



# MAGISTRATES COURT of TASMANIA

## CORONIAL DIVISION

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### Record of Investigation into Death (Without Inquest)

*Coroners Act 1995*  
*Coroners Rules 2006*  
*Rule 11*

**(These findings have been de-identified in relation to the name of the deceased and family by the direction of the Coroner pursuant to s 57(1)(c) of the Coroners Act 1995)**

I, Leigh Mackey, Coroner, have investigated the death of BX. BX died on 22 February 2022 on Mount Royal Road in Kingston. He was 53 years of age. He died when, after riding his bike through loose gravel left on the roadway following repairworks he collided with an oncoming motor vehicle.

I have considered whether to hold an inquest into the death of BX. The accident has been subject to significant investigation by Tasmania Police and WorkSafe Tasmania. The latter as the gravel through which BX rode his bicycle on 22 February 2022 was on the road as a consequence of work undertaken by TasNetworks to repair a high voltage cable. The area was accordingly a workplace for the purposes of the works being undertaken and those organising and supervising the works were persons conducting a business or undertaking (PCBUs) within the meaning of the *Work Health and Safety Act 2012* (WHSA). As such the PCBUs had a duty to ensure the health and safety of workers on site and to provide any information, training, instruction or supervision necessary to protect all persons from risks to their health and safety arising from the work being conducted (s19(3)(f) WHSA). The latter duty is sufficiently broad to extend beyond a worker employed on site and to encompass members of the public, such as BX, who, as a cyclist on the roadway where works were being conducted, required protection from risks to his health and safety resulting from those works.

BX's death, whilst reportable under the *Coroners Act 1995* (s3), is not a death for which an inquest is mandated. Consideration must then be given as to whether the holding of an inquest is desirable (s25). Given the extensive investigation that has been conducted, as I have previously referred to, I do not believe an inquest will assist in advancing the investigation. The evidence gathered allows for the discharge of my function without the need to resort to the coercive powers that an inquest allows nor are there matters in respect of which I would be assisted by the examination of witnesses. I further understand that BX's Senior Next of Kin has expressed a preference for an inquest not to be held. On the basis of these matters I have determined not to hold an inquest into BX's death.

**Having considered the evidence arising from the investigations conducted into the death of BX I make the following findings, pursuant to Section 28(1) of the Coroners Act 1995:**

- a) The identity of the deceased is BX. BX was born in Lae, Papua New Guinea on 8 December 1968. He had an older brother and moved with his family to Australia when he was 5 years of age. The family settled in Queensland before BX moved to Tasmania, at the age of 17 years, to attend the University of Tasmania where he obtained a Bachelor of Applied Science, a Graduate Diploma of Applied Science (Aquaculture) and Master of Business Administration.

At the time of his death BX was married with two adult sons and worked at Centre Care Evolve Housing as a Risk and Compliance Manager.

BX had no medical concerns of significance. He liked to keep fit and one method for him to do so was to regularly ride his bike which he did on average once a week. He rode both mountain and road bikes and was a seasoned cyclist having ridden for over 20 years.

BX would typically ride in the early hours, usually leaving home at 5.30 am, to avoid motor vehicle traffic as he felt it was safer. He would ride alone and typically choose the route he would take at random. Data taken from his Stravia revealed that he had last ridden along Mount Royal Road in Kingston on 30 September 2021.<sup>1</sup>

BX was riding his white, red and black Merida branded bike when he died. It was a road bike he had owned for the previous 10 years. The bike was in good condition and was serviced as necessary.

BX was wearing suitable cycling attire including gloves, bicycle shoes with cleats and a Netti brand safety helmet.

- b) BX died as a result of head, neck & chest injuries suffered due to impacting with a motor vehicle after having fallen from his bike on Mount Royal Road at Kingston.

