

Water Supply & Sewerage for Launceston

Ken Hose

Water

Launceston was settled, from 1806, at the confluence of the North Esk and South Esk rivers. Two reasons to move from George Town were availability of clean water and access to better soils for crops upstream.

There was ample water in the South Esk but it was difficult to harvest due to the rocky gorge and floods. The North Esk water was brackish and muddy, but easier to collect. Many attempts were made to develop a reliable supply for the growing town, notably the Evandale scheme of 1834. Between 1850 and 1857, there were eight other aborted schemes, which ranged from pipelines attached to the walls of the Gorge, tunnelling from Beam's Hollow through the hill, or pumping from the North Esk.

In January 1853, the water supply issue became a responsibility of an elected council. John (Jock) Lamont, suggested to the then Mayor, W S Button, that it might be possible to take St Patricks River water across a saddle and into Distillery Creek. Lamont had remembered an idea of the owner of the distillery, James Towers, who had thought of improving his water supply by diverting water from the high quality St Patricks River. The Council took up the suggestion, and W H Clayton was appointed to make a survey on behalf of the Government.

By 2 December 1855, the Council's Water Committee was able to report on Clayton's plan to divert St Patricks River below Nunamara, at an altitude of about 360 metres, construct flumes on both sides of an intervening hill and connect the races by means of a tunnel. The combined flows from St Patricks and Distillery Creek would be captured at the head of the gorge above Waverley. A small storage would be created and pipes would take the water over the North Esk River and discharge into a reservoir on High Street near Frankland Street.

Mr W R Falconer, the Director of Public Works, Hobart, was appointed to superintend the construction of the scheme. He also provided engineering services. He set the Distillery Creek storage to be 341 feet (104 metres) above high water, and water would be piped to the town using iron pipes. The work started in 1856.

The water was diverted from St Patricks River by means of a bluestone rock dam; but because it had been constructed by placing rough stones together without any cement or binding material, it leaked. There was plenty of flow, so it was of little concern at the time. However, as the summer of 1887-88 was extremely dry, the council took advantage of the low flows to rebuild the weir as a concrete wall some 30 metres long, and one metre at the top. Other than for maintenance, what you see today is that work.

The diverted water flowed through a flume approximately 975 metres in length. It is believed that the flume was a composite timber and cement mortar-lined structure and was constructed basically by day labour. The flume was replaced by a concrete structure around 1967, so the original had quite a useful life.

A tunnel some 154 metres in length, with additional cut and cover sections taking the overall enclosed length to 210 metres, was required. A further timber-lined and open earth channel completed the transfer of the water to the headwaters of Distillery Creek. The construction of the tunnel was contracted to a Mr Henry Newman on 7 May 1856.

Work on the tunnel was well underway in August 1856, but, unfortunately, the crown of the tunnel fell in due to water seepage and by blasting the rock without having sufficient

supporting timbers. In spite of many difficulties, the tunnel was finished in 1857 and is still in use today, albeit with a concrete lining provided in 1912.

The smaller dam on Distillery Creek, above Waverley, was a rock and concrete structure diverting water from the creek into the 250 mm cast iron pipe. The pipeline crossed the North Esk River at Hoblers Bridge and continued to the site of a tank off High Street. A 225 mm pipe was laid in Frankland and George Streets to link to another tank being constructed at Hill Street, West Launceston, then called Cataract Hill. Both of the brick reservoirs were constructed by contractor Philip Miller in 1857-58. Iron pipes were supplied by various British foundries.

Except for the reservoirs, the works were completed in 1857, with the opening of the sluice gates performed by the Mayor, Ald. Henry Dowling, on 23 October 1857.

The fountain in Prince's Square was purchased from a Parisian firm exhibiting at the London Exhibition. It was provided by the Council to celebrate the completion of the new water scheme, but did not arrive until February 1858. The fountain was erected immediately but it was 1859 before it was in full operation.

The water supply, as well as being distributed to all who wanted to pay, also was a mechanism to flush the street table drains and supply many drinking water fountains other than the main fountain in Prince's Square. The water supply also enabled the installation of a water-borne sewage system.



The fountain in Prince's Square, Launceston, erected in 1858 to celebrate the arrival of the new water scheme.

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The Sewers

In Launceston, there were no sewers constructed until 1860. Drainage before then appears to have consisted mostly of open ditches, with sanitation provided by cess pits, and later pan collection. The Council took steps to improve sanitation.

On 5 July 1856, the Sewerage Committee, consisting of the Mayor and four Aldermen, reported to the Council, saying: "the Town lying between Upton and Bourke Streets on the west, and Tamar and Welman Streets in the east, which your Committee believe

comprehends an area over which a complete system of drainage may be spread equal to the growing wants of the community.”

It was suggested the Council should offer two prizes (premiums) of £150 and £75 respectively for the best reports on the works. The committee considered that the separate system might advantageously and economically be adopted in Launceston.

The first prize, upgraded to £250, was awarded in March 1857 to William Bennett of Bennett & Wade, Sydney. The original map is in the archives of the Community History Branch of the Queen Victoria Museum and Art Gallery, but I have not yet found the report. It is interesting that the initial leaning for a sewerage system favoured the separate system, but the combined system was constructed. I suspect that cost was a big factor, but also there were hundreds of combined sewers being constructed around the world; particularly the United Kingdom, Europe and America at the time. It is known from correspondence that the Governor made the decision to accept Bennett's proposal.

There were different views on the level at which the Margaret Street sewer should discharge into the Tamar, and it was decided that this would be one metre below high water. This was a major issue, as the ground between Margaret and Bathurst Streets was basically a creek bed, and there was very little cover above the sewer. The deeper the sewer, the more water would enter from the incoming tide. The outfall sewer looks the same as it must have when constructed in 1860.

Launceston's sewers are very much related to United Kingdom and European practice. Brick ovoid, brick and concrete ovoid, brick arch with stone invert, stone arch, brick invert with concrete slab lid, circular brick, circular concrete, and earthenware.

Tenders for construction of the sewers were invited in late 1859. A contract was let in 1860 to Martin Boland and George Rhodes to construct the Margaret and York Street sewers at the sum of £4,300 with completion to be within two years. The work was not easy, and the contractors did not comply with the specifications, particularly relating to underdrainage, bricks and mortar. Part of the sewer fell in. A report to Council of 22 March 1862 stated that this “was evidently the result of the extremely faulty manner in which the work had been executed. Many of the bricks used are the square building bricks, quite unsuitable for the purpose.” This eventually led to the Council suing the contractors.

By 1888, when the Town became the City of Launceston, some 11 kilometres of main sewers had been constructed, plus a substantial length of smaller sewers. All of the sewers discharged directly into the Tamar and North Esk rivers.

Around 1895, a system of intercepting sewers to collect all the sewage flows in the central city area that emptied into the rivers was proposed. The intent was to discharge the sewage farther downstream. This proposal would have made Launceston's sewers similar to those constructed in London from the 1850s. London is an inland city on an estuary having a large tidal range, and so is Launceston, albeit on a much smaller scale. Regrettably, it did not happen at the time.

The sewer in Shields Street, adjacent to Boag's Brewery, was relined in the 1980s to show what can be done to renovate these larger sewers, with minimal disturbance. The liner is plastic sheeting supported by a thin concrete backing.

All new areas are served by separate sewers and drains. It is interesting that on my Study Tour to the United States of America and the United Kingdom in 1992, those cities that have combined systems keep as much as they can of the old sewers, but no one constructs a new combined system.