have drawn significantly upon the submissions of Counsel Assisting, given the general acceptance as to their content, save as to some limited matters.

PART C – SUBMISSIONS AS TO FINDINGS

63. The Family of Bradley Hope ("the Family") emphasised the need for a multimodal response to VSU, and submitted that the "genie is out of the bottle", and "limiting education, particularly to parents, is also problematic". The Family emphasised the need to equip parents and caregivers with the tools and

information to speak with their children, whether or not they are deemed to be "at risk".

64. As to the risks of VSU, the Family supported the submissions of Counsel Assisting and sought to add that "sudden sniffing death syndrome" may be a misnomer, as its effects may not in fact be immediate.

65. The Family also submitted that VSU is not restricted to a particular demographic, and emphasised the need for broad parental education.

66. In relation to the industry efforts around VSU, the Family submitted that Unilever and other manufacturers and retailers of hydrocarbon products ought to be required to take up membership of the AAA or other such bodies, and submitted that there should be a "strong push towards phasing out the use of hydrocarbons altogether". It was also submitted that warning labels should be placed on the front of the product, similar to cigarette packaging, rather than the back.

67. The Family submitted that there ought to be consideration of legislation, particularly in relation to the sale of hydrocarbon products and police powers to confiscate aerosols being used for VSU.

68. The Family submitted that the Department of Communities and Justice, who may have care of children, ought to be included as prospective participants in any recommendation as to a NSW Inhalants Roundtable (which I note was proposed by Counsel Assisting).

69. The Family submitted that two further themes should be added to those outlined by Counsel Assisting in relation to the recommended NSW Inhalants Roundtable, namely, (a) the addition of toxicology testing in suspected VSU fatalities to the P79A form to enhance the collection of data on VSU; and (b) investigation into the addition of non-volatile compressed gas propellants as an alternative to hydrocarbon propellants and products typically comprising of butane, iso-butane and propane, or the use of barrier packs in aerosols.

70. The Family also made a number of more general submissions, including:

    a. That Unilever join the AAA as a member;

    b. That Rexona and other aerosol deodorants be required to provide a consumer flyer with purchase explaining the risks of VSU;

    c. That Unilever to look into phasing out hydrocarbons;

d. That Unilever to provide consumer education on their website for parents, teachers and emergency response information;

e. That Unilever make regular investments to address the issues of VSU;

f. An organisation similar to Re-Solv UK, supported and funded by major manufacturers such as Unilever, be set up to offer education and support programs in Australia for first responders, community workers, teachers and police;

g. School-based education about VSU and brands that are most dangerous; and

h. Consideration for products that use hydrocarbons and/ or products that may be used for VSU be made a restricted substance in NSW, giving police powers to intervene.

71. Unilever made submissions which generally endorsed the submissions of Counsel Assisting. Unilever raised some concerns regarding the terminology of volatile substance use, noting, as A/Professor MacLean raised at the hearing and as outlined above, that aerosol deodorants have a legitimate use and legitimate purpose, and these products are safe to use when used as such.

72. Unilever also noted that Counsel Assisting and the Family's submissions raised Unilever's non-membership of the AAA as an issue. Unilever's submissions recounted the evidence of Mr Mingl at the hearing as to why Unilever does not have membership with the AAA, but noted that Unilever is already working to engage with the AAA on matters related to volatile substance misuse.

73. Unilever responded to the Family's submission that there should be a strong push towards the phasing out of hydrocarbons. Unilever acknowledged its corporate responsibility to address the issues of VSU and ensure the safety of its products, and emphasised its commitment to continuing efforts at product reformulation to create better and safer products.

74. Unilever noted the Family's submission that warning labels should be placed on the front of cans, but noted that this may cause consumers to mistakenly believe that the product was more dangerous than any other product on the market, which is not the case. Unilever noted its support for recommendations that it

collaborate with the AAA to evaluate the effectiveness of warning labels, and advised it has already commenced such work with the AAA.

75. Unilever supported the recommendation for a NSW Inhalants Roundtable, however queried the Family's submission that a key theme for the Roundtable be the addition of a non-volatile compressed gas propellants as an alternative to hydrocarbon propellants or products typically comprising of butane, iso-butane and propane, or the use of barrier packs in aerosols. Unilever noted that it has already conducted significant investigations into such alternatives, and drew attention to the written and oral evidence of its staff members. Unilever noted its continued commitment to the highly technical subject of product reformulation.

76. In response to the Family's submission that it Unilever ought to commit further to public education, Unilever expressed it support for a NSW Inhalants Roundtable at which the most appropriate means of education could be discussed. Unilever stated it will continue to progress its initiatives for parental education, including support for the Ted Noffs Foundation, and will investigate how best to use its website to provide useful and safe information.

77. Woolworths provided brief submissions in support of those of Counsel Assisting, and drew particular attention to the need for careful consideration of the risks to retail staff when legislative restrictions are imposed on supply or access to products that may be used for VSU. The prospect of a NSW Inhalants Roundtable to more thoroughly canvass this issue was wholly supported, as was the need for further data and careful empirical evaluation of same.

PART D – MATTERS RELEVANT TO STATUTORY FINDINGS UNDER s 81

78. In the somewhat unique circumstances of this matter (including my concern to a avoid further trauma to Bradley's friends and family), the inquest proceeded on the basis of an agreed factual foundation as to the central matters.

79. However, two matters were explored in relation to the issues of the manner and cause of Bradley's death, having regard to section 81 of the Coroners Act 2009.

Circumstances of aerosol deodorant purchase

80. The first issue concerned the circumstances in which Bradley purchased the cans of Rexona deodorant from the Woolworths store at The Strand,

Coolangatta. It was initially understood that Bradley and his friends had purchased three cans of aerosol deodorant, together with snacks, possibly from a check-out salesperson directly.

81. From extensive investigations undertaken by Woolworths, it was subsequently established that the sale took place at 7:59pm, was in fact for two aerosols (not three) and a number of snacks; it was also completed via a self-service checkout (not a salesperson).

82. Counsel Assisting submitted that while that first scenario in which Bradley and his friend were thought to have purchased the aerosols was of potential concern, that position was not borne out by the evidence. Instead, the transaction that actually took place underscores the ubiquity and accessibility of aerosol products for abuse.

83. I agree with Counsel Assisting's submission. The ease with which young and vulnerable people can access aerosol products and engage in VSU, with the potential for fatal consequences, is of great concern: yet the problem is hugely complex, and there is no "silver bullet" to solve the issue. That issue is canvassed further below.