### **Mount Royal Road Kingston**

Mount Royal Road (road) extends from Roslyn Avenue and runs predominately south to north before joining Osbourne Esplanade at the southern end of

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<sup>1</sup> Unsworn affidavit Nicholas Preshaw page 1.

Kingston Beach. The road runs in both directions with single north and south bound lanes divided by a broken white line. The north bound lane is 3.35 metres wide and the south bound lane, 3.15 metres wide.<sup>2</sup>

The road is constructed of bitumen and is permanently designated a 40 km/hour speed zone which is reflected in signage present on the road. At the relevant time the road, excluding the area of the road works, was in reasonable condition.

Heading north the road has a sweeping left-hand bend at the bottom of a medium downhill section just prior to it joining Osbourne Esplanade. On approach to the bend the road falls between 7.6 and 6.9 degrees to the north. In the north bound lane at the bend and adjacent to the gutter, a section of road was subject to road works. The road works consisted of the removal of a top section of the road surface and its replacement, temporarily, with road base and gravel which had been compacted (the excavation). At the time BX was riding his bike down the road in the north bound lane, down hill and around the bend before it joined onto Osbourne Esplanade, some of the compacted road base and gravel from the excavation had been disturbed by vehicle movements on the road and had spread across the bitumen covering sections of the north bound lane.

The road is within the municipality of Kingston and the City of Kingston “Works in Road Reserves - Road Openings and Reinstatement Guidelines” applied to any excavation and reinstatement works undertaken on utility services located on it. The guidelines, whilst not making specific provision for impacts on cyclists does provide for the protection of the public generally including the workers on site by mandating the erection of signs, the exclusion of the public from the work site, provision of barricades and lighting and a traffic management plan. Detours are described generally as a risk control of “*last resort*”,<sup>3</sup> the site to be “*at all times*” kept in a “*clean and tidy condition*” and all surplus material removed at completion.<sup>4</sup>

### **The roadworks**

On Friday 18 February 2022 at approximately 5.50 pm TasNetworks<sup>5</sup> were alerted to a power outage affecting the Kingston Beach area. They dispatched a

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<sup>2</sup> Collision Analysis Report dated 22 February 2022 page 2.

<sup>3</sup> City of Kingston “Works in Road Reserves - Road Openings and Reinstatement Guidelines” 14 August 2007 page 9.

<sup>4</sup> City of Kingston “Works in Road Reserves - Road Openings and Reinstatement Guidelines” 14 August 2007 page 11.

<sup>5</sup> Tasmanian Networks Pty Ltd are Government Business Enterprise, trade as TasNetworks and own, operate and maintain the electricidal transmission and distribution network in Tasmania on behalf of the State.

crew to assess the outage which revealed an underground issue was the most likely cause.

On Saturday the 19th of February 2022 TasNetworks identified the fault in a high voltage cable located under the road near Osborne Esplanade. Service Stream (previously Lend Lease) is a company that provides design, construction, installation, operation and maintenance services for critical assets across Australia's infrastructure networks. TasNetworks engaged with and authorised Service Stream to conduct the civil works required to unearth and repair the cable.

On Sunday 20th of February 2022 access to the cable was obtained through Service Stream digging up a section of the roadway on the road near Osbourne Crescent. A TasNetworks crew was at the site of the excavation together with workers of Joint Co, a cable repair contractor, which had been engaged to effect the necessary repairs to the high voltage cable.

Prior to commencing the road works Service Stream prepared a Safe Work Method Statement (SWMS) as part of the risk assessment and management of the site and the works. The SWMS identified a hazard/risk of the excavation as "*off-site wind-blown transport of contaminated material...dislodged rock debris (fragments)*".<sup>6</sup> Control measures for this risk were:

- High housekeeping standards to be kept at all times;
- Avoid work in high wind conditions;
- Silt bags in place; and
- Wet down work site and cover stockpiles of waste material.<sup>7</sup>

A further risk identified was of failing to pack up and secure the area which may lead to, among other things, slips, trips and falls and traffic accidents. The control measure for this risk included:

- Ensuring good housekeeping standards; and
- Leave the site clean and tidy each day, barricading areas if required.

