CITATION: *Inquest into the death of Brody Roy Wauchope-Dirdi* [2021] NTLC 033

TITLE OF COURT:	Coroners Court
JURISDICTION:	Darwin
FILE NO(s):	D0166/2020
DELIVERED ON:	24 November 2021
DELIVERED AT:	Darwin
HEARING DATE(s):	12, 13 October 2021
FINDING OF:	Judge Greg Cavanagh
CATCHWORDS:	**Electrocution of 11 year old boy at a home in a remote Aboriginal community, roof live with 240 volts, caused by faulty Power and Water Corporation connection to residence, no earthing of electrical connection and metal roof, no maintenance or inspection over 25 years**

REPRESENTATION:

Counsel Assisting:	Kelvin Currie
Counsel for Power and Water:	Jodi Truman
Counsel for DEMED Aboriginal Corporation:	David McKenna
Counsel for Family:	Sean Bowden

Judgment category classification:	B
Judgement ID number:	[2021] NTLC 033
Number of paragraphs:	46
Number of pages:	16

IN THE CORONERS COURT
AT DARWIN IN THE NORTHERN
TERRITORY OF AUSTRALIA

No. D0166/2020

In the matter of an Inquest into the death of

BRODY ROY WAUCHOPE-DIRDI

ON: 28 OCTOBER 2020
AT: GUNBALANYA

FINDINGS

Judge Greg Cavanagh

Introduction

1. At the request of his family the deceased will be referred to as "Rory" in these findings. Rory was born at the Royal Darwin Hospital on 8 October 2009 to Darlene Anne Wauchope and Kingswood Dirdi. They had been together for 22 years and he was their fifth child. The family lived in Gunbalanya (previously Oenpelli), a community about 300 kilometres east of Darwin.

2. Rory was described as a happy-go-lucky boy who was a very fast runner and good at sports. He loved basketball, football and bike riding and was a good hunter. He attended school every day and was said to be very bright.

3. In September 2020 his 19 year old uncle, Jayden, went to Gunbalanya to work for the DEMED Aboriginal Corporation. He was delivering food and fuel to outstations. He was allocated House 548 (also known as 3 Pandanus Court), a property maintained by DEMED. Two weeks later Jayden's aunty, Kelly, also went to Gunbalanya to work for DEMED. She drove a truck making deliveries. She was allocated the same house.

4. The house has verandas on two sides. The verandas have steel poles supporting a steel beam upon which the rafters rest that support the iron roof. At the end of one of the verandas outside the room in which Kelly

slept was an area enclosed in steel mesh. On either side it extended up to the rafters but on the outside of the veranda it extended only up to the steel beam. That left open the space above the beam and below the roof of about 200mm.