Cause of death

84. The second issue concerned the medical cause of Bradley's death.

85. An autopsy report was provided by forensic pathologist Dr Alison Ward of the Department of Forensic Medicine. Dr Ward found that the direct cause of death was "presumed solvent abuse". I note that this phrasing, while technically accurate, may present as misleading or exaggerated to a lay observer, noting the social connotations of the word "abuse" and whether or not Bradley's practices would be classified as "abuse" in the colloquial sense. (As noted, the expert conclave gave evidence as to the connotations associated with the various terms of "abuse", "misuse" and "use", which is explored below).

86. Dr Ward noted that the substances inhaled by Bradley could not be tested by the toxicology laboratory, and as such the diagnosis was presumptive, and based on the history described in the evidence before her, namely the P79A and the medical records from the Tweed Hospital. Dr Ward also noted that no alcohol was detected in Bradley's blood.

87. An expert report was obtained from Professor Alison Jones, clinical toxicologist. Professor Jones opined that, following her review of the relevant material, “death due to solvent inhalation remains the most likely sole and direct cause of death”. She noted that any apparent previous drug use by Bradley likely had no relation to his death.

88. Professor Jones gave evidence as to the various methods of VSU and wide range of solvents intended for household or industrial use that are known to be used. She also identified a wide range of adverse physiological effects beyond those typically sought by those engaging in VSU, including a variety of acute medical complications relevant to Bradley’s case, specifically: seizures, palpitations, tachyarrhythmias, dyspnoea (breathlessness) and sudden death. Other consequences can include psychotic episodes, hallucinations, paranoia, chronic neurotoxicity, mood swings and memory impairment.

89. While testing and analysis of the substances inhaled by Bradley would have undoubtably been beneficial, Professor Jones advised that volatile organic compounds (VOCs) evaporate easily and quickly. They require specific storage conditions of post-mortem blood samples, and the time for which they may be kept may vary depending on the type of blood sample and tests that are performed. Detection of VOCs decreases in likelihood as time progresses, and the specific requirements of immediate sampling and toxicological analysis of VOCs is not common practice.

90. An expert report was also obtained from Dr Daniel Bodnar, detailed above. This was supplemented by oral evidence at the hearing. In relation to Bradley’s cause of death, Dr Bodnar noted that seizures were relatively uncommon in otherwise healthy young men like Bradley, and the most likely cause was severe intoxication secondary to hydrocarbon use. He opined that Bradley likely suffered from a combination of hypoxia, or a direct hydrocarbon injury to the brain, or a seizure related to poor perfusion to the brain, and severe volatile agent intoxication, which led to cardiorespiratory arrest.

91. Having regard to the totality of the evidence, as summarised above, and the circumstances of Brad’s death, I accept the submissions of Counsel Assisting. I find that the cause of Bradley’s death was cardiac arrythmia or hypoxia in the setting of hydrocarbon inhalation. Further, the manner of Bradley’s death is best

formulated as complications associated with the inhalation of hydrocarbon chemicals in the context of engaging in volatile substance use.

The Complexity and Nature of VSU

92. From the evidence received during the inquest, I am left in no doubt that VSU is a very complex phenomenon that poses unique and difficult public health challenges. Seeking to gain an understanding of VSU and the scope of the problem in NSW (relevantly) was a critical aspect of this inquest.

93. VSU has similar effects to alcohol intoxication, but with much quicker effects, which may last anywhere from two or three minutes, to as long as 45 minutes. Effects may vary depending on the substance used, the amount consumed, the general health of the user, and the combination with other substances, including alcohol, medications and illicit substances.

94. A key aspect of VSU is the wide range of products captured by the term. Volatile substances may be classified into four groups:

    a. Solvents – liquids or semi-liquids that vaporise at room temperature, such as glues and petrol;

    b. Gases – medical anaesthetics and fuel gases, such as lighter fuels;

    c. Aerosols – sprays containing propellants and solvents, such as aerosol deodorants and paints;

    d. Nitrites – amyl nitrite or cyclohexyl nitrite found in room deodorizers, and whipped cream cannisters.

95. Although Bradley's death involved an aerosol deodorant, it was beneficial to hear from the experts about trends in the use of other inhalants amongst various demographics, particularly in relation to whipped cream cannisters known colloquially as "nangs".

96. The divergences in use of various inhalants are often reflective of geography and levels of use. For some users, use of inhalants is experimental, social and occasional; in contrast, chronic users tend to engage in prolonged use of substances in high quantities, over long periods of time.

Drivers of VSU

97. Beyond the common driver of obtaining a “high”, either for recreation or to self-medicate in situations of grief or distress, the evidence revealed that there are many drivers of VSU, which may be dependent on social, geographical, financial and other demographic factors.

98. Motivators for use may include:

    a. Boredom;

    b. Intoxication and/ or euphoria;

    c. Attempting to block hunger pains;

    d. Attempting to dull physical and/ or emotional pain;

    e. Escapism and coping mechanisms for difficult life situations.

99. The issue of accessibility is central to the apparently young age of many users, noting that household products are available to potential users from very early in life. Mr Dillon explained that many users would, in a sense, outgrow use of volatile substances once access to substances such as cannabis and alcohol increased. Indeed, Bradley and his friends opted for VSU only after they were unable to obtain cannabis. Interestingly, both Mr Dillon and A/Professor MacLean gave evidence that inhalants were often seen as “gutter drugs”, use of which ceased when other substances became accessible.

100. This status as a “gutter drug” however, generated perceptions of shame amongst users and non-users. A/Professor MacLean noted that this rendered it difficult for chronic users to seek help and remove themselves from the lifestyle of VSU.

101. Use of volatile substances is also reflective of geography. Mr Dillon told the Court about lack of access to other illicit substances in rural and remote communities, where once there was access to other drugs such as cannabis, the use of inhalants stopped. Mr Ray spoke of CAYLUS’s work in remote communities where petrol was a popular means of VSU, in transitioning to low-aromatic fuel. Mr Ray gave evidence of the effectiveness of this transition in discouraging petrol sniffing. It is evident that where alternatives that prohibit VSU can be found, they should be implemented, however I note that industry evidence suggests that viable alternatives are not always available. I also note

that it is important to be mindful of the differing ways in which different communities are impacted by VSU, and ensure responses are appropriate and sensitive to the specific social and cultural context. There is no one solution to the multifaceted issue of VSU, and a solution that may have effect in one setting may have little in another.

102. A/Professor MacLean's extensive research in the area of VSU found that a number of young users engaged in the practice as a means of expressing anger towards systems and institutions they were involved in, such as child protection and juvenile justice systems. She noted that VSU has "unique power to upset parents, teachers and other caregivers". This enables young persons to draw attention to themselves and their situations of actual or perceived powerlessness.

