QUEENSLAND COURTS

CORONERS COURT OF QUEENSLAND

FINDINGS OF INVESTIGATION

CITATION:	**Non-inquest findings into the death of a 5-year-old boy**
TITLE OF COURT:	Coroners Court
JURISDICTION:	BRISBANE
DATE:	14 March 2025
FILE NO(s):	2023/4262
FINDINGS OF:	Carol Lee, Coroner
CATCHWORDS:	CORONERS: Non-Inquest findings- Fire- Rural property- Child- Modified motorcycle- Non-compliance with refuelling protocol.

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Introduction

The deceased was a 5-year-old boy (the boy) who was born on 10 August 2018 and died on 4 September 2023 at Queensland Children's Hospital (QCH).

Queensland Police Service (Police) reported the boy's death to the coroner because his death appeared to be a violent or unnatural death and fell within the definition of a reportable death in the *Coroners Act* 2003.

The role of a coroner is to investigate reportable deaths to establish, if possible, the cause of death and how the person died. The purpose of a coronial investigation is to establish facts, not to cast blame or determine criminal or civil liability.

Circumstances

The boy resided at a rural property in the Lockyer Valley Region with his father, as part of a shared custody arrangement with his mother.

At approximately 11:00 hours on 3 September 2023 (Father's Day), the boy was riding a small black motorcycle around his father's rural property in the Lockyer Valley Region when he parked it outside the residence, next to a white Ford sedan (Ford) for refuelling. Whilst his father was refuelling the motorcycle, the fuel ignited with both the boy and his father becoming engulfed in flames. A friend in the residence heard an explosion and calls for help and saw both the boy and his father alight. The flames were extinguished by water and first aid was provided and continued by Queensland Ambulance Service on their arrival. Both were transported to hospital for ongoing care; the boy being airlifted to QCH. Tragically, the boy succumbed to his injuries and was declared deceased at 07:10 hours on 4 September 2023.

Forensic Pathologist's Examination

An external examination, imaging, document review and toxicology studies were undertaken.

The opinion of the forensic pathologist as to the cause of death is based on consideration of the circumstances of death and a post-mortem examination including associated imaging and testing.

The forensic pathologist summarised the findings at autopsy as follows:

1. External examination showed generalised oedema with partial and full thickness burns involving nearly the entire body (>90% body surface area), consistent with clinical assessment. Signs of recent therapy were also noted.
2. Postmortem CT imaging shows:
    a. Generalized oedema.
    b. Complete opacification of both lungs.
    c. Bilateral pleural effusions.
    d. Ascites and retroperitoneal oedema.
3. There were no obvious skeletal injuries.

In the opinion of the forensic pathologist, the cause of death was:

1(a) Complications of burns

Toxicology

Toxicological analysis was undertaken on antemortem samples of blood taken at 14:22 hours on 3 September 2023; the results of which were negative for alcohol and drugs (save for therapeutic drugs).