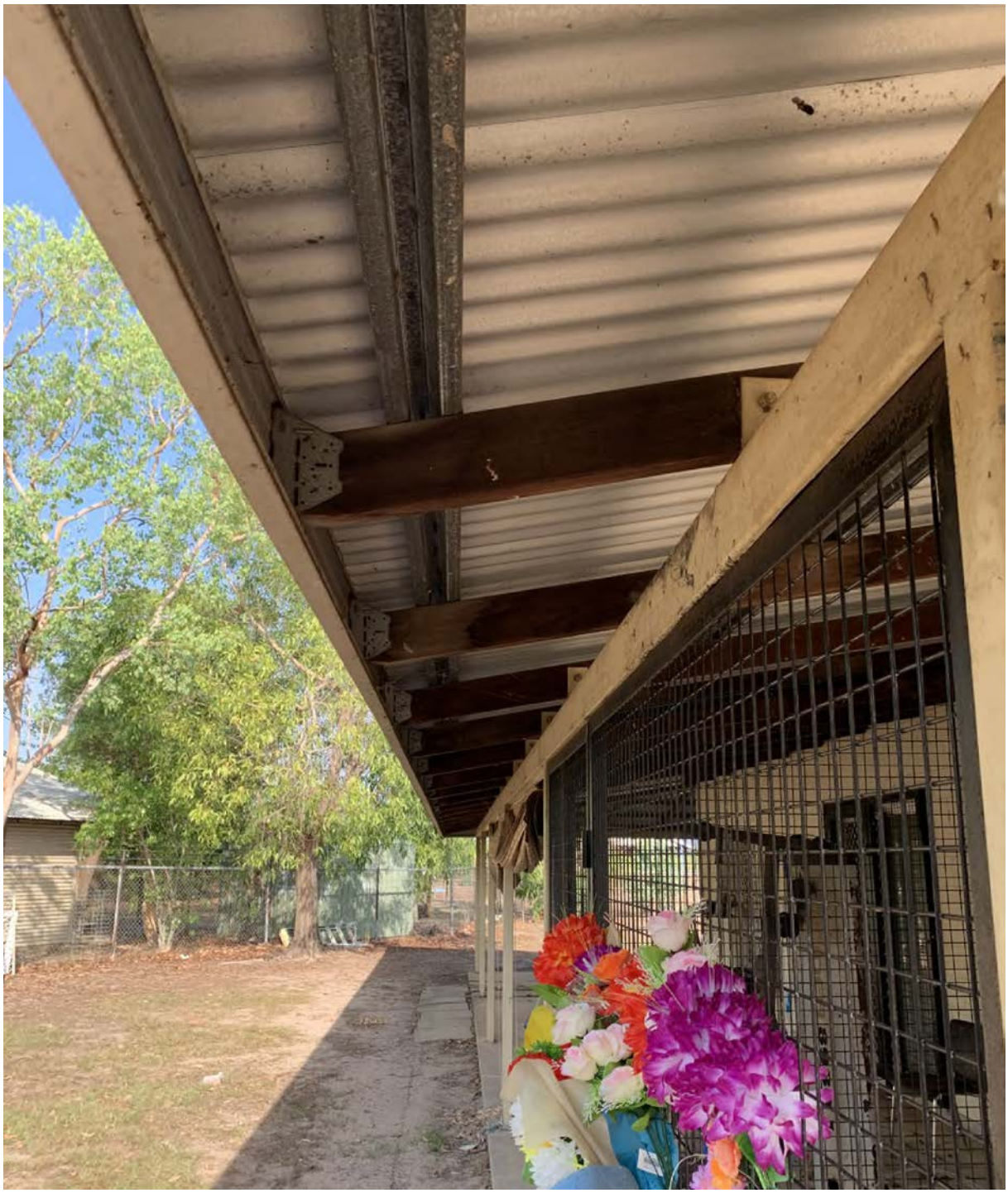

Figure 1. The veranda, posts, beam, the mesh and the 200mm gap between beam and iron roof

5. In mid-October 2020, Rory and his younger brother went over to the house to play the PlayStation with their uncle, Jayden. They stayed overnight. When leaving the next morning, Rory left without his mobile phone.

6. At about 4.30pm on Wednesday, 28 October 2020 Rory's aunty dropped him back to House 548. It was his intention to play games and retrieve his phone. As it turned out there was no one at home. Both Jayden and Kelly were delivering a 4000 litre tank of diesel to Manmoyi Outstation. They left the outstation at about 4.45pm to travel back to Gunbalanya. They got back at about 9.15pm. After dinner they went outside and sat on the veranda for about 20 minutes with a cup of coffee before going to bed. They did not see Rory.

7. The next morning (Thursday, 29 October 2020), sometime after 6.30am Kelly was in the process of taking rubbish out to the bin when she noticed a boy lying over the top of the beam on the outside edge of the meshed enclosure. His stomach was on the top of the beam, his legs were on the outside of the mesh and his chest, arms and head on the inside. The Forensic Pathologist described it as a "jack-knife" position. The fingers of his right hand were holding the mesh and he appeared to be deceased.

8. Kelly alerted Jayden and then rang her boss at 6.40am. Her boss drove over and contacted Emergency Services at 6.54am. He told the operator that it appeared a young boy had been trying to get into the house and got stuck and he was starting to smell. When police arrived it was obvious to them Rory had been dead for a significant period of time. His body was cold to the touch and rigor mortis had set in. A crime scene was established and the Crime Scene Investigation team flown in from Darwin. They arrived at 11.55am.