TasNetworks also undertook a risk analysis of the roadworks.<sup>8</sup> In that document the risk to road users other than pedestrians was not specifically recognised.

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<sup>6</sup> Lendlease Safe Work Method Statement page 4.

<sup>7</sup> Lendlease Safe Work Method Statement page 4.

<sup>8</sup> TasNetworks Job Risk Analysis 20 February 2022.

The total area of the excavation was approximately 26 – 27 metres. At its widest point the excavation took up approximately 3.5 metres of the northern lane. However, this width only accounted for approximately 1.5 metres of the 10-metre-long excavation, the remaining area being narrower.

The high voltage cable was repaired and returned to service at 8 pm on the 20th of February 2022. The excavation was backfilled with road base and gravel.

On Monday 21 February 2022 no work was done at the road works. The road works had not yet been completed with a need to replace the bitumen surface over the excavated area. Vehicular traffic was able to access the roadway including the area of the road works. This caused the road base within the excavation to be spread over the north and south bound lanes.

Ms Catherine Towns was in the area of the excavation on the morning of 22 February 2022. She had driven south along Osborne Esplanade at Kingston Beach to go for her regular morning swim. It was approximately 6.15 am. She did not witness the accident but alerted to it was the first person to arrive at the scene. She noted loose gravel was on the road surface.

Mr Yianni Genaris was also at Kingston Beach in the early hours of 22 February 2022. He had been fishing off Osborne Esplanade after having parked his car at the sailing club carpark which is at the southern end of the Esplanade. His attention was captured by hearing a swooshing sound, he looked up and saw a cyclist riding down the hill of the road toward Kingston Beach. He didn't observe the cyclist to be in any difficulty but felt that his speed may have been greater than the 40 km/hour speed limit. His view of the cyclist became obscured, he heard an impact. He made his way to the scene of the accident. He also observed gravel on the surface of the road and felt that the gravel may have played a role in the accident.

### **The impact of the gravel on the road surface**

Tasmanian Police undertook a thorough traffic crash investigation of the accident including conducting friction tests on the north bound lane of the road proximate to the road repair. The tests were filmed. The tests revealed a difficulty retaining traction on the loose road base and gravel which covered the bitumen surface. The friction tests identified a level of friction between the tyre and loose surface

of around 0.17. This is considered a low friction value and equivalent to driving on ice.<sup>9</sup>

Other cyclists have recounted their experience negotiating the north bound lane of the road proximate to the excavation. Mr Henry Alfred Hodgson is a regular cyclist completing on average 12000 km per year with ride distances anywhere between 20 km and 150 km per ride. He cycles on average four times a week including commuting between his work in Rosny and his home in Blackmans Bay. His usual route when commuting to work takes him along the road heading north between Roslyn Avenue and Osborne Crescent at Kingston Beach.

He cycled this route on Monday 21 February 2022, the day after the excavation and the day before BX's death. He was riding his bike along the road at approximately 6 am. He recalls approaching the left-hand bend proximate to the road works when he was faced with a large patch of gravel and loose stones. He had already committed to leaning into the corner before becoming aware of the loose gravel on the road surface. This posed the risk of his bike tyre losing grip. To prevent that from happening he was able to straighten up on the bike as he passed over the gravel. As a result of this manoeuvre he entered the oncoming lane on the road and was fortunate no car coming from that direction was on the road at the time. His GPS tracker showed his speed at the time of crossing the gravel as 38 km/hour.

