



# Why did they leave the vehicle?

Factors contributing to driver deaths  
in Remote Regions of Australia



Mike House  
Survival Specialist



## Tragic, Avoidable Deaths

People who become lost or stranded in the remote and arid outback areas of Australia face a potentially life threatening challenge.

Being lost or stranded out there, regardless of how harsh the conditions might be, does not guarantee your death. And yet too many have died.



***There have been 54 preventable outback deaths from dehydration or exposure in the last 25 years in Western Australia alone.***

## High Cost

Each death carries enormous cost. The deceased pay the ultimate price - the loss of life. In addition there are family, public and company costs that range into the hundreds of thousands of dollars.

With the right knowledge, a few resources and a strategy to maintain control and make sound decisions, most (if not all) of the unfortunate victims would still be alive.



## Life or Death Decisions

One of the big decisions people face when lost or stranded with a vehicle is, *"Should I stay or should I go?"*

Many who perish decide to leave the vehicle, often in extreme heat, with little or no water, and attempt to walk to help. Sometimes the nearest help is over 30km away. In the best of scenarios people are found soon after they leave the vehicle. Others manage to stagger into the nearest settlement, badly dehydrated, but alive.

All too many experience the worst-case scenario - they perish before they arrive at their goal. Often they are found with water on them, or near a water source yet they die of exposure and dehydration. The cost of such a death is enormous, both in concrete dollar terms and the immeasurable cost of any loss of life. These costs are borne by the general public, the family of the deceased, and in the case of professional deaths, by the company who employed the deceased.

These are avoidable tragedies and therefore avoidable costs. It is imperative that as much as possible is done to prevent such unnecessary loss of life, and resulting cost.

## Why would they leave the vehicle?

The question echoes through Coronial courts, the media, workplace and social conversation. There does not appear to be a logical answer to the question.

From the safety of your home, office or a functioning vehicle, it's hard to imagine what would make someone think that leaving the vehicle was a good idea. It becomes more baffling when in some circumstances the vehicle they left was well stocked with an ample supply of pure drinking water. It's difficult to understand, because the decision does not seem logical.

It would also be easy to assume that tourists represent the majority of people who perish as a result of being lost or stranded. Few countries in the world have the same level of isolation as Australia. Many have closely spaced towns or villages. Water sources and supply are rarely an issue.



For someone unfamiliar with the ravages of our climate and the remote isolation of the outback, it's conceivable that the decision to leave a vehicle is based on the expectation that it will only be a short walk to assistance and resources.

But tourists are not the only ones who die. Many who perish are experienced remote travellers or workers, including Truck Drivers, Prospectors, Miners, and Station Staff.

Some were even born and brought up in the area they perished - they literally had a life time of experience in the area. The assumption is they would know better. They are experienced outback workers, they know the risks. It wouldn't happen to them.

### ***So why would they leave the vehicle...***



At the actual point someone realises they are lost or stranded there is an enormous risk that the emotional side of their brain will overrule the more rational side of their brain.

It's not logical or thought through, and unless you have experienced the reactive stress of such a situation, it's difficult to comprehend.

***The reason that a decision to leave the vehicle doesn't make sense to an external observer is that it is not really a decision...  
It's a reaction.***

Picture yourself in the scenario... You are lost or stranded in a remote area. It dawns on you that you won't make it to your destination today. Your attempts to sort the problem out leave you convinced that you are stuck. Your body fills with adrenaline and cortisol. The primal mechanism of Fight or Flight is activated. You are primed for action. In this state it is impossible to sit still. There's a fine line between control and out of control. Armed with sound knowledge and some awareness of what is happening to you, this energy can be channeled to great effect. You can get lots done. However, in the absence of knowledge and a plan, blind action is more likely. Often, blind action means leaving the vehicle in haste - without a plan and without adequate resources.

You are now out of control, burning energy and making irrational decisions. If you are also mildly dehydrated then your ability to think rationally is further compromised. That's if you are just stranded.

Being lost adds another layer. Separation from other people, and familiar environments ramps up your fear. In times gone by being unable to find your tribe or village would have been a certain death sentence. Being lost activates a frantic search for the familiar. It becomes more and more frantic as each decision takes you into less familiar territory. In many cases this results in you running, or driving faster to get "there" even though you have no idea where "there" is. There are other layers; If you are out there for work then there's a purpose you are meant to fulfill, deliver a load, grade the road, find the ore body, or relieve the last shift. It's likely that your desire to complete the job on time will add another layer of pressure. Perhaps your ego kicks in.

### **Dehydration**

2% to 3% dehydrated is enough to cause significant problems, such as reducing your ability to think rationally by up to 25% and a headache. For a 80kg person that's a loss of just 1.6 litres of water. On a hot day it's possible to lose that much in less than 2 hours of moderate activity. Attempting heavy work like trying to unbog a vehicle could result in the loss of that water in half an hour or less.