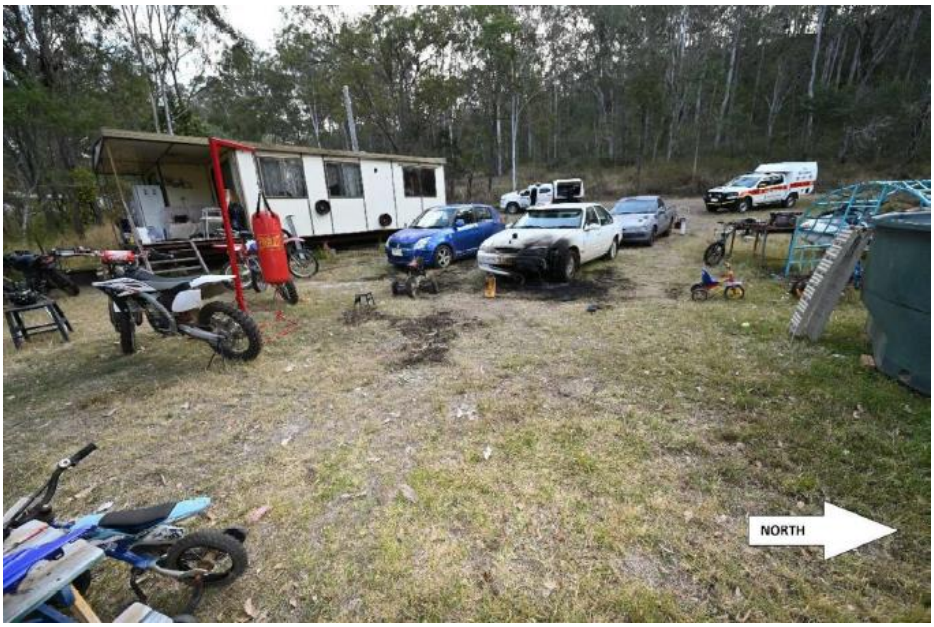
Investigation

Police

Police (including the Child Protection Investigation Unit) attended the scene and commenced a joint investigation with officers from the Queensland Fire and Emergency Service (QFES).

Following a comprehensive investigation, the following findings and an opinion on the circumstances and cause of the fire were provided; relevant aspects of which are summarised as follows:

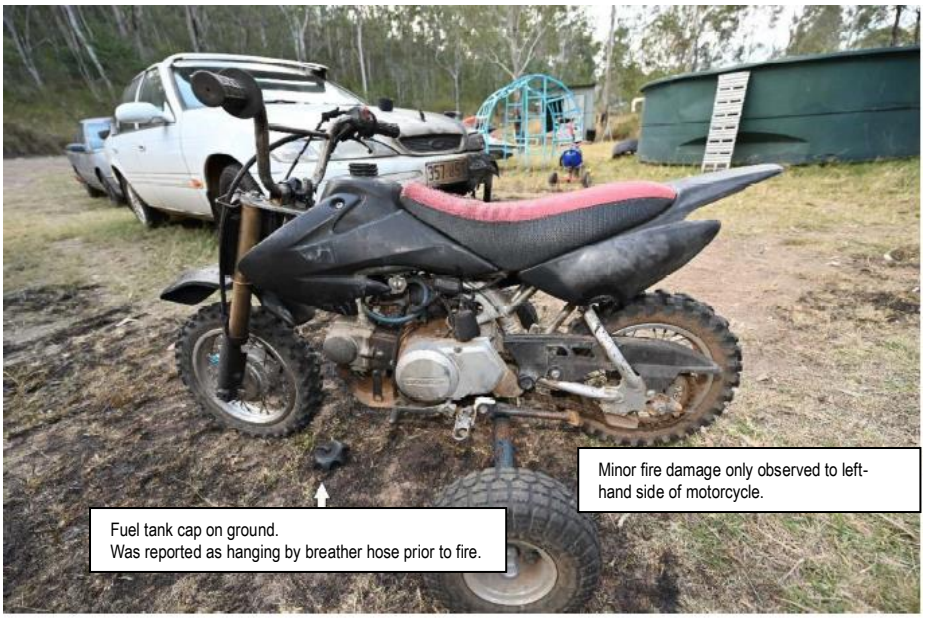
1. Scene examination revealed the following:
    a. The incident location was a rural property with a long dirt driveway with a demountable style building used as a dwelling.
    b. Parked outside the dwelling were several motorcycles and vehicles, including the subject motorcycle and the Ford sedan which were parked approximately 1.2 metres at the closest point.



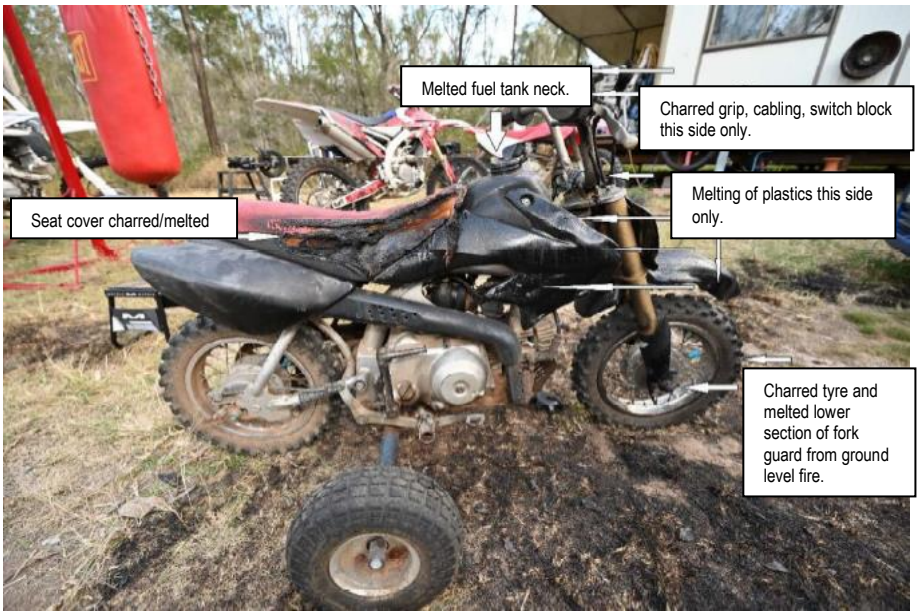
Incident scene looking west.