103. The issue of peer pressure and exposure was also canvassed by the expert panel. Mr Ray explained that, in his experience in geographically isolated communities, a small number of people were more committed users, whilst the majority were largely influenced by the actions of their peers. This meant that when one or two key persons ceased use, the wider cohort would also stop.

104. In a similar respect, Mr Dillon gave evidence about a former Western Australian service which had assisted in identifying a where a single individual had effectively brought volatile substance issues to the community. The service would locate the individual and work with them, which often resulted in the practice decreasing in the community. Similarly, Mr Rigney noted the likelihood of young people learning about VSU from their peers and social media, which may have a compounding effect.

<u>Ubiquity and accessibility of volatile substances</u>

105. As I have noted, a central challenge in addressing the issue of VSU is the ubiquity and accessibility of the products that enable it. Around 250 such products are legally available via Australian retailers such as supermarkets and chemists. Many of these are low cost, and available for purchase by children and young people.

106. It was noted by A/Professor Peacock that:

> "Firstly, just in the definition alone as we've heard previously that it's a wide range of compounds that have potentially different effects that really are linked together only by the way that they are administered. So that presents a challenge in and of itself. Because of the context around use and the effects so they are essentially in most jurisdictions depending on the substance we talk about legal to possess at any age. They are relatively inexpensive, relatively easily obtained and their effects are quite short lived so those too pose challenges."

107. The wide range of products that might be abused can lead to transitioning from one primary product to another – that is, product displacement. Mr Ray explained that when one product became less accessible, users would transition to other products. He noted there may be a reduction in usage initially, and a lag until a new product then assumed popularity.

108. The "product of choice" may vary according to geographical locations and other demographic features, such as the "ideas or cultures within groups of young people". A/Professor MacLean stressed the importance of multi-modal responses to research and direct engagement with affected individuals and communities to understand localised drivers of VSU, and to identify targeted and appropriate solutions.

Language and terminology of VSU

109. Volatile substance use is known colloquially through a number of terms, including, but not limited to: chroming; rexing; sniffing; huffing; ballooning; and bagging. The various terms have differing connotations as to specific products and methods of use, but largely fall under the umbrella of VSU.

110. As I have touched upon, beyond the slang used to describe VSU, there are debates in academic, health and other professional spheres as to the terminology of "use", "misuse" and "abuse". A/Professor MacLean and A/Professor Peacock provided valuable evidence in support of the use of the term "use", noting the risk of pathologizing and alienating people through more pejorative phrasing such as "misuse" and "abuse".

111. The complexity in terms of addressing VSU in the media was highlighted during Mr Dillon's oral evidence, where he cautioned against the potential glamorising of VSU in this medium (for example, through the use of terms such as "chroming" or "rexing"), particularly on social media.

112. It was also underscored that reporting guidelines should avoid promoting potential positive effects of and methods of engaging in VSU. For example, describing “highs” and “trips” and the various effects in a non-pejorative sense, and identifying specific products and methods, may risk introducing the practice to vulnerable young people and provide, in effect, a “how to” guide to VSU. The effects of media reporting in this regard were identified by Professor MacLean as warranting further research.

Risks of VSU

113. The significant health risks associated with VSU are wide ranging and serious. The risks may vary depending on the user’s personal health characteristics, the method and type of VSU and the products utilised.

114. The effects of volatile substances on human cell membranes is similar to those of alcohol and anaesthetic gases. Inhalation results in swift access to the brain, resulting in intoxication occurring very soon after consumption. This feature of being fast-acting causes difficulties in terms of dosage control, and may result in death for even a first-time user.

115. The risks associated with VSU span from acute to chronic conditions, as well as long-term addictions due to the “paint-stripping” effect VSU has on the brain. Intoxication was identified during the inquest as an additional significant risk to users, particularly younger and more inexperienced users, making them potentially more reckless and less capable of dealing with dangerous situations.

116. There are a number of acute effects of VSU, including: euphoria, disinhibition, visual or auditory hallucinations, blurred vision, tinnitus, dysarthria, ataxia, agitation, limb and trunk incoordination, tremors, unsteady gait, hyperreflexia, confusion, muscle weakness, headache, abdominal cramps, chest pain, irritability, belligerence, impaired judgment, dizziness, delusions, nausea, vomiting (with risk of aspiration), flushing, coughing, sneezing, increased salivation, stupor, coma, depressed respiration and convulsions.

117. Chronic effects have also been identified including: peripheral neuropathy, cerebellar dysfunction, chronic encephalopathy, dementia, and organ damage.

118. VSU has sensitisation effects on the heart. Dr Bodnar explained that hydrocarbons make the heart more receptive to the effects of catecholamines, which means the heart rhythm may be disturbed. As such, the release of

adrenaline, which is an endogenous stress hormone, may cause a malignant heart rhythm where the heart is unable to beat effectively. This means that exertion or a shock which may increase the heart rate following VSU may result in a cardiac arrhythmia. I note that this feature of VSU is of significant relevance to NSW Police, and the possibility of further education materials for officers to be aware of the risks of startling people following VSU was canvassed during the oral evidence of Superintendent Crisafulli.

119. I also had the benefit of hearing oral evidence from Professor Johan du Flou, who detailed the harms that may result from VSU, to the following effect:

    a. damage to the central nervous system, particularly the brain, spinal cord and the heart. VSU may lead to "shrinkage of the brain… cause damage to the spinal cord and… interfere with certain vitamin metabolisms which are essential for a proper brain and spinal cord function";

    b. the major issue of "cardiac arrhythmia or abnormal rhythm of the heart and sudden cardiac arrest";

    c. cardiomyopathy, and the "sudden onset of pulmonary oedema, which is a fluid accumulation in the long due to the direct toxic effect of the substance on the lung tissue";

    d. kidney disease and kidney failure that could require dialysis; and

    e. skin damage, such as irritation around the mouth and nose, long-term asthma, severe long disease; and

    f. "psychosis with agitation" sometimes referred to as "acute behavioural disturbance or excited delirium", (although those terms are somewhat contested).

120. Sudden sniffing death syndrome (SSDS) was also explored during the inquest, given that it is the term "described for the unexpected death in the context of hydrocarbon use".

121. While SSDS does not relate to a specific condition, it can cause cardiac arrest when a person consumes a volatile substance either at the time of consumption, or at a later point. Professor Du Flou explained that this is likely caused:

> "Because the heart muscle is sensitised by the hydrocarbons to the effects of adrenaline like substances and as stress levels increase because of the behavioural disturbance and the people around the person trying to restrain the person, as an example, there can be a dangerous arrhythmia generally starting as ventricular tachycardia in generating to ventricular fibrillation from there going on to asystole."