### ***I never get lost, what about my reputation?***

These factors assault your mind. In a blur of emotion and reaction your rational mind is overpowered and you act. You leave the vehicle.

In that light it's easy to understand why, but it is no less tragic when people perish as a result.

In the aftermath of such unfortunate deaths, coronial courts and Worksafe investigations are activated. There is a need to establish the cause of death, and to attribute responsibility for it if possible. There is also a need to establish what if anything can be done to reduce the likelihood of such a death occurring in the future. Often the response includes a raft of suggested safety measures all aimed at reducing the likelihood of future incidents and deaths.

Most recommendations focus around company responsibilities, technological solutions (such as personal beacons and satellite phones), and increasing emphasis on tracking people's whereabouts and status.

### ***While these are all valid and necessary responses, they will not prevent deaths on their own especially in remote areas.***

In some parts of the Australian outback, even with a highly efficient tracking and communication system, it could take up to 24 to 72 hours to mobilise and effect a rescue. The majority of people who perish as a result of being lost or stranded die within 24 hours to 48 hours. If people make it past 72 hours, usually they are able to hang on until help arrives, or they achieve "self rescue".

Clearly, to avoid deaths under these circumstances, people need the ability to manage their emotional and psychological state, avoiding the fight or flight response. In addition they need clear strategies - actions which will increase their chances of being found alive. For the majority of people the only way to achieve this is through comprehensive survival training.



# Case Study

## Anthony Bradanovich, Professional Truck Driver

### Summary

Anthony was stranded between 2:00pm and 3:30pm on Saturday 22 January 2011.  
He was found dead at 4:41pm on Sunday 23 January 2011  
Approximately 24hrs had elapsed between the time he was stranded and the time he died.

### Conditions at the time:

44° C  
Dry

### Timeline

#### Friday 21 January 2011

- Friday Morning Anthony commenced work with the transport company.
- Early Afternoon He picked up a Prime Mover from a depot in Wangara with instructions to deliver to the Jundee Mine Site near Wiluna.
- 6.30pm Anthony picked up two trailers from a depot at Perth International Airport.
- 11:00pm He arrived in Wubin and collected a third trailer, discussed directions with another driver.

#### Saturday 22 January 2011

- About 1:00am Anthony left Wubin heading for the Jundee Mine site, driving the Prime Mover and its three trailers.
- 9:49am Anthony rang his parents and spoke to them for the last time. He thought he had missed a turn off, and may have to turn around.
- 2:00pm He was seen by a local man in Wiluna.
- 3.35pm A travelling family noticed the bogged truck around 55 km from Wiluna. The truck was unattended and the family assumed the driver had been picked up.

#### Sunday 23 January 2011

- 4.41pm The police are notified that a man had been found about 23 km out of Wiluna. The man was later identified as Anthony Bradanovich. He was found lying at the base of a dam wall, about 300m from water. He had walked approximately 30Km from his truck.
- 6.35pm Anthony Bradanovich was transported to hospital and pronounced dead

***“For reasons not apparent on the evidence, the deceased did not remain with his vehicle...”***

***It is appreciated that there are many commercial vehicles traversing the countryside without incident. Nevertheless, the response to emergency breakdowns cannot be dependent on passing traffic or the capacity to use such devices as mobile phones with limited coverage. Complacency is not the appropriate response when travelling in isolated, if not remote, areas.”***

## The High Cost of Death

The cost of a fatality due to someone being lost or stranded is difficult to estimate. There are many direct and concrete costs to business, families and the general public which are either unquantifiable or extremely difficult to estimate accurately. In addition, there are numerous human costs which are impossible to ascribe a dollar figure to. The estimates below are conservative and based on known costs.

### Costs to Business:

Internal resolution of the incident (includes internal documentation, investigation replacing and training staff, lost productivity). <sup>1</sup>	\$4,500
Worksafe fine and court costs. (NB max penalty allowed is \$500k) <sup>2</sup>	\$55,000 – 150,000
Vehicle recovery. <sup>3</sup>	\$10,000
Costs associated with non completion of original task.	unquantifiable
Costs associated with attending to Worksafe, police and coronial investigations/hearings, and subsequent implementation of recommendations.	unquantifiable
Costs associated with loss of standing/reputation with clients, employees and public, dealing with family of deceased and media.	unquantifiable
Costs of increased insurance premiums.	unquantifiable
<b>TOTAL</b>	<b>\$69,500 – 164,000</b>