Mr Hodgson again took this route on his morning bike commute to work on the following day, 22 February 2022. He left his home at 5.22 am. He describes the road surface as dry and it was dark. Aware, due to the events of the preceding day, of the likely presence of gravel on the road Mr Hodgson approached the left-hand bend on the road more slowly and at a different angle to ensure he remained in control of his bike. His GPS tracker recorded his speed at this point at 32 km/hour. He observed that the spread of loose stones and sands on the road surface appeared to him to be far greater than was present on the previous morning. He, shortly later, met a friend and fellow cyclist at the pedestrian bridge over Browns River toward the northern end of Kingston Beach. That friend had also ridden down the road and stated that he had been fortunate that he had reduced his speed after encountering a wallaby before encountering the gravel on the road.

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<sup>9</sup> Collision Analysis Report dated 22 February 2022 page 5.

Mr Chetwynd has been riding bikes for approximately 50 years and for the last 15 years has been a race cyclist. He is also an experienced mountain bike rider. On Monday 21st February 2022 he was on a pre organised bike ride with approximately 15 others. The ride is undertaken regularly, every couple of weeks, and the route usually incorporates heading north from Roslyn Avenue along the road to Osborne Esplanade. On this day he had separated from the main bunch of riders and was riding ahead of one other.

He and his companion reached the left-hand bend in the road heading toward Osborne Esplanade at approximately 11 am. He explains that he had picked his line for the corner, and at the last minute observed a road scar in front of him to the left-hand side of the road, which was about 5 – 10 cm wide. He applied his brakes which he states is usually something a rider would not do as it “*upsets the balance and handling*”<sup>10</sup> of the bike, reducing his speed to approximately 25 km/hour, changed his line by steering slightly toward the centre of the road and was able to maintain control of his bike.

On the basis of the friction testing and experience of the cyclists when encountering the excavation and gravel on the left hand bend of the road when travelling northward toward Osborne Crescent I find that the presence of the excavation and the gravel on that portion of the road presented an extreme risk to cyclists for losing control of their bike, coming off their bike and/or entering into the oncoming, south bound lane.

### **Risk Mitigations**

Spectran Traffic (Spectran) is a Tasmanian company that provides traffic management services including traffic control, event management and planning and permit services in Tasmania. Spectran was contracted by Service Stream to provide traffic management on the road and on Osborne Esplanade for the roadworks.

Traffic control operators and signage were in place on 19 February 2022 and overnight whilst excavation work continued in preparation for the cable repair on Sunday 20 February 2022. After the repair of the cable on 20 February 2022, “after care” roadwork signs were in place 50 metres before the work zone, these signs were located on both the northbound and southbound lanes. The signage

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<sup>10</sup> Affidavit Bruce Chetwynd sworn 17 March 2022.

was clear and free of any obstructions. The signage was visible from some distance. The signage warned of roadworks ahead and of rough surfaces.

A temporary 40 km/hour speed sign was erected prior to the roadworks heading north. This sign was located on the western edge of road approximately 28 metres north of the exit from James Avenue.

The fact that signage was erected and was visible a reasonable distance prior to the roadworks, is evident from the forensic photographs taken at the scene of the accident immediately after it occurred. The photographs depict the presence of a sign warning of a rough surface and the roadworks south of the accident in a position that should have been apparent to BX as he rode down the road's incline, before entering the left-hand bend and being faced with the excavation and gravel distributed on the road surface.

WorkSafe Tasmania in their investigation concluded that the signage used complied with the traffic management plan in place for the works undertaken, and with relevant Australian standards and guides. Nevertheless, cyclists riding north on the road on the 21 and 22 February 2022 all refer to being taken by surprise by the gravel on the road surface and not having seen any signage alerting them to road works or a rough surface.

Mr Chetwynd thought the road scar and gravel was dangerous. He did not recall seeing any road signs advising of road works along the road. Mr Hodgson also did not notice any warning signs when descending the road on 21 February 2022 but did notice a temporary yellow sign the following day. He recalled it as being located on the left-hand side of the road just prior to the gravel. He did not note what the detail on the sign was.