122. Notably, an arrhythmia may have a delayed onset, which could be a "number of hours later".

Data collection and prevalence of VSU

123. The inquest revealed that the ability to draw sound conclusions as to VSU prevalence and trends is significantly hindered by the absence of effective data collection methods and consequently, accurate, reliable and current data. This dearth of data undoubtedly impacts negatively on the ability to implement targeted, evidence-based policy and strategic responses to this issue.

124. Australia wide, the National Drug Strategy Household Survey (NDHS) revealed that in 2019 that the number of respondent who had used inhalants in the past 12 months had increased to 1.4%, compared to 0.4% in 2001. Of the participants who used inhalants, 33% reported using at least monthly, and the most common forms of inhalants used were nitrous oxide, amyl nitrate and other nitrates.

125. As Mr Dillon noted, however, the NDHS likely underestimates the prevalence of VSU because most of this use occurs before the age of 14 years.

126. The Australian Secondary School Students Alcohol and Drug Survey (ASAAD) reported in 2017 that 18% of all students had deliberately sniffed inhalants at least once in their life and 19% of students identified as regular users. Significantly, inhalants comprised of 18% of illicit substance use for the age group 12-17.

127. Importantly, Professor Peacock stated that the statistical increase in VSU use is concerning, given that it is unlikely to reflect the true level of VSU use due to stigma and subsequent underreporting.

128. In terms of NSW, Mr Madeddu gave evidence that the NSW School Students Health Behaviours Survey revealed that 19% of students across all groups had used some form of inhalant use in their lifetime, and approximately 4-5% of respondents aged 12-17 reported using recently.

129. Demographics of inhalant users are very young, typically being aged between 9-18 years old. Often they are marginalised persons, from lower socio-economic backgrounds who may be involved in the juvenile, criminal justice system or welfare system, in isolated communities and people with neuropsychological, behavioural or learning disorders. That was of course not the position in relation to Bradley. He came from a loving and stable background and had no involvement with the criminal justice system. This underscores that while VSU may be more common amongst certain demographics, it impacts a broad cross-section of Australian society. As Mr Dillon pointed out, this is likely connected to the widespread accessibility of the products used.

130. Recent research into VSU-related deaths in Australia provides further insight into the demographics of users. Findings of a recent study (unpublished at the time of the inquest)[1] conducted in Australia between 2000 and 2021 by Professor du Flou and others, identified 164 deaths, of which 80% were male, with an average age of 26. Of all 164 deaths, only 47 were witnessed by a person; the remainder occurred while the deceased was alone. Of the 47 witnessed events, 22 people died shortly after a sudden collapse. Significantly, these results indicate that a person is at a greater risk of dying when engaging with VSU alone, as compared to being in company. However the speed with which deterioration and death can occur often renders medical intervention and resuscitation ineffective.

131. Those assisting me conducted research on the NCIS database and various other public sources, including media reports, which revealed that between April 2009 and February 2022, 13 aerosol deodorant deaths occurred in Australia. Five of these deaths involved Rexona aerosol deodorant products. I note, however, that this list includes the death of Brooke Ryan, which is currently the subject of a coronial inquest for which no finding has yet been made. As mentioned, this research is based off a combination of NCIS data and other sources, including media reports.

132. The need for “triangulation” (that is, the bringing together of all relevant data sources to obtain the most accurate information) is necessary for a more

[1] See Darke, S., Zahra E., Duflou, J., Peacock, A., Farrell, M. & Lappin, J. (In press) Characteristics and circumstances of volatile solvent misuse-related death in Australia, 2000-2021. *Clinical Toxicology*.

comprehensive understanding of the issues at hand, a pointed highlighted by both Professor Peacock and Dr Maddedu.

NSWPF data collection

133. As VSU is not a criminal offence, the recording and documenting of its occurrence is limited in police data.

134. Superintendent Sam Crisafulli, who gave evidence on behalf of the NSW Police Force (NSWPF), acknowledged that the COPS (Computerised Operational Policing System) used to record crime and other incidents, aid police investigations and provide data to conduct crime analysis and identify trends, does not have a specific and formalised mechanism for recording incidents involving VSU.

135. Instead, COPS uses 'Incident' categories and sub-categories, none of which are particularly well-suited to VSU. For example, the 'Drug Detection' incident is inaccurate, noting substances used for VSU are typically legal and widely available, as compared with illicit substances such as cocaine or cannabis. The 'Incident' category of 'Child or Young Person at Risk' was canvassed at the hearing as a potential tool for recording VSU, however this presents similar issues of inaccuracy.

136. Chief Inspector Sharon Blacklock in her statement dated 20 October 2022 noted that VSU-related terms are occasionally recorded by officers in COPS event narratives. However, difficulties are posed in obtaining data by such means given the varied terminology for VSU.

137. Prior to the inquest, (and to his significant credit), Superintendent Crisafulli consulted with the Queensland Police Service (QPS) who have recorded VSU since the early 2000's. QPS data indicated that poor education of officers and their recording systems created 'spikes' in the results of their data. Superintendent Crisafulli noted that education for police is critical to increase awareness of VSU.

138. Since the hearing, representatives for NSWPF have advised that the NSWPF Statistical Services team are in the processes of preparing for enhancements to the COPS in order to introduce an associated factor for 'Volatile Substance Use'. I understand that NSWPF will liaise with the Ministry of Health in relation to this,

and acknowledge the proactivity of both Superintendent Crisafulli and the NSWPF in relation to this issue.

Industry data

139. The shortcomings as to accurate and reliable datasets regarding VSU in Australia were clearly identified by Woolworths, Unilever and the industry body, the Aerosol Association of Australia.

140. Ms Fenske of Woolworths provided evidence that Woolworths is restricted in its capacity to design and implement effective measures in relation to VSU, as the data available to it is typically anecdotal only.

141. Mr Cadogan Cowper and Philip Fleming of the Aerosol Association of Australia noted the limitations of data in its broad usage of the term “inhalants”, which may include nitrates, gases and, of course, aerosols, amongst other products.

142. Mr Mingl of Unilever similarly stated that the dearth of reliable scientific data and statistical research acted as a hindrance to comprehending the scale and nature of the issue of VSU in Australia.

143. Mr Madeddu also noted the effect of poor methodological issues and data collection methods on emergency departments and hospitalisations associated with VSU.

