Local Heritage Places

Heritage Citation

Underground Saltwater Reservoir (former)

Key details

Addresses	Corner Wickham Street, Spring Hill, Queensland 4000
Type of place	Dam / reservoir
Period	World War I 1914-1918
Geolocation	-27.462133 153.021174
Key dates	Local Heritage Place Since — 1 December 2017 Date of Citation — April 2015
Construction	Structure
Criterion for listing	(A) Historical; (B) Rarity; (D) Representative

The saltwater reservoir, located beneath the traffic island on the intersection of Wickham Terrace and Leichhardt Street, began storing river water in 1916. The scheme was an initiative of the Brisbane Municipal Council in an effort to provide a reliable water-source for civic sanitation services such as drain flushing, street watering and public bath water. A series of mains were constructed along several key roads where hydrants and standpipes to fill water carts were erected. The scheme ended in the early 1930s and in the 1960s the reservoir was converted to an electrical substation.

History

Beneath the traffic island on the corner of Wickham Terrace and Leichhardt Street is a deep reservoir. Constructed of reinforced concrete, the reservoir was designed to hold a large quantity of salt water.

From as early as the 1870s, the Brisbane Municipal Council had deep concerns about the cleanliness of the inner-city suburbs, in particular Spring Hill. Most houses in Spring Hill had no bathrooms, let alone running water, and bathing in the river outside swimming enclosures was hazardous and illegal. The narrow, crowded and undrained streets of Spring Hill were regarded by local authorities as dangerously unhygienic following an outbreak of typhoid in the 1880s. The Spring Hill Baths were opened in 1886 as a means of alleviating this problem. The water from the baths was emptied at the end of each day into the Water Street drain, thus flushing the contents away. The other bath established in the vicinity was the Wickham Street Baths in Fortitude Valley. Concerns for the cleanliness of drains, gutters and the streets were also voiced at this time.

Triggered by a period of drought conditions, by the turn of the century, the Council began to discuss the possibility of introducing a saltwater system to supply clean water to the baths, as well as for drain flushing and street watering. This scheme was authorised in 1910 and would involve “the construction of a reservoir at the junction of Wickham Terrace and Leichhardt Street, and the laying of a rising main from the tramways powerhouse thereto, and the distributing mains therefrom to various parts of the city” (The Brisbane Courier, 27 September 1910, p5). Debate continued until 1911, when plans for the new water system were drawn. It was reported in September 1911 “the plans of this reservoir, which would probably have the capacity of 276,000 gallons, have been in course of preparation for some time” (The Brisbane Courier, 11 September 1911, p7). It was believed the new system would considerably lessen the costs imposed on the Council by the Metropolitan Water Supply and Sewerage Board.

In 1911, the Mayor reported the details of the scheme:

The works involved are, briefly, the construction of a covered concrete reservoir with a capacity for 276,000 gallons at the junction of Wickham Terrace and Leichhardt Street, the laying of a rising main from the Tramways Power House to the reservoir to the two City Baths, and to various parts of the City where standpipes will be located for the supply of water to the street watering vehicles. The distributing mains will also be furnished with a hydrant about every five chains, for gully flushing. [1]

The report goes on to state that the benefits of the new system would be the supply of ample amounts of clean saltwater to the baths. The use of saltwater for street purposes, including dust laying for unpaved streets, was believed to be more effective than fresh water. It was also stated that saltwater used to flush drains and channels helped to destroy germs.

In November 1915 a report by the Works Committee outlined the details of how the system would work. The new underground reservoir “should be supplied with water from the river by a turbine pump installed on the river bank near the south-western end of Turbot Street. From there a 9 inch pumping main would be carried along Turbot Street, Upper Albert Street and Wickham Terrace, to its intersection at Leichhardt Street, where it was proposed to locate the reservoir” [2]. It was estimated the reservoir had the capacity to hold 650 gallons per minute.

In early 1916 the saltwater system was under construction and by 1917 was in use. An underground main stretched from the river beside Victoria Bridge up to Leichhardt Street through which the river water was pumped. Various mains then ran from the reservoirs. For example, one of the longest ran from Leichhardt Street down Boundary Street to Ann Street, along Wickham Street to Breakfast Creek Road, “Arthur Street and Wickham Street Baths have been connected to the salt water mains, as well as a bath built by the Ithaca Town Council” (Brisbane City Council Minutes, Feb-Jan 1916, p119). Installed throughout the area were a series of hydrants from which the salt water could be tapped. Additionally, a series of standpipes were installed which provided the water-carrying vehicles, tasked with washing the streets, an easy means of accessing the water.