9. From the scene it was not clear how or why he died. There was no evidence of trauma and he was not stuck. He was a thin boy weighing about 25 kilograms and there was clearance between his body and the roofing iron.

10. The next day (30 October 2020) an autopsy was undertaken. The Forensic Pathologist, Dr Marianne Tiemensma was of the initial view that Rory had died due to positional asphyxia. She found:

    a. intense congestion of the scalp, with large confluent petechial haemorrhages;

    b. A large amount of bloody fluid in the lower airways;

    c. Congestion and oedema of the lungs; and

    d. A macroscopically normal heart, with fine petechiae visible.

11. However, there was no indication as to why he had remained in the jack-knife position long enough to succumb to positional asphyxia. Biochemistry was undertaken, including snake venom detection, along with histology and toxicology.

12. Rory's older brother was at school in Darwin. He returned to the community on Tuesday, 3 November 2020 and asked to be taken to the place where his brother had been found. He saw flowers and climbed the mesh to where it was said Rory had become stuck. He was certain that the 200mm space was sufficient for his brother to get through. As he got near the top of the mesh he put his head through the space between the beam and the roof. As he did so he felt a sharp pain shoot through the right side of his head and down his neck. His neck felt immobilised for a couple of seconds.

13. The following day his mother told the investigating officers that Rory's older brother had received a shock when climbing the mesh. The police organised an electrician to inspect the premises the same day. The electrician found that the metal roof had 240 volts running through it.

14. The insulation on the Power and Water service conductors (service lines) was degraded. The service conductors had not been shaped away from braided cables attaching the clamp to the metal gooseneck riser. The braided cable was also in direct contact with the metal of the gooseneck riser

attached to the premises. That was a consequence of the insulated collar being installed below rather than above the mounting disk.