Education to address VSU

144. The issue of the education of young persons, parents, teachers and retailers in relation to VSU formed a central focus of this inquest. It was addressed in detail in the written expert statements and also during the expert conclave.

Education of young people

145. The evidence highlighted that educating young people about VSU is a difficult, and contentious issue.

146. As Mr Rigney noted, young people are likely to learn about VSU from peers and social media. Such uncontrolled exposure risks glamorising behaviours and spreading misinformation, whereas a controlled and deliberate education from health professionals would minimise such risks.

147. The Western Australian School Drug Education and Road Awareness drug education resource ‘Challenges and Choices’, referred to by Mr Dillon, notes:

> "Education around VSU is not the strategy currently used in Australia, as these products are found in many households and may lead to 'copycat' behaviour. Where it is believed that a student or group of students are involved with volatile substance use, a targeted-approach is acknowledged to best practice."

148. The potential for "copycat" behaviours by making young people aware of VSU as a behaviour was emphasised by the expert panel as a very real and significant risk. A/Professor MacLean highlighted again the dearth of data on VSU, and indicated that more reliable data as to the awareness and use of VSU by young people would assist in formulating an appropriate educational strategy.

149. Mr Dillon highlighted the preference for skill-based education, rather than lectures, as a means of information delivery to young persons. He gave evidence about how drug education should work, describing that education could look like:

> "…a scenario activity of you're at a party and someone offers you a can of spray paint and suggests you sniff it, what would you do in that kind of - now what that does is it actually highlights the risks associated with volatile substance use and it also provides an opportunity to discuss what kind of skills and develop skills in either refusal or help seeking behaviour."

150. Mr Dillon emphasised the importance of education building resilience in young people, to assist in their ability to "bounce back" when faced with certain situations. He also drew my attention to the importance of the school setting as a conduit for information and awareness for families and other groups.

151. Given the contentious nature of drug education and fast-paced changes both in terms of drug use and popularity and education standards, the space is constantly evolving. For this reason, he explained that consistency in education is also an issue.

152. A/Professor MacLean highlighted the balancing act between the importance of providing young people with a comprehensive understanding of the risks of inhalant use, against the fact that a lot of inhalant use is one off or occasional. Given the often-occasional nature of inhalant use, education for parents and teachers to enable targeted and skills-based education as and when required may be preferable.

153. A/Professor MacLean gave evidence during the conclave that there is a strong indication that in schools that are likely to have a high prevalence of VSU with high populations of minority groups, that "particular targeted programs that include information about volatile substances along with skills and…approaches

to inform parents about the potential of misuse of these products have been effective".

154. Mr Madeddu highlighted the need for multimodal approaches to drug education, in and outside of the classroom:

> "[T]he classroom is one context but there are others where we may be able to have different voices and different places and different degree of cut through for young people so online spaces, I think of stuff like youth services - 25 you know, police and citizens youth club or sporting clubs et cetera and then fundamentally also to think about who is the voice around that, who will have a more applicable voice for the population."

155. An alternate approach to education on VSU for young people was to increase education in relation to the best practices when an emergency occurs. The rapidity of deterioration in VSU-related health emergencies mean timely medical intervention is critical. Mr Dillon highlighted that keeping their friends safe is a primary concern for many young people, and educating young people in relation to "help seeking behaviour", including basic CPR and contacting emergency services, is essential.

156. Dr Bodnar echoed Mr Dillon's sentiments as to the importance of educating young people on urgently obtaining medical assistance - he opined that delay in calling for help was the biggest challenge faced by clinical staff in treating patients that have suffered and adverse reaction following VSU.

157. There is, however, an apparent reluctance amongst young people engaging in illicit behaviours to contact emergency services, due to the fear of police arriving as first responders rather than paramedics (and it is notable in this regard, that Bradley's friends did not immediately contact emergency services, albeit that I stress that in the circumstances, I do not consider that earlier intervention would have led to a different outcome). Mr Dillon noted this could be "terrifying" for young people, and the reality of this occurring produced difficulties in maintaining the credibility of messaging to young people that they would not get into trouble for seeking help.

<u>Parental education</u>

158. The ubiquity of aerosol deodorants not just as a product that is easily purchased by minors, but as a product that young people are actually encouraged to use, (as highlighted by counsel for Ms Mair, in fact being placed into the school bags

of children by their parents), means that the issue of regulation is a complex one. In such circumstances, the importance of a broader understanding by parents as to the risks of VSU is central.

159. From the evidence received during the inquest, many parents are unaware of even the existence of VSU as a practice, let alone the best practice of addressing it. I again note and commend, Ms Mair's tireless advocacy for parental education as a key strategy to combat VSU.

160. Mr Dillon gave evidence that a multifaceted approach was necessary; he explained that although school is at the heart of the issue, parental engagement with schools is continually decreasing. Further, an attitude of "not my child" is pervasive amongst parents, who are often unwilling to believe their own child may be impacted by VSU (or indeed, any drug use), not least given the associated stigma.

161. It emerged from the evidence of the expert conclave that better education for parents on VSU and drug use generally is necessary, not only to assist in identifying risky behaviours amongst children, but to decrease stigma and enable young people to feel safe and comfortable seeking assistance from their parents, both in situations of emergency and more generally.

<u>Education for retailers</u>

162. In addition to education for parents and teachers, and potentially young people, awareness of VSU is important for retailers, who may serve as a key point of contact through their involvement in the sale and supply of volatile substances to potential users. The ability to identify potential users and restrict sales seems to be an important part of combatting VSU at the 'front-line', particularly where there are 'outbreaks' in particular areas. In saying this, I acknowledge the importance of retailers who have a responsibility to ensure that their staff are kept safe. This was clearly outlined by Ms Fenske, who emphasised Woolworths' experience that staff on the floor attempting to enforce policies designed to limit the sale of inhalant products to potential users can result in verbal and physical confrontation. Comprehensive education and training, in addition addressing the root causes of the issue (to the extent possible), is clearly necessary to ensure the safety and retail staff.

163. As highlighted by A/Professor MacLean, there is also a need for retailers to be aware of the potential for VSU, noting a number of products are stolen as well as purchased from retailers. She referred to practices in Victoria where decreasing accessibility to products used for VSU had proven effective.

164. The work of the Queensland Police Service (QPS) through Project CASM (Communities Against Substance Misuse), involving QPS partnering with retailers to address VSU in certain 'hotspot' areas in Queensland, is exemplary of what can be achieved where there is strategic cooperation and collaboration to target VSU. In her oral evidence, Ms Fenske explained that through this project, greater awareness across the industry was gleaned in relation to VSU, in addition to enhanced support from QPS in addressing the issue.