    c. The subject motorcycle:
        i. Significant fire damage was observed to the right-hand side of the motorcycle (the exhaust side and front guards), closest to the Ford.
        ii. The ignition switch was in the ON/RUN position and the fuel cap was on the ground on the left side of the motorcycle.
        iii. No signs of fire damage were observed to the spark plug, lead or boot of the motorcycle.

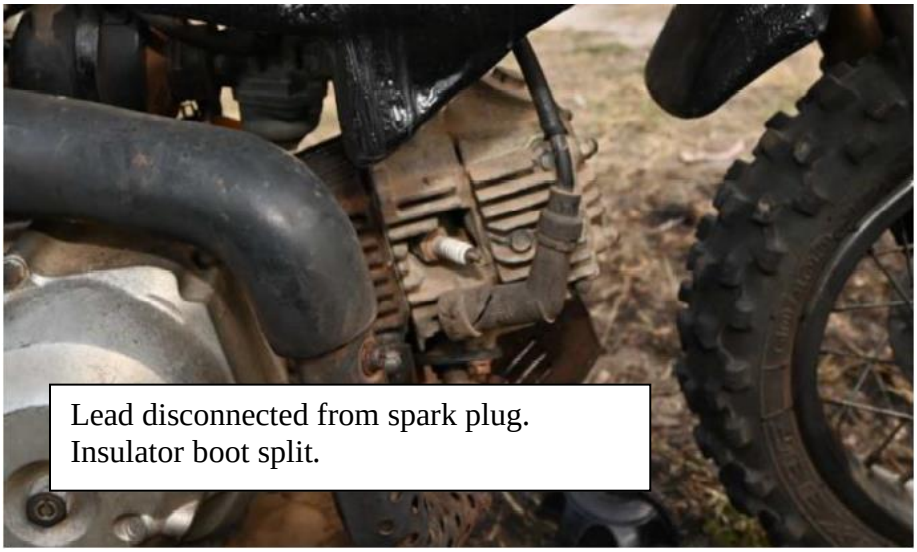
iv. Melting, deformation and char was observed to the external plastic components including handlebar switch block, fuel tank, fairing, front mudguard, fork guard and vinyl seat cover, indicating exposure to intense heat. The most intense fire damage was observed to the upper section of the motorcycle.
v. With the seat and fairings removed, isolated areas of minor melting and char of the inside surfaces of the seat and fairings, other plastic componentry and wiring insulation were observed, indicating short term exposure to heat and combustion gases.
vi. The fire patterns displayed across the motorcycle indicates exposure to a fire developing across or near its right-hand side external surface.



