



Vestey's Water Tank - Teacher's Notes

Repurposed resource

The large concrete building known as 'The Tank' at Darwin High School has a very interesting history. Originally built to hold water for a meatworks, it has been repurposed to become the school gymnasium and an enclosed courtyard.



'The Tank' - Darwin High School, July 2019

From 1914-1917, the North Australia Meat Company, owned by the Vestey family, built a meat processing works on the large piece of land where the Bullocky Point Education Precinct is now located. It was determined that the meatworks would require a large amount of freshwater to operate so two large concrete tanks were included in the design.

The two massive rectangular concrete water tanks were some of the first structures in Australia built with the relatively new technique of using metal rods to reinforce the concrete. They were the largest structures of





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this kind in the Southern Hemisphere for quite some time. The tanks could hold more than 18 million litres of water. The dimensions of the two tanks, sitting side-by-side with a common wall in the centre, are approximately 80 metres by 40 metres. The outer walls are about 6.5 metres high and up to 450 millimetres thick. The sand and gravel used to make the concrete and construct the tanks was made by crushing rocks found on site. The construction workers also used clay in the area to make bricks for other buildings on site.

There are reports of the volcanic rock pumice being used to line the large freezer chiller building which was also on site. Pumice is an interesting rock ejected during pyroclastic eruptions of volcanoes. It is lightweight and porous due to gas bubbles being trapped in the rapidly cooling lava ejected under pressure from volcanoes. These bubbles also give pumice the ability to float! It is not clear where the pumice used at the meatworks was sourced from, but it is not likely to have been found naturally occurring in Darwin due to the absence of volcanoes! It may have been imported from somewhere like Indonesia or even washed up on the shore in Darwin, floating across the sea from active volcanoes to the north. Testing the heat insulating abilities of pumice would be an interesting investigation for students to try.



View of Vestey's meat works with water tanks in the foreground.

(Image credit:
Northern Territory
Library, PH0274/0663
<https://hdl.handle.net/10070/29557>)





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When the meat works was opened in 1917, the massive reinforced concrete water tanks were meant to be filled by the six bores drilled at the site to satisfy the large demands for fresh water for the cattle, employees and the meat processing and freezing operation. However, two of the bores failed and additional water had to be sourced from a nearby spring and a desalination plant built about a kilometre offshore. The desalination plant was believed to have been one of the first in Australia. Seawater was also used for washing down parts of the plant.



Aerial view of Vestey's meat works 1944 - water tanks are the dark rectangles in the centre of the photograph. (Image credit: Northern Territory Library, PH0189/0001 <https://hdl.handle.net/10070/11582>)

The meatworks only operated at full capacity for about three years before the company abandoned its operations. Problems included the initial plant construction being overbudget, falling demand for beef and ongoing labour issues such as during the Darwin Rebellion of 1918-19. The plant could not process enough cattle to remain profitable, so it did not open for the 1920 and 1921 seasons before being permanently closed in 1925. Around 460 men were employed at the plant, a significant proportion of the then small population of Darwin. The closure resulted in many families leaving Darwin with significant flow on effects.





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However, the tanks kept standing, remaining a useful storage facility for the precious resource of fresh water. Whilst the water was no longer pumped in from the now defunct desalination plant or nearby spring, the newly built Manton Dam ensured there was a good supply of water in the 1930's as the population of Darwin grew. As new water sources were found, the tanks were used less and less to supplement Darwin water supply but were kept as an emergency backup source. The tanks also became a popular spot for Darwin locals to go for a cooling swim, even though this was strictly against the law.

During World War II, the abandoned meatworks buildings were used by the Australian military as barracks and to store equipment. The tanks only sustained minor damage during the many Japanese bombing raids of Darwin in 1942-43. It was thought the Japanese could possibly invade Darwin, so the tanks were wired with explosives to deny any invading armies the large store of fresh water.

After the war, the remaining meatworks buildings fell into disrepair and were demolished by 1957. The tanks remained. The surrounding land was split into lots and it was decided to build the Darwin High School on the site. The school opened in 1963 and not long after students started lessons, a large earthquake struck off the coast of the Northern Territory in the Banda Sea. The earthquake was felt in Darwin and students on the second floor of the high school reported seeing water in the large tanks sloshing from side to side. As years passed, there was some concern that the tanks may not maintain their structural integrity if a large earthquake were to strike (a plausible possibility) so it was decided to drain the water in 1982. The huge volume of water released ran downhill and washed away the newly prepared foundations at the building site for the museum which had to be redone!





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Darwin High School, Dec. 1982. Water tanks are in top left corner, still containing water. (Image credit: Northern Territory Library, PH0136/0131 <https://hdl.handle.net/10070/70443>)

Whilst some argued the now empty tanks served no purpose and should be knocked down, the idea was formulated to repurpose the tanks for the school to use. The eastern tank had a steel-trussed roof added and access doors cut into the thick walls so it could be used as the bones of the school gymnasium. The thick concrete walls provide excellent insulation against the Darwin heat. The western tank was transformed into an enclosed grassed courtyard by cutting out some sections of the walls.

Once the transformation was completed in 1987, the gym became the largest indoor venue in Darwin and was used for many non-school social events before other venues were built. The important part the water tanks played in Darwin history led to the structure being heritage listed in 2006. The story of 'The Tank' is certainly a unique and fascinating insight into the history of Darwin.

You can use this local historical information to complement the fun, hands-on activities all about the precious resource of water found in the [PALMS Year 2 - Earth's Resources booklet](#). There is a range of activities to try on





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topics such as where you can find water above and underground, water treatment and how to save water.

This information may also be used when discussing changes in the landscape through activities found in the [PALMS 1 - Local Environments & Patterns on Earth booklet](#).

References:

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