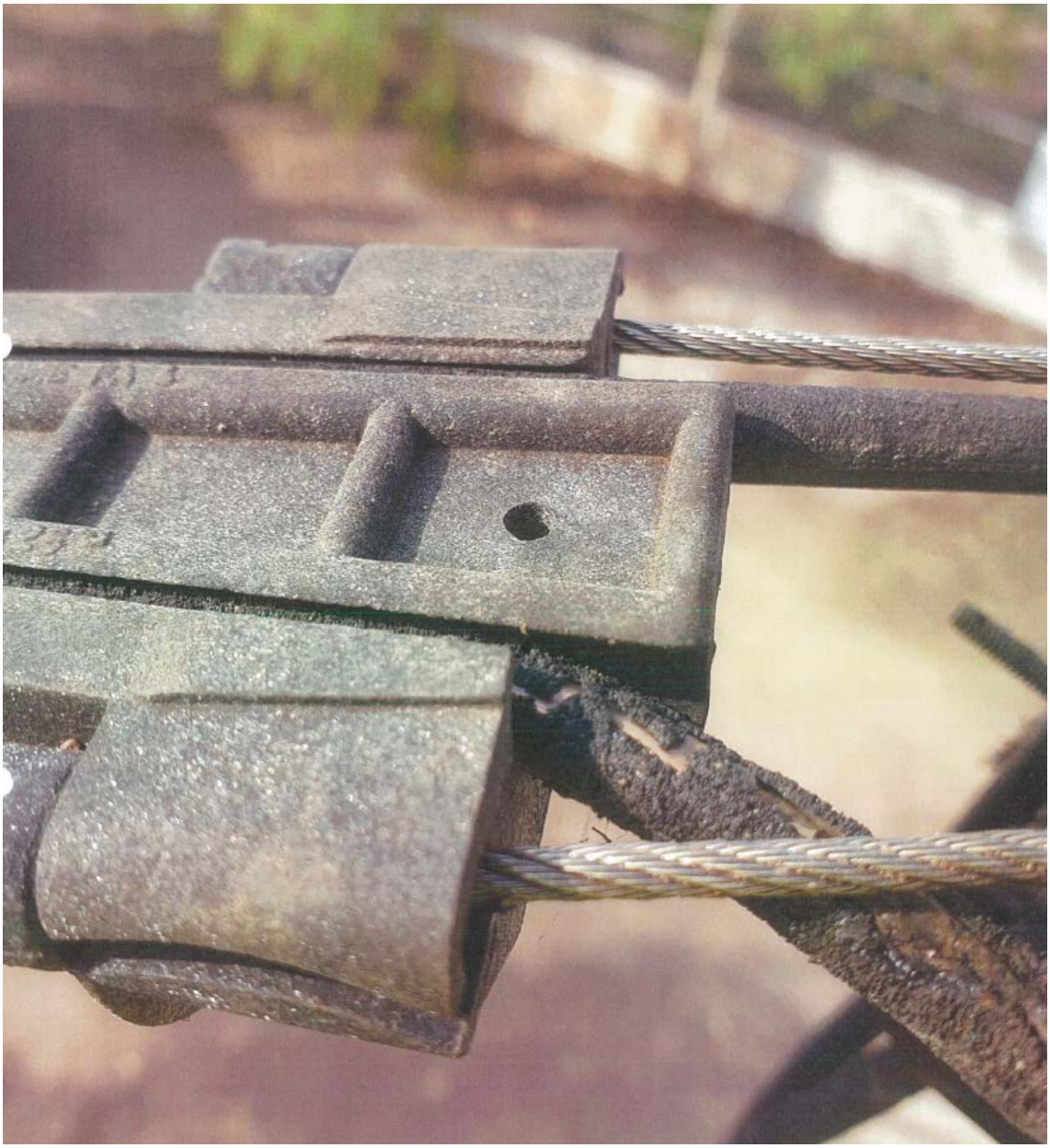

Figure 2. Showing degraded insulation and contact with steel braided cable

Figure 3. Showing clamp, degraded insulation and service conductors not shaped away from metal contact points

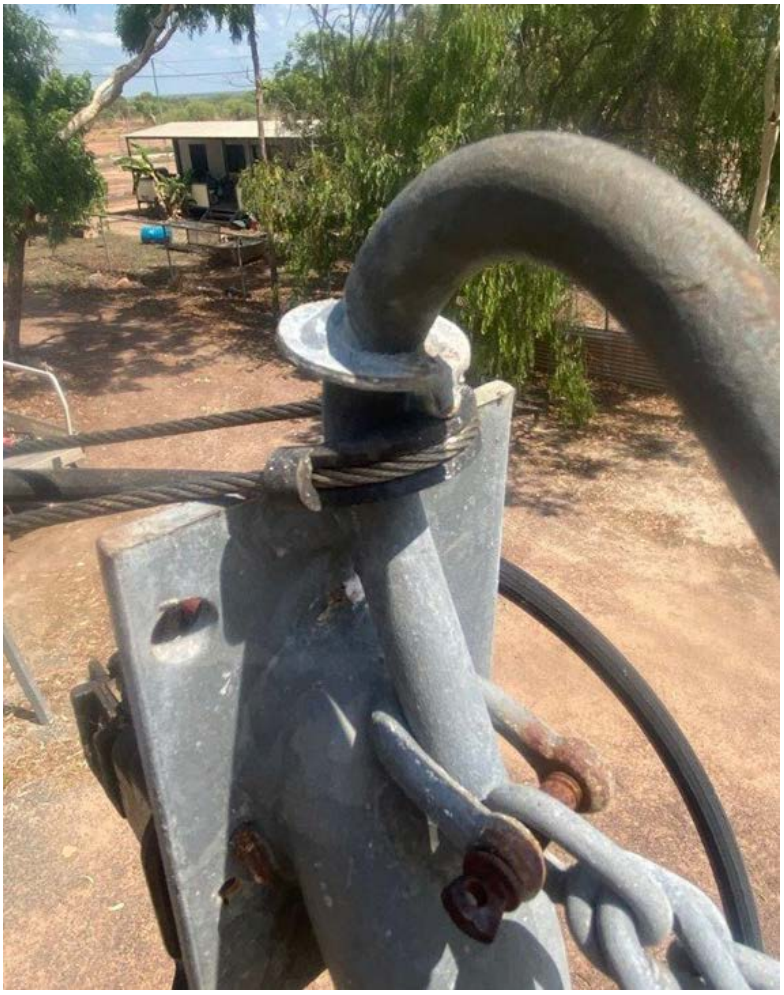

Figure 4. Showing braided cable touching plate on riser and insulated collar positioned below mounting disk