The only risk mitigation strategy in use proximate to the roadworks on the 22 February 2022 was the erection of the signage I have outlined. Whilst the signage was likely adequate to warn motorists as to the level of risk they faced from the roadworks and the excavation, the risk was far greater to cyclists. Cyclists had a significant potential for serious harm and death, particularly noting the location of the roadworks on a sweeping left-hand bend, the downward incline and high potential for destabilisation of a bike encountering debris such as gravel scattered on the road. Given the extent and nature of the risk to cyclists and despite the compliance of the signage with Australian Standards other steps may have been usefully taken to further mitigate or remove the risk with cyclists in mind. Those steps could have included the closure of the road to cyclists for the period it

would take for the works to have been completed and the gravel to be removed from the road, the use of signage specifically addressing cyclists, the presence of debris on the road and depicting the risk of loss of traction in light of the loose surface or the monitoring and removal of the gravel on the roadway throughout the period until the road was permanently repaired.

The Guide to Temporary Traffic Management Part 3 Static Worksites (AGTTM03), developed by Austroads, reflects contemporary temporary traffic management practice for application in Australia and New Zealand.<sup>11</sup> The roadworks being undertaken on the road were temporary static works to which the Guide has application. The Guide identifies cyclists as “*vulnerable road users*” and calls for temporary traffic measures to have specific regard to vulnerable road users providing that:

*“Road features that are hazardous to motorcyclists and on road cyclists should be treated. This may include transverse and longitudinal changes in pavement level, changes in surface condition and hazards on the road”.*<sup>12</sup>

Australian Standard 1742.3:2019 is a manual for traffic control devices for roadworks. The manual notes that whilst standard signs used for roadworks “*should generally apply to a wide range of road users including cyclists*” there may be a need to provide specific information to cyclists alone. The example it uses is for the closure of bike paths.<sup>13</sup> The Standard also provides a table of appropriate signage including signs for:

- Cycling hazard;
- Closure of a cycling lane; and
- Warning of the presence of cyclists ahead.

The Standard provides that a “Cycling Hazard” sign is appropriate for use when there is a hazard to cyclists in roadworks only suggesting that it does not endorse the use of the “Cycling Hazard” sign when the hazard exists for other modes of roadway use.<sup>14</sup> WorkSafe Tasmania’s investigation, however, concluded that the use of signage such as “Cycling Hazard,” as outlined in AS17432, could have

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<sup>11</sup> AGTTM03-Guide to Temporary Traffic Management Part 3 Static Worksites.

<sup>12</sup> AGTTM03-Guide to Temporary Traffic Management Part 3 Static Worksites page 52.

<sup>13</sup> Australian Standard 1742.3:2019 para 4.18.

<sup>14</sup> Australian Standard 1742.3:2019 Table A.1.

*“potentially contributed to a heightened level of safety for cyclists during the period of roadwork activities”*.<sup>15</sup>

I provided my findings in this matter in draft to the Department of State Growth for comment. The Department through Mr Donald Howatson (Manager of Traffic Engineering), advised that cyclists, as vulnerable road users, typically exercise a heightened level of caution to ensure their own safety and there was not a trend or recurring pattern of which the Department were aware of cyclists being involved in accidents at roadworks. Accordingly, the Department’s view is that generally separate warning signage specifically addressing cyclists is not required at roadworks. The Department does note that the signage in use in this instance warned of a “rough surface” and that signage warning of a “loose surface” may have been the more relevant and appropriate warning to have given. I agree with that observation.

### **The circumstances of the accident**

On the morning of 22 February 2022 Mrs Balfour left her home to drive her daughter to rowing training in Sandy Bay. She was driving a Ford Territory vehicle. After dropping off her daughter, she headed back to home via Kingston Beach where she stopped briefly to walk her dog. At approximately 6.25 am she left the dog beach, returned to her car and started her journey home which took her to the southern end of Osborne Esplanade and then onto the road heading south toward Roslyn Avenue. She was travelling slower than 40 km/hour, being the applicable speed limit for the road, at the time having just driven over a speed bump prior to the collision. The sun was by that time up, the weather was clear and there were no environmental factors that otherwise impeded her view nor was she distracted by her phone, tired or affected by drugs or alcohol.