Left-hand side of Honda

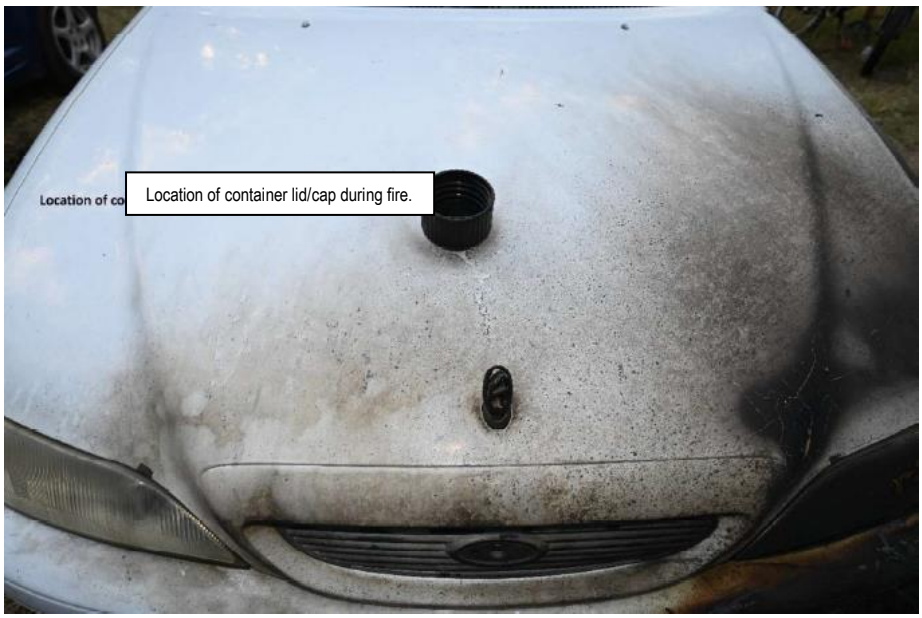


Right-hand side of Honda



Spark plug and lead, right-hand side of Honda

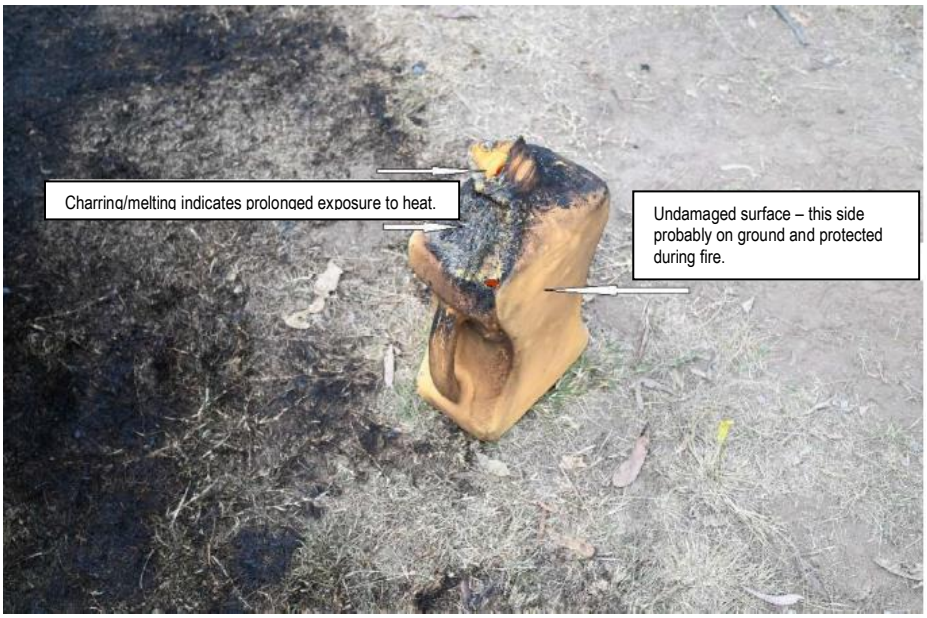
d. On the ground between the motorcycle and Ford sedan was a yellow fuel container which was partially fire damaged, and the cap was on the bonnet of the sedan.



Lid/cap in-situ on Ford bonnet

e. The container was identified as a FAST FILL FUEL JUG manufactured by O NEAL, having a capacity of at least eight litres. The lid/cap on the Ford's bonnet was identified as a compatible manufacturers accessory for the fuel jug.
f. The fuel jug was observed on the ground, on its base, adjacent to the area of most intense burning near the Ford. It is undetermined as to the exact location and position of the fuel jug during the development of the fire.
g. Consumption, melting and char was observed to the top surface of the jug, including the threaded neck/orifice. Smoke staining was observed across three sides while the remaining side and base were free from fire damage.
h. No liquid was present within the jug at the time of examination.