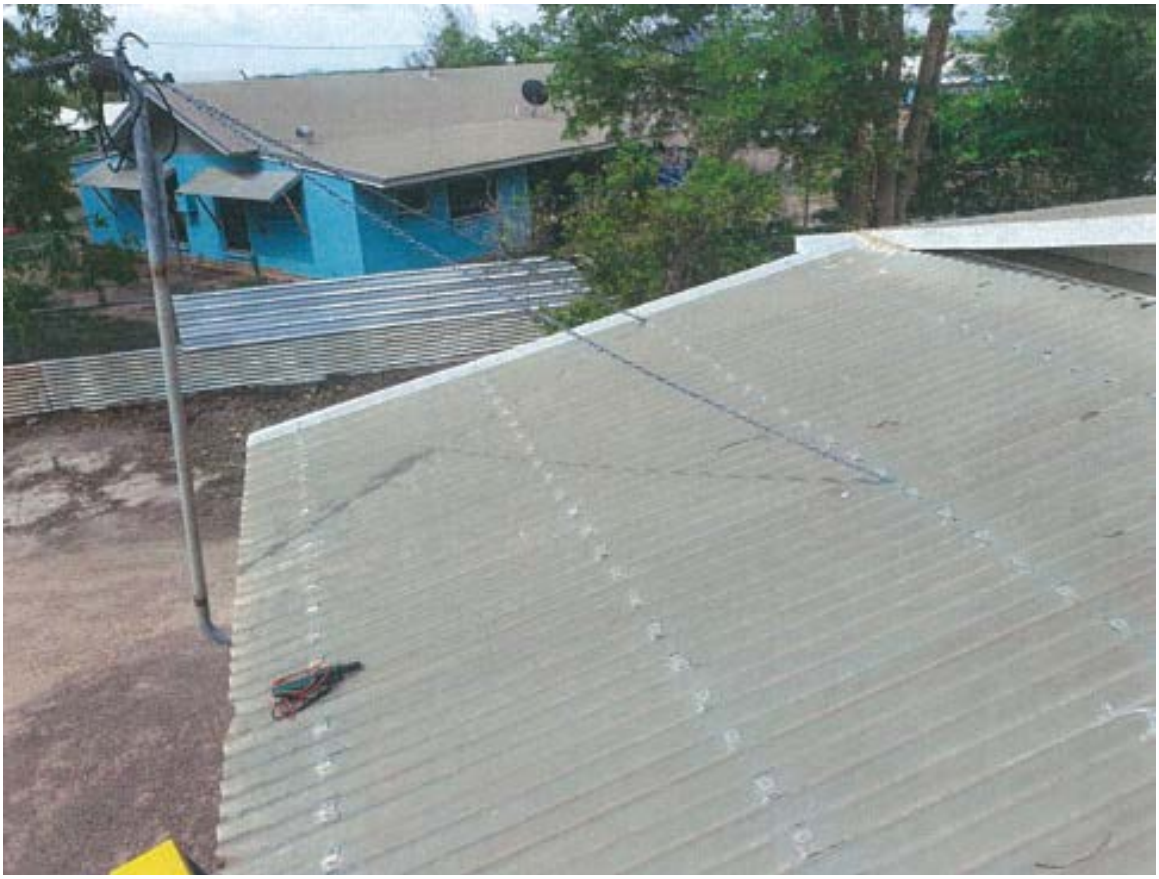

Figure 5. Showing riser and support chains connecting to iron roof

Figure 6. Showing insulation degradation on the service conductor

15. It is Power and Water's responsibility for the connection to the house. In effect that is to the riser pole. It is the owner's responsibility to have the riser pole installed along with the wiring from that point. The riser pole is

required to be earthed as is the metal roof. That is the owner's responsibility also. However, neither were earthed and the roof sat on wooden rafters insulating it from the rest of the house.