The saltwater scheme ran efficiently for almost a decade until problems began to emerge. In 1925 the Lord Mayor brought to the attention of the Council the unaccounted costs resulting from using saltwater to clean the streets. He stated that only £1000 per year was saved by using saltwater over fresh water. This was compared to the unforseen costs accruing due to the damage caused by saltwater corroding the tramlines and the undercarriages of vehicles:

The Chief Engineer of the Tramway Trust states that considerable damage is done to the lines and rolling stock…which he estimates between £2000 and £3000 per annum. Further, it is generally recognised that the saltwater has an injurious effect upon motor vehicles and it is estimated that, at a very low computation, the damage to motor vehicles is at least £25,000 per annum.[3]

In an era when the car was becoming increasingly popular and affordable, this was a major issue for the Council. Within a few months street watering and the flushing returned to using fresh water supplied by the Water and Sewerage Board.

Over next few years the hydrants were removed after requests were made by the Metropolitan Fire Brigades Board insisting “the two sets of plugs lead to confusion”[4]. The standpipes also were removed. Only one of these remains, and is located on Wickham Terrace close to the Windmill.

Although the supply of saltwater for street washing ceased, the reservoirs continued to supply the baths throughout the 1920s. As the Great Depression hit in 1929, Council discussions began in relation to the cost benefits of using the saltwater system for the baths. After a series of inquiries had been made over several months, the Lord Mayor ordered the use of fresh water rather than saltwater in the baths “a reduction of expenditure to enable the striking of a lower rate the use of fresh water instead of salt water in baths to save about £1400 or £1500 a year”[5]. Further to this, the chief engineer of the Water Supply and Sewerage Department of the Council declared the existing saltwater mains were in need of replacement and the cost to do this would be equal to the expenditure needed to connect the baths to fresh water mains. There were also grave concerns with the use of the river water which had become increasingly unclean. When an outbreak of Meningitis was linked directly back to the water in the baths by the Health Department swift action was taken to change the water to fresh. Once the fresh water had filled the baths a large amount of pure salt was added to it, ensuring the water’s safety.

Consequently, the saltwater reservoir was decommissioned and for many years was left empty. In the late 1960s the Brisbane City Council Electricity Department converted the space into a substation, Substation No.194. In 1977 it was transferred to the South East Queensland Electricity Board (SEQEB). The site continued to be used by Energex until 2016.

Description

The saltwater reservoir is a large, subterranean cavern situated under the intersection of Leichhardt Street and Wickham Terrace, Spring Hill. The reservoir is concrete with a series of concrete arches and columns. The reservoir is accessed by a manhole located in the triangular road island with a set of steps leading into the reservoir.

Statement of significance

Relevant assessment criteria

This is a place of local heritage significance and meets one or more of the local heritage criteria under the Heritage planning scheme policy of the *Brisbane City Plan 2014.* It is significant because:

Historical

CRITERION A

The place is important in demonstrating the evolution or pattern of the city's or local area's history

as a concrete saltwater reservoir constructed between 1916 and 1917, it provides evidence of the Brisbane City Council's scheme to maintain streets and supply clean water to public baths.

Rarity

CRITERION B

The place demonstrates rare, uncommon or endangered aspects of the city's or local area's cultural heritage

as an important and intact relic of Brisbane's saltwater reticulation system.

Representative

CRITERION D

The place is important in demonstrating the principal characteristics of a particular class or classes of cultural places

as an intact early twentieth-century concrete saltwater reservoir.

References

1. *Mayor's Report,* Brisbane Municipal Council, 1911

2. *The Brisbane Courier,* 23 November 1915, p4
3. *Brisbane City Council Minutes*, March-Dec 1925, p152
4. *Brisbane City Council Minutes,* Jan-Dec 1929, p482
5. *The Brisbane Courier*, 7 January 1931, p4
6. Allom Lovell Marquis-Kyle, *The Character of Residential Areas, Brisbane*, A Study for the Brisbane City Council, 1994
7. Brisbane History Group, *Housing, Health, the River and the Arts*, Papers No. 3, 1985
8. Brisbane City Council, 'Saltwater Standpipe', *Conservation Management Study*, 2002
9. *The Brisbane Courier,* 27 September 1910, p5
10. *The Brisbane Courier,* 11 September 1911, p7
11. *Brisbane City Council Minutes*, Feb-Jan 1916, p119

Copyright Brisbane City Council

Citation prepared by — Brisbane City Council (page revised September 2020)

BRISBANE CITY

Dedicated to a better Brisbane