### Costs to Family:

Loss of a loved one.	unquantifiable
Funeral Costs. <sup>4</sup>	\$4,000 – 15,000
Lost income. <sup>5</sup>	\$510,000
Costs associated with attending to Worksafe, police and coronial investigations/hearings, and media attention.	unquantifiable
<b>TOTAL</b>	<b>\$514,000 – 525,000</b>

### Costs to Public:

WA Police Search and Rescue Coordination. (Does not include police resources involved in the search itself) <sup>6</sup>	\$9200
Rescue Helicopter Costs. <sup>7</sup>	\$15,800
SES Volunteer time. <sup>8</sup>	98 hours
Coronial hearing. <sup>9</sup>	\$4500
Worksafe Investigation	unquantifiable
<b>TOTAL</b>	<b>\$29,500</b>

<b>GRAND TOTAL</b>	<b>\$613,000 - 718,500</b>
--------------------	----------------------------

<sup>1</sup> Based on non fatal incident <http://www.deir.qld.gov.au/workplace/resources/pdfs/ind-cost-calc-transport.pdf>

<sup>2</sup> Based on Worksafe prosecution figures <http://prosecutions.commerce.wa.gov.au/> lower range for an incident where staff were lost north of Kalgoorlie, Upper range based on a fatal incident.

<sup>3</sup> Based on actual recovery costs of private 4x4 vehicle from Tallawana track 2003.

<sup>4</sup> Australian Securities Commission <https://www.moneysmart.gov.au/media/131954/paying-for-funerals.pdf>

<sup>5</sup> Based on 10 years of the Australian average wage. Actual figure would depend on wage level and age at death.

<sup>6</sup> Based on average cost per hour of SAR coordination stated in WA Police Annual Report 2011 – 2012 and 72 hour search duration.

<sup>7</sup> Based on average mission (flight time) of 1.15 hours and average hourly mission cost of \$11,691 quoted in [http://www.dfes.wa.gov.au/publications/annualreport20062007/search\\_rescue.pdf](http://www.dfes.wa.gov.au/publications/annualreport20062007/search_rescue.pdf) plus CPI.

<sup>8</sup> Based on SES volunteer time quoted in [http://www.dfes.wa.gov.au/publications/annualreport20062007/search\\_rescue.pdf](http://www.dfes.wa.gov.au/publications/annualreport20062007/search_rescue.pdf).

<sup>9</sup> Based on average cost of Coronial Inquest as stated in WA Attorney General's Annual Report 2011 – 2012.



# Practical Strategies for Survival if Lost or Stranded.

## Pre departure

**Invest** in high quality survival training which includes how to make a survival plan and deal with a variety of situations.

**Tell someone** reliable where you are going and when you will be back.

Ensure the vehicle has **enough water** on board for at least 3 days. Work on a minimum of 2 litres per person per day. 5 litres per person per day allows for easier management and a moderate water allowance for hygiene considerations as well.

Pack something to **light a fire** with, or a small stove and capacity to brew a cup of tea or coffee. If lost or stranded, making a camp fire and a cuppa is a quick and easy way to exert some control over the situation and to put you back in your comfort zone. It also reduces the emotional pressure of the situation and allows time to think and plan properly, rather than just reacting to the situation.

Pack a **Personal Locator Beacon and Satellite Phone** if travelling in remote areas, and especially if you are responsible for the safety of others travelling with you.

Think about how you will **manage your emotions** and fear if lost or stranded.

## When Lost or Stranded

**Signal** If you are vehicle based the vehicle itself is a great signal, but only if people know it's in trouble. Lifting the hood is an instant message to anyone who sees the vehicle that you are needing help. Even if there is nothing wrong with the vehicle, and you are simply lost, this simple strategy alone would have prevented a number of deaths where a vehicle was ignored because it looked as if it was just parked.

**Water Management** If it is hot, you can lose a lot of water sweating, and even breathing. Avoid activity in the heat of the day. Stay in the shade, or in or under the vehicle, whichever is cooler. Drink water about a cupful at a time. Sipping does not prevent dehydration. The loss of even 1 litre of body fluid begins to effect your ability to think clearly, so staying hydrated is important. Rationing water by sipping or not drinking does not work, many people have perished from dehydration with water on them.

**Making Water** If the vehicle does not have water on board, but is still functional, start the engine, crank up the air-con and catch the water from the outlet. It comes out under the vehicle, usually near the passenger's feet. You can sit in the cool, and gather a significant amount of drinking water. You can also collect dew off the vehicle in the early morning by wiping it off with a cloth and wringing it out. Your shirt will do. The fluids in radiators and windscreen washers are not pure water and are usually toxic, don't drink them.