16. If the riser pole or roof had have been earthed, a short would have been created and the pole fuse would have blown when the insulation degraded to the point where the braided cable and pole became electrified. However without an earth, the pole and roof remained live with 240 volts. It is not known for how long that was the case.

17. The failure to earth the roof and the riser were not the only electrical issues with the house. The veranda posts, beam and the mesh were also not earthed and there was an earth fault on the solar hot water booster.

18. After the electrical evaluation, Rory's body was again inspected by the Forensic Pathologist for evidence of contact with electrical current. She found:

    a. An ill-defined area of very faint brown skin discolouration measuring 85mm by 40 mm on his left thigh. Histological examination showed subtle changes as seen in electrical cutaneous injury; and

    b. The dorsal aspects of the 4th and 5th toes on the left foot showed superficial pale blister formation suggestive of electrical injury.

19. On 9 November 2020 a senior electrical inspector from NT WorkSafe attended the premises and confirmed the findings. In an expert report by Ian Richie,[1] it was stated:

> "In this case, it is apparent that the primary fault in this residence that permitted the roof to be energised to 240Vac was the poorly maintained supply authority aerial service conductors.
>
> The photos appear to show badly UV degraded insulation on the service conductors to a degree where the insulation failed to

[1] Specialist Electrical Services Consultant

> adequately separate energised conductors from directly contacting metallic support structures, which in turn were in direct contact with the iron roof. That fault may have occurred months or even years ago, without detection or inspection.
>
> As the roof was electrically insulated from the mass of earth by the timber roof bearers, the roof was therefore permitted to remain energised at 240Vac potential without rupturing the service fuse (pole fuse).
>
> A contributing factor to this incident was the lack of adequate earthing."[2]

20. Dr Tiemensma was of the opinion that Rory did not die from electrocution. All indications were that he was immobilised due to the electricity or while attempting to avoid another shock. She estimated that he likely became unconscious within 8 to 30 seconds because of the position he was in. Death followed some minutes later.

21. I was told that Rory was buried by his community with full ceremonial honours in accordance with his peoples ancient traditions.

ISSUES

Records

22. The Power and Water Corporation is responsible for the electricity lines and the connection of those lines to the premises. However it has no records of connecting the premises. The Corporation does not have a certificate of compliance they say would have been provided to them before connecting the premises. They are unable to say when the electricity was connected or who connected it. They are unable to say whether anyone from their organisation or otherwise has returned to properly inspect the cables and the connection to the premises in the last 25 years.

[2] That analysis was accepted by Power and Water Corporation.

23. DEMED Aboriginal Corporation is responsible for the maintenance to the premises including the electrical installation for the premises. They have no records as to when the premises was built, who built it, who undertook the electrical installation and what, if any, maintenance has been undertaken to the premises prior to 2018. There are no construction or maintenance records to be found at the Northern Lands Council, West Arnhem Shire Council or the Departments of Housing or Infrastructure. Inquiries with the Federal Departments have also been unable to find records. The builder who is thought to have built the premises has no records either.

24. Records would have assisted. Firstly, it was apparent that the Power and Water connection to House 548 was poorly installed. After Rory's death Power and Water inspected other connections in Gunbalanya and found other poorly installed connections. Secondly, the failure to earth the roof and riser pole were found by DEMED to be repeated with the other houses under their care in Gunbalanya. In essence the electrical work by the builder and Power and Water was sub-standard.

Systems

25. The Power and Water Corporation had no systems to check that the connection was completed to Australian Standards or for the inspection and maintenance of the cables and connections to properties in remote communities. It was conceded during the evidence that there should have been a system for inspection and maintenance of those connections. It is likely that an inspection and maintenance regime would have prevented Rory's death. The many other infrastructure faults found within the community after his death, further emphasised the need for regular inspection and maintenance.