The Ford Territory vehicle driven by Mrs Balfour at the time of the accident was examined on the 24th of February 2022 by Transport Inspector Jason Armstrong. His inspection of the vehicle revealed it to be non-compliant. The defects identified were that the left and right steering rack boots were found to be damp with hydraulic fluid and the left suspension strut was found to exhibit minor dampness. He concluded that these defects were not causative of nor relevant to the accident.

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<sup>15</sup> Worksafe Investigation Report page 16.

BX was similarly unaffected by alcohol or drugs at the time of the accident. His bike was in a suitable and roadworthy condition and he was wearing the appropriate riding gear including a safety helmet.

As Mrs Balfour headed south on the road and was approaching the left-hand bend BX was cycling down the road in a northerly direction, entered the left-hand bend and lost control of his bike as it entered a patch of loose gravel. Tasmanian Police road crash investigators attended and examined the scene of the accident. They identified a tyre mark left by the bike on the road surface. The mark commenced to the right (east) of the excavation and continued in a general northerly direction for 10.8 metres. The mark was consistent with having been caused by BX applying a brake to the rear wheel of the bike. On examination scuffing was identified on the rear tyre of the bike. Striations were also evident within the scuff mark indicating the rear of the bicycle had side slipped and rotated in an anticlockwise direction. They concluded that this type of rotation on a bike causes the rider to be ejected, which occurred in this instance.<sup>16</sup> This type of ejection is referred to as a high side where the rider is catapulted into the air, in this instance from the left to right.<sup>17</sup>

On approaching the bend from the north, a cyclist had a line of sight to the north eastern edge of the excavation from a distance of approximately 35 metres and the excavation was clearly visible from approximately 25 metres.<sup>18</sup> Due to the presence of the tyre mark it is possible to find that BX had sufficient time to perceive and react to the presence of the excavation. However, he was unable to avoid the loose gravel on the road surface given the extent of its spread.

The exact speed at which BX was travelling is unknown. Following the final repair of the excavation Tasmanian Police crash investigator Senior Constable Cordwell revisited the left-hand bend at the northern end of the road. She observed a group of approximately 15 bike riders travelling through the bend toward Osborne Esplanade. The riders took an inside line travelling close to the gutter where the excavation had been and travelled at an estimated speed between 25 and 35 km/hour.<sup>19</sup> Following her examination of the scene and consideration of all the evidence Senior Constable Cordwell concluded that BX lost control of the bike he was riding due to the presence of blue metal on the road. The blue metal

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<sup>16</sup> Collison Analysis Report dated 22 February 2022 page 6.

<sup>17</sup> Collison Analysis Report dated 22 February 2022 page 6.

<sup>18</sup> Collison Analysis Report dated 22 February 2022 page 13.

<sup>19</sup> Collison Analysis Report dated 22 February 2022 page 12.

had been dispersed from the excavation. The presence of the blue metal caused the conditions on the road to be slippery. The rear tyre of the bike has resultingly slipped ejecting BX causing him to become airborne and collide with and then be run over by the vehicle driven by Mrs Balfour.<sup>20</sup>

I do not find that BX was travelling at a speed that exceeded the speed limit applicable to the road nor do I find that the speed at which he was riding was dangerous given his ignorance of the specific risks he would encounter at the bend on the road namely the excavation and dispersed gravel. By the time he became aware of those risks it was too late. Whilst Mr Genaris has estimated BX's speed to be greater than the 40 km/hour limit he also concedes that he is not good at assessing speed. There is no other evidence to suggest that BX was travelling at a speed greater than 40 km/hour. I further find that nothing in the way Mrs Balfour was driving contributed to the accident, put at its simplest she was merely in the wrong place at the wrong time.