165. The work of CAYLUS together with local retailers is instructive for more regional areas. Mr Ray explained that CAYLUS "will do things like buy cages to put in their shops, when they call us … we always make sure we respond and that they feel supported." This work demonstrates the value of a multifaceted response, as well as the importance of engaging social and community workers who have "on the ground" experience and knowledge of the issues to direct resources to the right areas.

National Inhalant Information Service

166. The regrettable defunding of the National Inhalant Information Service (NIIS) in has evidently left a gaping hole in the information resource armoury available to combat VSU. Mr Ray gave evidence that the NIIS was established as a consequence of recommendations made in the National Directions on Inhalant Abuse Report, and was operated by the Alcohol and Other Drugs Council of Australia from 2008 to 2014, when it was defunded by the Abbott administration.

167. Upon its defunding, the task of maintaining the NIIS website fell to CAYLUS. Without sufficient funding for the website fees, staffing a librarian, and other expenses, that model proved unsustainable, and the Australian Drug Foundation was then tasked to incorporate content from the NIIS into its own website.

168. While resources are currently available on the Australian Drug Foundation website, A/Professor MacLean noted that this information is more limited due to insufficient resourcing to keep it current. Mr Ray explained that the NIIS was

staffed by a librarian who actively pursued a comprehensive set of up to date resources by liaising with services and conducting research. This was clearly of great value to those in the field.

169. Mr Dillon also usefully observed that the NIIS was the fruit of significant collaboration across sectors.

Conclusion

170. Unquestionably, education regarding VSU is a key aspect of addressing the issue more broadly. Although educating young people about VSU is a more complex aspect of the problem, the need for greater parental education was a clear need identified by the expert panel. The best modes for achieving this is a matter upon which an appropriately appointed expert panel should, in my view, provide advice and is the subject of recommendations in terms of the broader proposal for a 'roundtable': see below.

171. Further, the maintenance of valuable resources such as the NIIS ought to be promoted. Contributions and collaboration from a range of parties, including academics, health professionals, educators, youth and social workers, parents, police and others would be beneficial to maintaining such a resource and promoting information sharing amongst and across industries, organisations and individuals.

172. The benefit of bringing together experts from various disciplines, together with industry representatives and relevant government agencies, has been clearly illustrated by this inquest. This collaboration is critical, in my view, to address the issue of VSU, given its multi-faceted complexity as a social and public health issue. This thinking has directly informed my primary recommendation as to a proposed roundtable involving experts and various stakeholders (amongst others), as set out below, to consider the plethora of (at times competing) concerns essential for an effective and appropriate education campaign.

Industry efforts to address VSU

173. At the outset, I acknowledge that various efforts have been made by parties in the industry to address issues associated with VSU in terms of practical/physical measures relating to delivery of the chemicals that lead to intoxication, as well as product reformulation.

Product reformulation

174. The topic of product reformulation was discussed at length during the inquest, noting that hydrocarbon propellants - the intoxicating component - are required to pressurise the antiperspirant product. All aerosols in Australia currently contain a mix of propellants including propane, butane and isobutane.

175. It is evident that Unilever has invested significant resources into research and development to attempt to find alternatives to using hydrocarbon propellants and identify solutions to reduce VSU related harm. I note Unilever's extensive engagement with industry and community stakeholders, NSW Police, health staff, retailers and scientific researchers to better understand the root causes of VSU, its consequences and possible harm mitigation strategies. Whilst these efforts are admirable, in my view, attempts at product reformation which has as yet proven elusive, should continue. From the evidence before me, there are no possible propellant alternatives considered appropriate or viable *at this time*. For example:

    a. Whilst alternatives have been identified, for example, Difluoroethane (HFC-152a) which is an alternative propellant used in the USA, this has also been associated with VSU. The efficacy of other alternate propellants has also been questionable.

    b. Options such as pump sprays or 'barrier packs' were explored, but are not viable.

    c. Adding bitterants and other aromatics which may dissuade people from VSU was found to have a deleterious impact on the products.

    d. Consumer perspectives are also relevant, noting that the aerosol form of antiperspirant deodorant was vastly preferred;

176. Ultimately, Mr Cadagon-Cowper from the AAA told the Court that reformulating these products requires an industry-wide approach given that hydrocarbons are the most prevalent propellant and are most readily available.

Other strategies

177. Other efforts made by Unilever to address issues associated with VSU include:

a. introducing the 'IMCKI' warning on their packaging (which has since been adopted by other antiperspirant deodorant companies in the market);

b. labelling their products with guidelines regarding their safe use;

c. changing the design of aerosol Rexona products to ensure the whole of the product is released, as opposed to only the "pure" propellant being released when upside down; and

d. Conducting clinical testing to understand the differences in Unilever's products as compared to others in the market, and to analyse why their products are preferred for VSU purposes.

178. Across the industry, various stakeholders have also implemented strategies to address availability and supply of these products. Unfortunately, these strategies have also not been without challenges.

179. For example, Unilever has worked with major retailers on a type of anti-theft shelving aimed at reducing the availability of anti-perspirant deodorant to those who might steal them and engage in VSU. A proposed prototype of 'antitheft' shelving in supermarkets for anti-perspirant deodorant was provided by Unilever to Woolworths, but ultimately not found suitable.

180. Woolworths also provided evidence as to the strategies implemented in various stores across the country, where VSU is seemingly more prevalent. These include:

a. Removing products from shelves and placing them at the front counters. This method was ineffective however, given the inconvenience it caused customers and in light of the number of products able to be utilised for VSU.

b. Storing aerosol products in locked glass cabinets. This met with similar customer inconvenience issues and cabinets often were vandalised or destroyed. Notwithstanding this, four hundred cabinets have been installed in 11 stores in NT and 18 stores in QLD (at considerable cost to Woolworths).

c. A trial of individual plastic casing on aerosol products resulted in similar issues of inconvenience and cost, and surprisingly, also increased the likelihood of products being stolen.

181. The AAA has also contributed significantly to industry efforts, including by advocating on behalf of its 30 members and providing education and training. The AAA believes that stakeholder engagement will be at its peak when it has membership with all major brand owners in the deodorant category. In my view, Mr Cadagon-Cowper's suggestion that Unilever become a member of the AAA to strengthen its connection and force within the industry, holds some weight and should be seriously considered. Creditably, Mr Mingl confirmed that Unilever was open to this membership.

Conclusion

182. From the issues explored during this inquest, it is clear to me that practical strategies to address or limit access to products used for VSU have many challenges, including inconvenience to customers and even potentially physical danger for retail staff. Product reformulation appears the most direct route to remove the intoxicating hydrocarbons from the product. Yet the evidence highlighted the challenges in finding a suitable alternative.