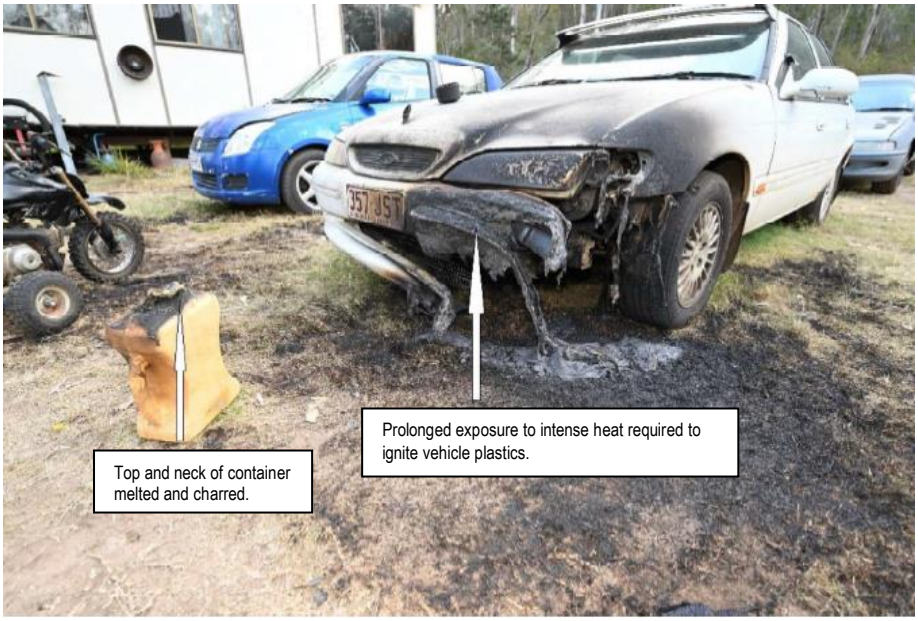
i. The fire patterns displayed across the external surfaces of the fuel jug indicate prolonged exposure to intense heat and fire.



Fuel jug

j. The Ford:

i. The left-hand front corner of the Ford displayed signs of severe fire damage.
ii. Consumption, melting and char was observed to the lower section of the plastic bumper bar, indicating prolonged exposure to intense heat. The fire damage decreased in intensity with distance in all directions across the front section of the vehicle.
iii. Heavy smoke staining extended across the bonnet where the plastic lid/screw cap was located. A clean section of bonnet was observed under the lid/cap indicating it was in that location during the development of the fire.
iv. The fire patterns displayed across the Ford indicates exposure to an intense fire developing at or near to ground level adjacent to its left-hand side front corner external surface.



Intense burning to localised area of Ford

k. Next to this vehicle was a pair of damaged thongs which were being worn by the father at the time of the incident.
l. At several locations around the yard were burnt patches of grass.
m. Items located inside the dwelling were items of fire damaged clothing.

2. The father gave information to investigators that as he started refuelling the bike with a jerrycan of E10 fuel directly from the container (no funnel), without shutting off the engine, it ignited, and the fire spread to him. He threw the container, which landed near the boy, who was standing next to the Ford. The boy then became engulfed in flames. The father then attempted to smother the fire on the boy but was unsuccessful. The fire was ultimately extinguished by the garden hose. He acknowledged that refuelling without shutting off the engine had become a '*bad habit*'.
3. Based on the location and intensity of the fire patterns observed at the scene, it was considered that the fire originated within an identified area of origin (AOO) encompassing the motorcycle, the front of the Ford and the plastic container. The possibility of a fire originating in either the Honda or the Ford and spreading to involve the other through normal fire behaviour is low. It is probable that the spread of fire within the AOO was a result of the movement, from one area to another, of persons and items involved in fire.
4. Based on the available evidence, the inference drawn by the investigator was that the motorcycle engine was running whilst being fuelled with unleaded petrol from the fuel jug at the time of fire origin and that an ignition source within the AOO has ignited petrol vapours, based on the following:
    a. The manufacturers specified fuel type is unleaded petrol.
    b. A manufactured for purpose fuel filler jug located within the AOO; its lid/cap removed/relocated to the bonnet of the Ford.
    c. The filler cap was removed from the fuel tank.
    d. The position of both ignition switches in the ON position.
5. Liquids that produce vapours that possess the ability to undergo combustion are considered an ignitable liquid. When an ignitable liquid such as unleaded petrol is poured onto a surface only its vapours, not the liquid itself, actually combust.
6. A contributing factor to the evaporation rate (volatility) is the surface material. Porous or semi-porous surfaces, such as fabrics, will have a considerably faster pre-fire

evaporation rate than if the same amount of liquid was poured onto a non-porous surface. This is due to the wick effect.