The investigation undertaken by WorkSafe Tasmania highlights the vulnerability of cyclists as road users and the need to identify and appropriately manage risks by reference to them. They highlight the need for PCBU's engaged in road works to conduct a thorough risk assessment prior to the commencement of a project which includes specific evaluation of the risk to vulnerable road users such as cyclists. Such a risk assessment may result in the provision of alternative pathways and influence the content and positioning of signs amongst other things. As the works progress and conditions alter, the assessment of risks requires review and to adapt to the altering conditions.<sup>21</sup> I concur with their conclusions.

- c) BX's cause of death was massive head injury, upper thoracic fracture and dislocation, multiple rib fractures with bilateral pneumothorax and air in the pericardium resulting from BX's impact with Mrs Balfour's vehicle.
- d) BX died on 22 February 2022 at Kingston Beach, Tasmania.

In making the above findings I have had regard to the evidence gained in the investigation into BX's death. The evidence includes:

- Tasmania Police Report of Death for the Coroner and incident subject report;
- Affidavits as to identity and life extinct;
- Medical records;

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<sup>20</sup> Collison Analysis Report dated 22 February 2022 page 17.

<sup>21</sup> WorkSafe Tasmania investigation report.

- Toxicology report;
- Affidavit of the State Forensic Pathologist, Dr Christopher Lawrence MB BS, FRCPA;
- Affidavit of JX sworn 11 April 2022;
- Affidavit of Yvonne Balfour sworn 3 March 2022;
- Affidavit of Nicholas Preshaw unsworn;
- Affidavit of Jason Armstrong sworn 29 March 2022;
- Affidavit of Janelle Kingston sworn 2 March 2022;
- Affidavit of Catherine Towns sworn 22 February 2022;
- Affidavit of Yianni Genaris sworn 9 March 2022;
- Affidavit of Bruce Chetwynd sworn 17 March 2022;
- Affidavit unsworn and Statement of Henry Hodgson dated 28 February 2022;
- Collision Analysis Report dated 22 February 2022;
- Affidavit First-Class Constable Rebecca Turner sworn 22 June 2022 and forensic photographs;
- WorkSafe investigation report and file; and
- Response from the Department of State Growth, Donald Howatson.

### **Comments and Recommendations**

I extend my appreciation to investigating officer Senior Constable Cordwell for her investigation and report and to Senior WorkSafe Tasmania Inspector Mathew Conway for the investigations and analysis he conducted and which are outlined in his investigation report.

The circumstances of BX's death exposed a need to consider the safety of cyclists when routes that are commonly used by them become subject to road works that give rise to risks affecting their capacity to appropriately and safely handle their bike such as the presence and spread of debris on a road surface. Cyclists are particularly vulnerable to changed road surface conditions and the consequence of encountering them can be, as it was in BX's case, catastrophic. The signage used in this case, albeit compliant with Australian Standards, did not address the risk to cyclists specifically nor did it successfully convey to cyclists clearly the nature of the risk that lay ahead. Whilst the distinction between a rough and loose surface may mean little to a motorist it would be significant to a cyclist. Here the signs did not effectively communicate the nature of the hazard that lay ahead as being a loose road surface nor the presence of debris on the road.

Considering my findings, I make the following **recommendations** pursuant to Section 28 of the *Coroners Act 1995*:

1. In circumstances where road works or road conditions pose a hazard to cyclists by the presence of debris on a road surface, warning signs advising of a loose surface be used.
2. Risk assessments for roadworks should specifically consider the impact of roadworks on cyclists as a vulnerable road user, in addition to other road users, and identify risk mitigation strategies appropriate to each of the categories of road users.

I convey my sincere condolences to the family and loved ones of BX.

**Dated:** 24 March 2025 at Hobart, in the State of Tasmania.

**Leigh Mackey**  
**Coroner**