26. There was inspection of the Power and Water poles outside of the premises and records of them being inspected in 2018 and 2019. However, it was said that but for foliage on the service conductors or some other obvious damage it is unlikely the inspectors would have checked the service conductors.

NT WorkSafe Improvement Notices

27. On 2 December 2020 NT WorkSafe issued Improvement Notice 2020IPN00174 to the Power and Water Corporation. It required Power and Water to:

    a. Conduct a systematic inspection of electrical supply services in Gunbalanya, ensuring any safety issues were rectified; and

    b. Develop an action plan to inspect overhead electrical supply services subdivisions commissioned between 1995 and 1998 for regulated centres.

28. The reason for the second of those requirements related to Power and Water's belief that the degraded insulation was from a batch of insulated conductor wires used during that period. That was the batch from which the service conductor at Lot 548 originated.

29. The improvement notice appears to have been issued in response to inspections already carried out by Power and Water between 11 and 18 November 2020 when 279 overhead services in Gunbalanya were inspected. The inspectors found 45 defects including three further services that had degraded insulation of the service conductors and another five with installation issues. Those faulty service conductors were also from the suspect batch manufactured in 1995.

30. On 10 December 2020 Power and Water Corporation confirmed that it had complied with the direction. A program had been developed to inspect the 5007 overhead services in all 72 remote communities along with an additional 382 services installed in the regulated (urban) areas between 1995 and 1998

31. A second WorkSafe Improvement Notice on 2 December 2020 required Power and Water to:

a. Review maintenance strategies as applicable to overhead electrical supply services;

b. Rectify all safety issues identified as a result of the targeted action plan to inspect overhead electrical supply services; and

c. Conduct a review of Power and Water Corporation Standards in relation to overhead electrical supply service connections to properties, and identify potential opportunities for improvement.

32. In a letter dated 15 April 2021 Power and Water indicated they had fulfilled the directions contained in the Improvement Notice. They said that:

a. They had inspected every service wire (7,677) in the 72 remote communities and most of the 79 outstations (those where access was not restricted). Also inspected were 422 services in the regulated network (major centres) installed between 1994 and 1998. Fifty seven (0.7%) were found to have degraded insulation. Seventy nine percent of those were from the same 1995 batch. Those where conductor clearance from service clamps was insufficient were corrected but no numbers were provided.

b. Power and Water had reviewed and benchmarked maintenance practices. It was found that although the frequency was good, Power and Water's inspection practices did not include a detailed inspection of the service wire and clamps at the point of connection to the customer's residence. It was determined to adopt the Queensland practice of utilising cameras on insulated poles to inspect the top side of the conductors and connections.

c. It was noted that Power and Waters current practices were consistent with 'industry practice' except that in Queensland and a service provider in New South Wales the practice was for neutral bonds at attachment points.

d. The standard drawings for customer attachment were being amended to emphasise conductor-shaping to achieve maximum clearance.

33. It is not the first time that Power and Water have identified degraded insulation or contact between the conductors and metal parts of the structure and failure to earth the structures. On 7 November 2018 a dog was killed in Alice Springs and its owners received electric shocks in trying to save the dog after it walked onto the concrete pad of a power pole. The pole and the earth mat were energised.

34. During the course of the investigation I received a letter and attachments from a person that did not identify themselves but said they were employed by the Power and Water Corporation. The person expressed concern about the lack of preventative maintenance despite the known hazards. The person went on to describe and attach documents in relation to another four incidents. A number of them raising the issue as to lack of inspection and maintenance.

35. That letter and the attached documents were provided to Power and Water Corporation. The initial response from the Corporation executives was that they were unrelated incidents. However by the second day of the inquest it was conceded that a system of inspection and maintenance was required of all infrastructure, and Power and Water were working toward that. It was estimated that the system would be operative in all remote communities within two years.