183. I have no doubt that Unilever will continue to explore this aspect in its research into the efficacy of hydrocarbon alternatives. This work is important, and should continue with some urgency, in my view, in collaboration with the industry more broadly.

Legislation and regulations

184. Several states and territories in Australia have enacted legislation to regulate the sale and supply of volatile substances/inhalants where there are reasonable grounds to believe or suspect that a product may be abused or misused. My attention was drawn to:

- s 23 of the *Summary Offences Act 2005* (QLD)
- s 206 of the *Criminal Code Act Compilation Act 1913* (WA)
- s. 52 of the *Volatile Substance Abuse Prevention Act 2005* (NT)
- s 19 of *The Controlled Substances Act 1984* (SA)
- s 58 of the *Drugs, Poisons and Controlled Substance Act 1981* (VIC)

185. I heard differing opinions regarding the perceived utility of such provisions. A/Professor MacLean gave anecdotal evidence of a widely-held belief that these offences are difficult to prosecute, given the challenge in establishing the requisite mental element (particularly if sales occur through automated systems, such as self-serve check outs). Notwithstanding, A/Professor MacLean told the Court that the legislation still operates in a beneficial manner by educating retailers of their legal responsibility.

186. Ms Fenske gave evidence of her view that the legislation has a limited effect in its current form. She raised the concern that, given Woolworths' experience in other states, introducing similar legislation in NSW would exacerbate the aggression and violence directed toward Woolworths staff members.

187. Mr Ray recommended that I consider the potential for such legislation. He drew my attention to the NT legislation and suggested that I consider requiring shops to manage high-risk products in specific ways in areas where VSU is a known issue.

188. It is clear that legislation in this area may face similar challenges in practice, as with other strategies attempting to target VSU. Noting the concern raised as to the perceived efficacy of such legislation, I accept the submission of Counsel Assisting that further consideration and evaluation of such legislation might be most usefully canvassed at the proposed roundtable (discussed below).

189. At this stage, I also think it relevant to mention again the orders I made in this matter on 19 October 2022 reflecting media guidelines for reporting on VSU. In considering the least harmful way that the evidence of this inquest could be reported, the Government of Western Australia Mental Health Commissions guideline, 'Responsible Reporting of VSU', was incredibly helpful. Noting the widespread availability and ease of access of inhalant products, it is crucial that media reporting does not inadvertently draw young people's attention to this harmful practice.

190. As such, I ordered that there be no publication of the following information contained in written and oral evidence received in these proceedings:

    a. Brands or product names which may be the subject of volatile substance misuse (VSM) (the generic term "aerosol deodorants" may be used);

b. Any methods used for VSM (including how to inhale or access the substance from its container);

c. The effects of inhaling the product (i.e. intoxication), save as to harmful effects.

d. Reference to aerosol deodorant propellant hydrocarbon formulations being the same or similar.

Inhalants Roundtable

Queensland Inhalants Roundtable

191. On 10 December 2019, an Inhalants Roundtable was chaired by Dr Jeannette Young, then Chief Health Officer at Queensland Health ('the Queensland Roundtable'). The Queensland Roundtable had almost 40 participants from across industry, retail, manufacturing, Queensland government departments, a federal government agency, Queensland peak bodies and commissions, Queensland Police Service, and youth and health service representatives.

192. Young people who engaged in VSU and their families were not invited to participate. While Professor Allan of Queensland Health noted that the lived experience of families would have benefited the Queensland Roundtable, concerns were held that their presence may inhibit free and frank discussions amongst other stakeholders.

193. The Queensland Roundtable focused on: (1) discussing the issue of inhalant misuse and considering the issue from a range of expert perspectives; and (2) identifying areas for further consideration to enhance existing actions and initiatives.

NSW Inhalants roundtable

194. The possibility of an inhalants roundtable in NSW was canvassed with the interested parties and experts. It was met with unanimous support, including from Mr Madeddu on behalf of the Ministry of Health, the government agency with responsibility for coordinating such a forum.

195. Any such roundtable would have the benefit of the experiences of the Queensland Roundtable, and I am grateful for the evidence provided by Professor Allan in this regard.

196. Professor Allan recommended that any NSW roundtable be aware of marginalised groups involved in VSU, noting that persons from this cohort are generally reluctant to talk openly about illicit activities for fear of repercussions.

197. Professor Allan also noted that, while the Queensland Roundtable was limited to a one-day event, a two-day roundtable, potentially split into stages, would have been beneficial by enabling feedback from interested parties who were not directly involved in the Roundtable itself.

198. A/Professor MacLean raised concerns that individual roundtables for different States and Territories may not be the best approach, and voiced support for a more nationalised approach. A/Professor Peacock expressed support for such an approach, including from the perspective of national data collation.

199. The participants for any such roundtable were considered carefully throughout this inquest. In keeping with the precedent established by the Queensland counterpart, the roundtable would be organised and coordinated by NSW Health. In this respect, I acknowledge the commendable approach of Mr Madeddu and the Ministry of Health for their support of this proposal. The assistance and expertise proffered by Mr Madeddu, and the attitude of NSW Health in its willingness to seek to grapple with the difficult issue of VSU (necessarily in partnership with other relevant stakeholders), was impressive in my view.

200. In addition to NSW Health, the key stakeholders who participated in the Queensland Roundtable will form the basis for identifying their NSW counterparts, including NSW Ambulance Service, NSW Police, government agencies (including the Departments of Education, and Communities and Justice), industry and retail stakeholders (such as Unilever and Woolworths as well as retail associations), community and youth workers, Indigenous health agencies, experts in the field of VSU (such as those who gave evidence in the expert conclave) and other relevant organisations and individuals.

201. Careful consideration must be given to whether families and individuals who have engaged in VSU ought to be involved for the whole or part of the proposed roundtable, noting the concerns outlined by Professor Allan.

202. A number of key themes have emerged from this inquest that ought to be canvassed by any 'NSW Inhalants Roundtable'. These include, but are not limited to:

    a. The collection of data in relation to VSU;

    b. Means and methods of information sharing and communications between agencies and stakeholders, at a state and national level;

    c. VSU-specific training for first responders, such as paramedics, police, social and youth workers;

    d. Whether children and young persons should be educated on VSU;

    e. Education on VSU for the public, including in particular parents and teachers;

    f. First aid training for young people responding to emergencies involving illicit substances;

    g. Legislation regulating the sale of volatile substances where there are reasonable grounds to believe the products may be abused; and

    h. The restoration of the National Inhalants Information Service website.