Food and Alcohol both increase your water consumption. If water is tight, **don't eat and don't drink alcohol.**

**Should I stay or should I go?** The vehicle is much easier to find than a person on the ground. Most of the time the best course of action is to stay with the vehicle. If you leave then do so in a controlled and planned manner. Leave an obvious note including a description of yourself, the date and time, your condition, and what you plan to do. It's also useful to include how someone finding the note can best help you. Consider that a good average walking speed on a well-formed track is 3km per hour, not counting breaks. 30km is a 10hr trip. You can easily lose a litre or more of sweat in an hour on a hot day, so plan how much water you will carry and walk in the cool of the day. Treat walking out as a last resort.



# Mike House is one of Australia's leading survival instructors



Mike House has spent the last 15 years working with groups as diverse as exploration geologists, national parks and station staff, remote communities, multinational corporations, and television documentary crews on what has been described as the *“world’s most arduous survival exercise outside the military”* (National Geographic America 1999).

Mike has personally survived several life threatening survival situations on the ocean, in tropical jungles, raging white water, and extended sea kayak journeys.

As a gift to himself, Mike undertook a 12 day solo survival walk in one of Australia’s most hostile environments. Taking only 2 litres of water, a pocket sized survival kit and the clothes he was wearing, Mike put his survival skills to the test sourcing all his food and water off the land.

He has traveled extensively in isolated and remote areas by foot, kayak, bicycle, boat, 4x4 and truck. Many of these adventures have taken him far from the beaten track where self reliance, a calm disposition and high skill level make the difference between success and failure.

Having observed himself and countless others in extremes of deprivation and duress, Mike is uniquely positioned to offer profound and practical insight into effective and sustainable survival strategies for extreme situations.



*Mike instructing in the Pilbara*

## Testimonials

*"I met Mike many years ago on a survival program run by a mutual acquaintance, and since then we have worked together several times to further the bush and survival skills of many who were willing to listen and learn. Mike's easy manner, calm approach and proficiency in all aspects of his craft make for an enjoyable learning experience for those with the good fortune to expose their mind to his considerable depth of knowledge. Publications on bushcraft and survival are filled with drawings and advice on the subject. Most only work in their country of origin and need to be modified for use elsewhere. My lingering impression of Mike is his refusal to subject others to skills and techniques that he is not already the master of and in the environment where they are to be employed."*

**Graham Brammer, Former Senior Survival Instructor at The Australian SAS Regiment; and Former Officer Commanding at The Australian Army Survival School**

*"It was an excellent week and there is substantial food for thought as I go through a personal debrief! Thank you and the team again for all of your clever planning and insight."*

**Participant Advanced Survival Course, Pilbara, 2013.**

*"Thanks again to you and the team for a course that will be remembered for my lifetime, your knowledge of the land, tracking skills and general know how was humbling to all us that participated. I could speak for the group and say you ran a very professional and thorough course on survival that would be rivalled by none. I will recommend you guys to all I know."*

**Participant Advanced Survival Course, Pilbara, 2013.**

*"I rely on Mike's expertise when it comes to tackling my work. His change management skills consistently help me problem-solve in a media environment that is changing at broadband speed. Whatever the environment - outback track or commercial challenge - Mike helps me solve problems with clarity and purpose."*

**Jonathan Harley, Supervising Producer, 60 Minutes**

---

## References

**Tavener, K (Coroner)**, 13 November 2012, *"Inquest into the death of Anthony John BRADANOVICH"*, WA Coroner's Court.

**Cooper, B.** 2012, *"Outback Survival"*, Hachette Australia.

**Syrotuck, W.** 2000, *"Analysis of Lost Person Behavior"*, Barkleigh Productions Inc.

**Gonzales, L.** 2004, *"Deep Survival: Who Lives, Who Dies, and Why"*, W. W. Norton & Company.

**Wise, J.** 2009, *"Extreme Fear: The Science of Your Mind in Danger"*, Palgrave Macmillan.

<http://www.miningaustralia.com.au/news/no-one-to-blame-in-mine-truck-driver-death>

**Johnson, C. et al** 2008, *"Oxford Handbook of Expedition and Wilderness Medicine"*, Oxford Uni Press.

**Cannon, W.B, (M.D.)** 1932 *"The Wisdom of the Body"*, W.W. Norton and Company.

**Yerkes RM, Dodson JD** (1908). *"The relation of strength of stimulus to rapidity of habit-formation"*. Journal of Comparative Neurology and Psychology 18: 459–482.





**M: 0423 193 196**  
**E: [mike@mikehouse.com.au](mailto:mike@mikehouse.com.au)**  
**W: [www.mikehouse.com.au](http://www.mikehouse.com.au)**

You are welcome to use and distribute this resource as widely as you like provided the following conditions are observed

1. It is kept in it's original format.
2. The source is acknowledged.
3. It is not distribnuted for commercial gain.

We reserve the right to print and/or sell this resource at our discretion.