7. Unleaded petrol is easy to ignite having high vapour pressure which makes it highly volatile, and a very low flashpoint (-40C).
8. Flammable vapours can only be ignited within specific ranges of vapour concentration. These limits are normally expressed as the Lower Flammable Limit (LFL), the lowest concentration by volume of flammable gas in air that will support flame propagation, and the Upper Flammable Limit (UFL), the highest concentration of flammable gas in air that will support flame propagation.
9. The LFL for unleaded petrol is 1.4% in air and the UFL is 7.6% in air. It is accepted, for example, the sparks created by a lighter's spark wheel and/or subsequent flame (NFPA, 2021) are deemed as a competent ignition source and can ignite petrol vapours.
10. There were 3 potential ignition sources within the AOO at the time of the fire:
    a. Hot surface- motorcycle exhaust/engine.
    b. Static electricity- flow of petrol from jug to tank; human movement.
    c. Electrical short circuit or arc- electrical arc from split in spark plug lead.
11. Because all 3 were considered as competent ignition sources, the cause of the fire is classified as 'undetermined'.
12. The investigator was unable to categorically rule out human initiated ignition.
13. It is probable that petrol vapour was present within the AOO at the time of the fire, however no material first ignited could be categorically identified.
14. Ultimately, Police have not identified any suspicious circumstances surrounding the boy's death. Rather, it was considered that the evidence is such that it was a tragic accident. Whilst there is certainly a level of recklessness in relation to refuelling the motorcycle whilst it was still running, it could not be foreseen that this action would reasonably result in the death of any person. There was no intention, malice, nor anything else that could be considered a negligent homicide. The father's reactions, when interviewed by Police in relation to this matter, are consistent with that of a grieving father. There is no intention at this time, to charge him with any offences relating to the untimely death of his son.

Child Death Review

Following a Systems and Practice Review undertaken by The Department of Child Safety, Seniors and Disability Services pursuant to the *Child Protection Act* 1999, the Review Team did not identify any high value system or practice learnings arising from various child safety contact regarding the boy in the year preceding his death.

The Systems and Practice Review Committee identified the following themes arising from the review[1]:

1. The importance of appropriate documentation of all relevant information informing assessments.
2. The necessity for sufficient Safety Assessments and Safety Planning to occur when departmental staff facilitate a change of living arrangements for a child from one parent to another.

[1] None of which were relevant to the circumstances of death but are set out for completeness.

3. The use of power and authority by staff and how changes in the child's living arrangements may interface with the Family Court of Australia.
4. The importance systemically of identifying when additional support may be needed for international graduates where English is their second language to enhance cultural capability.

Conclusion

After considering the material obtained during the coronial investigation, I consider that I have sufficient information to make the necessary findings in relation to the boy's death. I am not satisfied that it is in the public interest to hold an Inquest as, I am of the view that drawing attention to the circumstances of this death is unlikely to prevent deaths in similar circumstances happening in the future. There is also no uncertainty or conflict of evidence as to justify the use of the judicial forensic process and no suspicious circumstances that have not been resolved or resulted in criminal charges. On that basis I have determined that an Inquest is not required.

I accept the forensic pathologist's opinion as to the cause of death and find that the cause of the boy's death was:

1(a) Complications of burns.

I accept the findings and opinion of the joint investigation conducted by Police and the QFES.

I extend my condolences to the boy's family and friends for their loss.

Findings required by s.45

Identity of the deceased –	A 5-year-old boy.
How he died –	On Father's Day, 3 September 2023, a 5-year-old boy was enjoying a ride on his modified motorcycle at his father's property. Whilst refuelling the boy's motorcycle a fire ignited, which spread from father to son, and caused catastrophic burn injuries to the boy. Despite prompt care and treatment including aeromedical retrieval to a tertiary facility, the boy ultimately succumbed to his injuries and died on 4 September 2023.
Place of death –	Queensland Children's Hospital, SOUTH BRISBANE QLD 4101 AUSTRALIA
Date of death–	04/09/2023
Cause of death –	1(a) Complications of burns

I close the investigations.

Carol Lee
Coroner
CORONERS COURT OF QUEENSLAND
14 March 2025