

*Presented at the FIG Working Week 2016,
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Cyclone Tracy Disaster Darwin, Northern Territory, Australia. December 24-25 1974

**The Disaster Effect and
Lessons Learnt**



- Location: Darwin, Australia
- Population: 47,000
- Timing: Christmas Eve
1974
- Event: Cyclone Imminent

- Location of Darwin



Overview of Darwin History prior to Tracy:

- Major Cyclones had been experienced in January 1897 and March 1937 with significant loss of life and property.
- Darwin was also heavily bombarded by Japanese planes in World War 2 from 1941 to 1942.
- The **Bombing of Darwin**, also known as the **Battle of Darwin**, on 19 February 1942 was the largest single attack ever mounted by a foreign power on Australia.

Overview of Darwin History prior to Tracy :

- In the 20 years leading up to Cyclone Tracy, the city had undergone a period of rapid expansion.
- Darwin was a remote, dynamic, yet laconic small City with a generally young population.
- The majority of employment being provided by Public Service jobs.
- Cyclone Selma impacted Darwin on 9th December even though it did not reach Darwin – 12 inches of rain fell in 12 hours.

Resident Attitudes:

- Journalist Bill Bunbury interviewed the residents of Darwin some time later and recorded the experiences of the survivors of the cyclone in his book *Cyclone Tracy, picking up the pieces*.

Resident Dawn Lawrie, a 1971 independent candidate for the electorate of [Nightcliff](#), told him:

" We'd had a cyclone warning only 10 days before Tracy [that another cyclone] was coming, it was coming, and it never came. So when we started hearing about Tracy we were all a little blasé. (Bunbury, p. 20)

Another resident, Barbara Langkrens, said:

" And you started to almost think that it would never happen to Darwin even though we had cyclone warnings on the radio all the time ... most of the people who had lived here for quite some time didn't really believe the warnings. (Bunbury, p. 21)

Images of the Cyclone Tracy Disaster

- Cyclone Tracy Destruction



- Cyclone Tracy Destruction



- Cyclone Tracy Destruction



- Cyclone Tracy Destruction:



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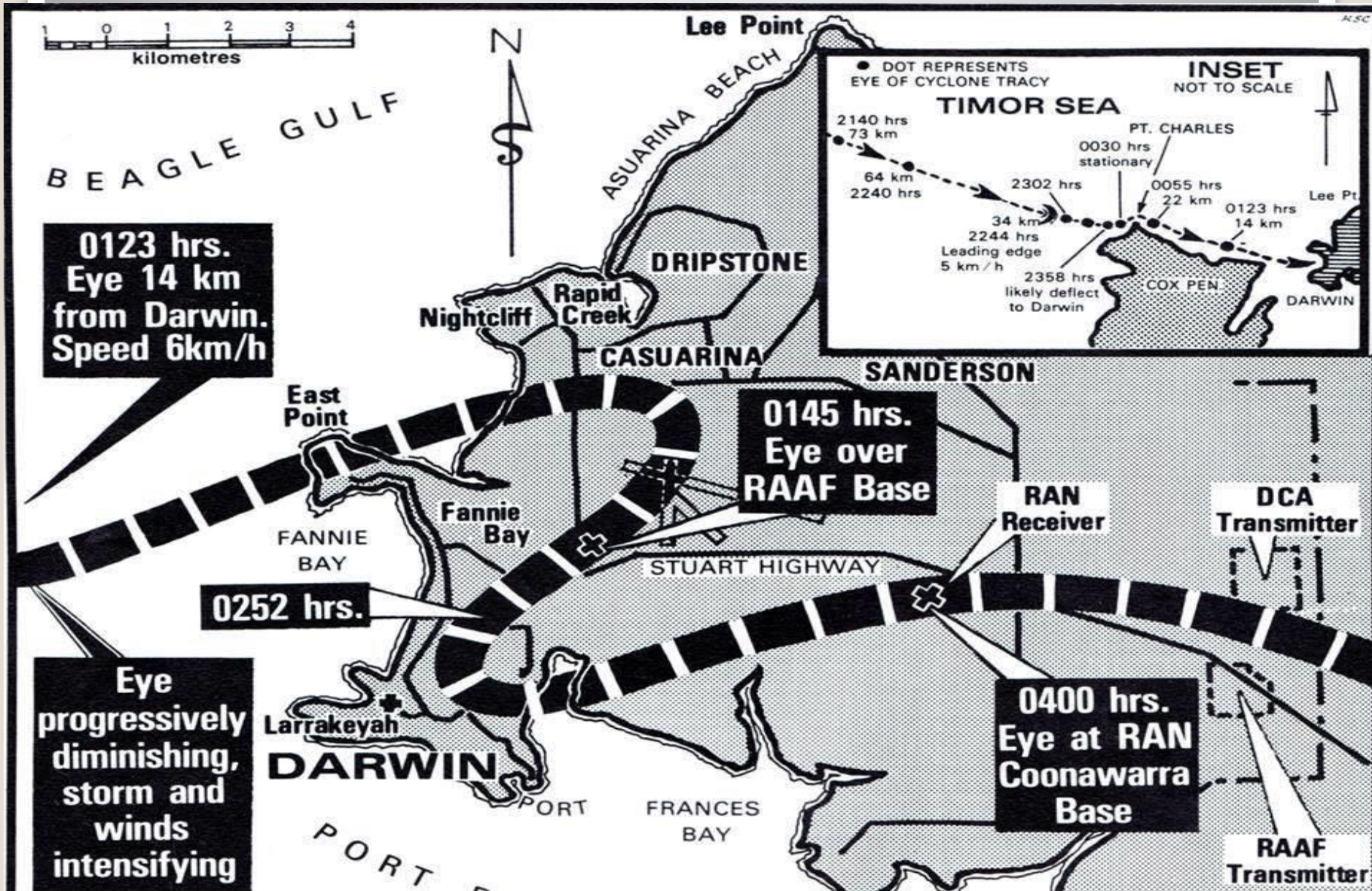
- Cyclone Tracy Destruction:



- Cyclone Tracy Destruction:



- Pathway of the Eye of Cyclone Tracy



- On Christmas Day the Eye passed over every major residential area traversing the Northern Suburbs, the inner areas of Darwin, then the Industrial areas and Rural living areas.
- Tracy left more than 41,000 out of the 47,000 inhabitants of the city homeless prior to landfall and required the evacuation of over 30,000 people.

- Darwin Airport – The Evacuation



The Evacuation:

- Between 26 to 31 December, a total of 35,362 people were evacuated from Darwin.
- By 31 December, only 10,638 people (mostly men who were required to help clean up the city) remained in Darwin.

- Tracy killed 71 people, caused A\$837 million in damage (1974 dollars), or approximately A\$4.45 billion (2014 dollars).
- It destroyed more than 70 percent of Darwin's buildings, including 80 percent of houses.

The Role of the Valuer General prior to Cyclone Tracy:

- Provide Valuation Services to the Commonwealth
- Value Government Houses for purchase
- Rental Valuations
- Provide general property advice as required to the Commonwealth (The Australian Government)

The Role of the Valuer General after to Cyclone Tracy:

- Provide Valuation Services to the Commonwealth
- Provide similar services but now specifically to the situation including:
 1. Value all privately owned property (to assist in the assessment of promised Government rebates for uninsured losses).
 2. Valuations to be as at 24th December (prior to Cyclone) and then as inspected post cyclone to assess the difference.

Lessons learnt:

- Prior to Cyclone Tracy there was a change to individual property files incorporating land details, building plans, detailed descriptions, photographs and records of previous work carried out by the VG office
- These records were packed up on 9th January 1975 and removed to Adelaide for VGV to carry out the required work.
- They became an invaluable asset for later tasks.

Lessons learnt:

- Due to the total level of disaster and evacuation, existing staff were not available for any immediate duties with some residual loss of availability due to emotional stress.
- The remote location of Darwin to other City Centres around Australia combined with the damage to existing facilities resulted in a complete break-down of communications.

The Process of these Valuations:

1. Inspection team of 16 valuers sent from Adelaide to Darwin in February 1975 to inspect all privately owned residential properties.
2. Where possible measurements were made, photos taken and current condition generally noted and described.
3. Accommodation was only available on the Patris, a ship brought to Darwin to provide emergency assistance and provisions.
4. Limited vehicles were available which required valuers to be dropped off with inspections carried out on foot in most suburbs.

Actions taken after Cyclone Tracy by Reconstruction :

- Armed forces inserted into Darwin area for instant relief and assistance with the clean-up.
- Significant clearing of badly damaged and un-occupied houses.
- A survey of all residential property rating each property as follows:
 - 100% damaged,
 - 75% damaged,
 - 50% damaged,
 - 25% damaged,
 - "Write off"

Nb This work was done by untrained staff.

Disaster Planning:

- Despite previous extreme Cyclones having impacted Darwin, no provision had been made for significant protection of staff or records.
- There were no computers and all records were in paper form, with no back up copies available.
- Even projecting forward to computer and electronic records such was the extent of the Cyclone damage (eg loss of power and other infrastructure damage) that records remote to Darwin may have been required.
- Without doubt our most valuable source were the historical property records recovered from the office 2 weeks after Cyclone Tracy.
- The loss and unavailability of the local valuers suggests that remote resourcing is also needed to be considered in any disaster planning.

- East Timor (Timor Leste)
- As the late John Leigh said, when he arrived in Dili in December 2002 he “found every piece of information gone. There were no civic records left at all – no land titles, no town planning, no maps showing the layout of water and power supplies ... all destroyed”
- Ref: Focus, Spring 2003. http://dfat.gov.au/about-us/publications/Documents/focus_spring03_13.pdf
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- This is the catch-22 of valuation in the developing world: To develop, the developing world needs properly functioning property markets. To have properly functioning property markets, you need to develop (McDermott 2012).

- Consequently, it is the catch-22 of monetary valuations in the context of disaster relief: to provide transparent and accountable valuations, the developing world needs properly functioning property markets. To have properly functioning property markets, you need to develop.

- These are matters under consideration in this conference.
- Your contributions are most welcome.
- **THANK YOU!!!!**