

**SULLAGE TREATMENT WORKS, CAMP 14, LOVEDAY
INTERNMENT CAMP
WHATELEY ROAD, LOVEDAY**

Camp 14, Sullage Treatment Works

Five sullage treatment works were constructed at the Loveday Internment Camp Complex, one each at Camp 9, Camp 10 and the General Headquarters Site and two at Camp 14. The sullage treatment works considered in this paper is the larger of the two works at Camp 14.

A sewerage system was installed at the Loveday Internment Camp Complex to treat detainee and army personnel waste. Sewage management was a two phase process that dealt with solid and liquid waste separately. Solid waste was collected on a pan in the latrine and then disposed of, while liquid waste was treated at a sullage treatment works. At each sullage treatment works, the liquid waste from the camp or HQ was fed into a series of settling tanks where solids would fall to the bottom and be disposed of, while the liquids were filtered through gravel beds before being diluted with water at a ratio of 1:4 waste to water and used to irrigate the crops grown by the detainees.



Irrigation ditch, Camp 14 between vegetable crops and bamboo windbreak, 1943.

Source: AWM Acc No 064972

The Sullage Treatment Works at Camp 14 comprise settling ponds, filtration beds, a deep in-ground storage tank (possibly also a settling tank), and channel connecting some of the elements together. Most of the structures are constructed from reinforced concrete, while some of the deeper ponds are made from concrete rendered brick and reinforced concrete. While the sullage treatment works currently retains many of its components, most are now affected by concrete spalling (in this instance cracking) and oxide jacking (corrosion and expansion of the reinforcing rods and mesh resulting in the concrete falling apart). The spalling may or may not have been caused by concrete cancer: an alkali-silica reaction that takes place in poorly made concrete resulting in cracking and then jacking due to the ingress of water corroding the reinforcing rods and / or mesh. The structures in the sullage treatment works are beginning to fail (see images).

The Sullage Treatment Works at Camp 14 was a vital aspect of the operation of the Loveday Internment Camp Complex. The appropriate disposal of human waste was important to prevent the spread of disease, while the waste water was used to fertilise the crops grown by the detainees. The food crops grown by the detainees at Loveday played a role in feeding South Australians and the troops serving overseas, while other crops such as opium poppies and pyrethrum daisies supplied, respectively, vital medicine (morphine) and pesticide (pyrethrum) to control insect populations and protect agricultural production.





Elements of the Sullage treatment Works, Camp 14 showing the channel, in-ground tank, and settling beds. Note the losses to beds and channel.

Source: DEW Files 29 October 2020.



Sullage Treatment Works, Camp 14, filtration beds.

Source: DEW Files 29 October 2020

Comparison

There are four State Heritage Places that demonstrate aspects of the history of waste management in South Australia (See Appendix A: Comparative Analysis), one, the General Headquarters Site, Loveday Internment Camp Site (SHP 13716) contains a sullage treatment works within the extent of listing and demonstrates similar heritage values as the sullage works at Camp 14. There are also two State Heritage Places (with a third being considered at this meeting) that illustrate various aspects of Second World War Internment Camps (See Appendix A: Comparative Analysis).

Condition and integrity

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Currently, most of the structures show signs of being effected by spalling and jacking, with some sections already failing completely. The structures are exposed to the elements, and in particular rain, which hastens the rate of deterioration. As the condition of each structure deteriorates, it reduces its intactness as the sections crumble away, which in turn diminishes the integrity of the place. Within a few years, the integrity of the place will be compromised to such a point that it would no longer demonstrate its function as a sullage treatment works or the important role it played in supporting waste management and agricultural production at the Loveday Internment Camp Complex. Centennial Hall, Adelaide Showground was rejected for entry in the Register in 2005, due to concrete cancer weakening the structure. It was demolished in 2007.



Filtration beds, showing loss of wall due to concert cancer (top).

Source: DEW Files 29 October 2020





Examples of the damage being caused to the structures by spalling and jacking that will result in imminent failure.

Source: DEW Files 29 October 2020

Potential heritage significance

The Sullage Treatment Works at Camp 14 have important historical and rarity values that suggest they may meet criteria (a) and/or (b). However, the condition, integrity and intactness of the site do have a significant bearing on its ability to demonstrate those values.

When using the tests for interpreting criterion (a), it is important to assess the extent to which the place demonstrates a clear and strong association with the historical theme. Given the quality of the surviving fabric and the extent to which it has and is deteriorating, it is not considered to demonstrate its historical values as well as other places with similar values that are of State significance. For example, the Detention Cell Block at Camp 10 (see Agenda paper 7.2) and the State Heritage listed Piggery Breeding Pens (SHP 26509), both of which are considered to meet criteria (a) and (b) under s16 of the *Heritage Places Act 1993*.

Similarly, when considering the place against criterion (b), most of the broader rarity values are better represented by other places that are already listed. It is not considered that this place has any values that would meet any of the other criteria for State listing.

Summary

Due to the concrete cancer and the impact it is already having on the integrity of the place and its ability to demonstrate significant historical and other heritage values at the State level, it is recommended that the Council rejects the Sullage Treatment Works, Camp 14, Loveday Internment Camp Complex for listing as a State Heritage Place.

Appendix A - Comparative Analysis

There are four State Heritage Places and one Local heritage place included in the South Australian Heritage Register (the Register) that demonstrate aspects of waste management in South Australia, namely:

- Former Straining Shed of Islington Sewage Farm, Pedder Cres, Regency Park (SHP 11752), listed under the provisions of the *South Australian Heritage Act 1978*, for demonstrating aspects of the development of comprehensive waste treatment and possibly the first water borne waste disposal treatment system in Australia.
- Sunnybrae Farm Complex (part of former Islington Sewage Farm), including Managers' Residence and Dairyman's Quarters, Cheese Room and Cellars, Stables, Cow Shed and Smoke House, Tikalara Rd, Regency Park (SHP 10757), listed under the provisions of the *South Australian Heritage Act 1978*, for demonstrating aspects of the development of comprehensive waste treatment in nineteenth century South Australia.
- Manure Pits, Brownhill Creek Recreation Park, Brownhill Creek Road, Brown Hill (SHP 14782), listed under criterion (a) of the *Heritage Places Act 1993*, as it demonstrates early attempts at pollution and waste management, and market gardening.

- Loveday Internment Camp Site - General Headquarters Site, Thiele Road, Loveday (SHP 13761), the sullage treatment works at the HQ is included as a part of the listing.
- Port Adelaide Treatment Works, 16 Frederick Road, West Lakes (LHP). The listing only includes the administration building, main plant building and adjacent garden.



Elements of the Sullage Treatment Works, Loveday General Headquarters Site (SHP 13761).

Source: DEW Files 29 October 2020.



Elements of the Sullage Treatment Works, Loveday General Headquarters Site (SHP 13761)

Source: DEW Files 29 October 2020.

There are two State Heritage Places listed in the Register, with a third being considered for listing at today's meeting, which illustrates detainment of POWs and civilian internees during the Second World War in South Australia, namely:

- Loveday Internment Camp Site - General Headquarters Site, Thiele Road, Loveday (SHP 13761), demonstrates the experiences of Army personnel rather than the detention of POWs and internees.
- Piggery Breeding Pens, Loveday Internment Camp Complex, Costello Road, Loveday (SHP 26509), demonstrates detainee experiences of working at the Loveday Internment Camp Complex.
- Detention Cell Block, Camp 10, Loveday Internment Camp Complex, Yeo Road, Loveday (26506), being considered for listing at today's meeting, demonstrates detainees experiences of further incarceration for 'illegal' activities while interned.

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