36. I said during the course of the evidence:

> "The other thing that strikes me about systems is they only work properly when there's a recording part of the system, so people can go back and check. The system is only as good as - in my view, as good as the recording mechanisms, and there was none."[3]

[3] Transcript page 97

37. Pursuant to section 34 of the Coroners Act, I find as follows:

(1) The identity of the deceased was Brody Roy Wauchope-Dirdi, born on 8 October 2009 in Darwin in the Northern Territory.

(2) The time of death was shortly after 4.30pm on 28 October 2020. The place of death was Lot 548 Gunbalanya Community.

(3) The cause of death was the combined effects of electrical shock and jack-knife body position.

(4) The particulars required to register the death:

1. The deceased was Brody Roy Wauchope-Dirdi.

2. The deceased was of Aboriginal descent.

3. The deceased was a student.

4. The death was reported to the Coroner by John Thomas the manager of DEMED Aboriginal Corporation.

5. Forensic Pathologist, Doctor Marianne Tiemensma confirmed the cause of death.

6. The deceased's mother was Darlene Anne Wauchope and his father Kingswood Dirdi.

Comment

38. The year 1996 (assuming that to be about the year of construction) is just 25 years ago. In that year there were likely 10 houses built in Gunbalanya. It seems building approval was not required and certificates of occupancy not issued. There was no government agency that the investigating officer was able to find that held any documentation relating to the construction of that residence.

39. Power and Water said the practice was that electricity would not be connected to a premises without a Certificate of Compliance from the licenced electrician who undertook the electrical installation on the house.

However for reasons not explained, they were unable to produce such a certificate for Lot 548 Gunbalanya.

40. They were also unable to produce any document or other evidence in relation to the connection or maintenance of the service conductors and clamp over the next quarter of a century.

41. The Power and Water response made much of the failure to have the premises earthed. It was said they were entitled to rely on a Certificate of Compliance that the electrical installation was to Australian Standards. That might be a reasonable position unless it is known that earthing of properties and structures is an issue. The Specialist Electrical Services Consultant, Mr Ian Ritchie noted that in Queensland supply authorities bond the riser pole earthing point to the incoming supply protective earth/neutral (PEN) conductor. Such a practice mitigates the dangers of faults or poor installations ending in tragedy. That aspect is likely to be worthy of Power and Water's consideration given the earth faults experienced.

42. Mr Sean Bowden, the lawyer for the family provided written submissions that in part said:

> "The family notes the issues with the live roof, the degraded cable, the damaged insulation, the poor workmanship, the lack of proper earthing, the frayed power line, the lack of documentation and the general lack of maintenance of the electrical connections. These issues – all avoidable – relate to public infrastructure and the safety of the public and the inherent failures have caused the death of an innocent boy …
>
> It is the family's wish that real and identifiable reform and change come out of this tragic event by the wheels being set in motion to ensure that PWC fulfils its obligations across all of the Territory and that timely, professional and proper work is carried out by PWC to ensure that a safe and reliable electricity network is provided to all citizens of the NT. The family acknowledges the work done by PWC at Gunbalanya since the tragic incident."

43. He went on to submit that I make comprehensive recommendations on what Power and Water Corporation should do in auditing, publishing the results of their audit, the class of persons who should carry out future inspections and investigations, the timing of inspections, publication of the cost of improvements, and the adoption of a protocol for remote communities:

> "so that the results of the audit and assessment, and any other critical matters, may be broadcast and distributed in a culturally sensitive way including through interpretation and translations, interaction with elders, and by way of community meetings".

44. I do not think it is appropriate, however, that I recommend with so much specificity, how management of the Power Water Corporation should conduct their business. That is particularly so as there was very little evidence of best practice in conducting such an enterprise when dealing with so many remote communities and outstations.

Recommendations

45. I **recommend** that Power and Water Corporation ensure that all infrastructure including service conductors and clamps is subject to a system of regular inspection and maintenance and that the inspection and maintenance be recorded and audited.

46. I **recommend** that Power and Water Corporation ensure that all appropriate records are maintained in relation to its functions.

Dated this 24 day of November 2021.

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GREG CAVANAGH
TERRITORY CORONER