203. It has been evident from early on in the inquest that a multifaceted response across a range of government agencies, industries, organisations and individuals is required to better understand and address the VSU. The collaboration of key stakeholders and contributions from affected persons and bodies are necessary aspects of any successful approach, and a NSW Inhalants Roundtable constitutes a valuable forum for such work.

PART E – FINDINGS

Pursuant to section 81 of the *Coroners Act 2009* I make the following findings.

1. *Identity* – the person who died was Bradley John Hope (born 18 July 2003);
2. *Date of death* – Bradley died on 8 December 2018 at 1.18am;
3. *Place of death* – Bradley died at The Tweed Hospital, Tweed Heads, NSW;
4. *Cause of death* – the cause of Bradley's death was cardiac arrythmia or hypoxia in the setting of hydrocarbon inhalation; and

5. *Manner of death* – the manner of Bradley's death was complications associated with the inhalation of hydrocarbon chemicals in the context of engaging in volatile substance use. His death was accidental.

PART F – RECOMMENDATIONS

204. I therefore make the following recommendations:

To the NSW Ministry of Health:

A. That the NSW Ministry of Health convene a 'round-table' forum with stakeholders in NSW in relation to the issue of Volatile Substance Use (VSU) in NSW, including as to the misuse of aerosol deodorants and also 'nangs', informed by the approach adopted by the 'Inhalants Roundtable' convened by the Queensland Government, and chaired by the QLD Chief Health Officer in December 2019 (NSW VSU Roundtable).

B. That the NSW VSU Roundtable participants – in addition to the Department of Health - include relevant stakeholders such as:

    v. the NSW Police Force;
    vi. the NSW Department of Education;
    vii. the NSW Education Standards Authority;
    viii. the NSW Ambulance Service;
    ix. the NSW Department of Communities & Justice;
    x. industry participants, including the Aerosol Association of Australia and Unilever Australia Limited;
    xi. all major retailers of aerosols (including Coles, Woolworths and pharmacies);
    xii. the retail associations (including the National Retail Association and the Australian Retailers Association);
    xiii. Community youth and AOD services (including NGOs);
    xiv. First Nations health agencies;
    xv. an advisory expert panel (including academics in the VSU field);
    xvi. any other organisations or individuals of relevance;

C. That key themes of the NSW VSU Roundtable include consideration of:

i. Prioritising the collection and collation of data across agencies in NSW to obtain better statistical evidence relating to VSU use in NSW (including the use of aerosols and 'nangs'), including as to the prevalence of VSU in NSW;
    1. data trends in VSU within NSW;
    2. potential 'hotspots' within NSW; and
    3. mortality (deaths) and morbidity (harms) associated with VSU within NSW.

ii. A review of the NSWPF P79A Form with respect to capturing sufficient information which may indicate the need for specific toxicology testing;

iii. Arrangements and channels of communication for sharing such data between agencies and stakeholders (including at a national level) so as to better monitor, respond to and report upon, VSU (including outbreaks or 'hotspots');

iv. Ensuring adequate training of first responders (including police, NSW Ambulance officers and social and youth workers) in identifying VSU and the risks associated with it;

v. The formulation of an appropriate public health education program to address VSU, informed by an expert focus group, including:
    1. Whether VSU should be addressed in school-based prevention programmes;
    2. Teacher education including as to the signs of VSU, the risks of VSU and how to deal with young people who may be engaging in VSU, whether recreationally or as chronic users;
    3. Parental education including as to the signs of VSU, the risk of VSU and how to deal with young people who may be engaging in VSU, whether recreationally or as chronic users;
    4. Providing harm reduction education for regular users of VSU;
    5. Promotion of links to reputable sources of information, such as the Australian Drug Foundation (and others);

6. First aid training for children and young people responding to emergencies involving illicit substances, including education on the benefits of a timely medical response;
7. Peer to peer education amongst adolescent and older users;

vi. The potential utility of introducing legislation in NSW regulating the sale of volatile substances/inhalants by retailers where there are reasonable grounds to believe/suspect that the products may be abused (such as s. 23 of the Summary Offences Act 2005 (Qld) and s. 206 of the Criminal Code Act Compilation Act 1913 (WA);

vii. The inclusion of basic life support training within the high school curriculum, so as to equip young people with basic skills to deal with medical emergencies arising from VSU;

viii. Collaboration with the Department of Health and Aged Care (Cmth), and other state agencies and stakeholders (including youth organisations and health agencies) as to the potential resurrection of the National Inhalants Information Service website (previously operative until 2014);

ix. Exploration of non-volatile compressed gas propellants as an alternative to hydrocarbon propellants in aerosol deodorants.

To the Aerosol Association of Australia (AAA):

D. That the AAA collaborate with other aerosol industry participants (including Unilever) to retain an appropriate expert to conduct an evaluation of the efficacy and impact of warning labels on aerosol containers regarding inhalant abuse/VSU in Australia;

E. That the AAA update its publication 'Aerosol Association of Australia – AEROSOL LABELLING – An introduction' (July 2018) to include guidance to industry participants on labelling and warnings against VSU, to the effect that:

i. all aerosols should carry a warning against deliberate inhalation;

ii. suggesting the 'SACKI' (Solvent Abuse Can Kill Instantly) or 'IMCKI' (Inhalant Misuse Can Kill Instantly') warnings, or another warning to the same effect;

1. That the AAA liaise with Committee PK-013 and the Council of Standards Australia regarding Australian Standard AS 2278.1 (2022) re 'Aerosol Containers' as to the inclusion of mandatory VSU warnings in the labelling section.

Concluding remarks

205. I thank my counsel assisting, Ms Emma Sullivan, instructed by Ms Francesca Lilly of the Crown Solicitor's Office. They have worked tirelessly to ensure this important inquest did what it needed to do. It is the first step.

206. On the last day of the inquest, Bradley's mother Corrine said, "we as a society can't afford to lose one more young life in this way where there must be answers or solutions to prevent this'. Through Corrine's courage and determination, these proceedings have shone light on the issue of VSU, with the very real potential for other lives to be saved as a result.

207. The conduct of the interested parties in this inquest also deserves special mention. Through the great co-operation and the constructive spirit in which the interested parties approached this inquest, I am confident that real change can happen.

208. I offer my heartfelt condolences to Bradley's family who attended this inquest every day. Their grace and dignity was remarkable and I thank them for their generosity in sharing their memories of Bradley on the last day of the inquest. It is very clear how much they loved him and how much they miss him.

209. I close this inquest.

Magistrate Teresa O'Sullivan
NSW State Coroner

3 March 2023