

The impact of Christchurch City on the adjacent Avon-Heathcote Estuary – contemporary voices

The general principles of water-course response to urbanisation are well enough understood, but what about contemporary evidence?

Might there be descriptions of the state of the immediate environment and of the nearby estuary in the years after first settlement – during the period when according to my observations up to half a metre of mud was deposited in the estuary, and the tidal compartment decreased by about 30%?

Hard not to notice, right?

It turns out the voices of the day are clear, and many. The Press and the Star published a number of drainage board and city council reports, editorial comments, and correspondence, in the period up until the early years of the twentieth century, that mention the state of the city, of the two rivers, and of the estuary. This material makes it clear that the city and its suburbs were pretty muddy places, the rivers and drains were full of sediment (and subject to periodic clearing) and that the estuary deteriorated to a very poor state.

The emphases below are mine.

There was early talk about better drainage. For example in the Star, 11th July 1871 (21 years after first settlement, when the population was a few thousand).

“The City Surveyor reported that during the past week he had been engaged [on] the drainage of the City of Christchurch, and his report would be laid before the Council ...”:

“To the Mayor and Council of the City of Christchurch. Gentlemen, Having been requested by the Works Committee of your hon. Council to furnish a report on what system I recommend to be adopted for the general drainage of the City of Christchurch, together with estimates of the cost of the same, I have carefully considered the plans and levels of the city as shown on the maps, and the section of the ground between Christchurch and the estuary, prepared by your surveyor, as well as such circumstances connected with the drainage of the district prior to the selection of land by the Canterbury colonists as have come to my knowledge

“... The City of Christchurch, for which this system of drainage is required, is limited to an area of little more than one and a half square miles, and all the rural waters now draining through the city can be diverted by the respective Road Boards before they enter the City. This area consists of two portions – That portion of the city which has its natural drainage into the River Avon. And that portion which had its natural drainage into the raupo swamp at the southeast corner of the city, for which swamp an outfall drain was provided by the Canterbury Association ... by the Pilgrims, to enable them to form through this swamp the high road which was to lead from the ferry to the intended

city, and which road was formed along this Association drain, although the drain was not originally cut at the outer boundary of the land reserved by the Association for this purpose.

“To the cutting of this drain having drained the swamp, which was, before that, waist deep in water, the present Ferry Road owes its direction, and all sections of land selected thereon owe their frontage. The portion of the city draining into the river is subdivided by the River Avon into two districts ... The North Avon City District, containing about 397 acres [and] The South Avon City District, containing about 318 acres. The portion draining into the raupo swamp may be also subdivided into ... The South East District, draining into the High street drain, and containing about 150 acres [and] The South West District, draining into the south drain, and thence through the Association drain, which contains about 175 acres.

“In providing for the drainage of these four districts, I have considered only the removal of the ordinary house sewage, diluted with artesian water, to the exclusion of all solid matters, which, if discharged by any system of drainage into the estuary, would be lodged on the extensive mud flats, and there become both offensive and prejudicial to health ... [at present] nearly 400 acres of the Spreydon Road Board district, and of the Heathcote Road Board district discharge their sewage and stormwaters into the South drain, which must, therefore, continue to discharge, as at present, by the Canterbury Association drain.

“The system of drainage thus laid before your honorable Council will be sufficient for the discharge of the sewage for many years to come; but if the city became so densely populated, or the artesian supply so increased as to need it, other lines of pipes could be carried down any of the streets, and passing under the Avon be discharged in the above named sewer. “

Drains were excavated, presumably to this or a similar plan, but not without controversy, and not with good outcomes for the residents of the lower Heathcote River:

The Press, 21 March 1877

“MEETING AT WOOLSTON

“... a meeting was held to consider the report of the committee appointed to watch the interests of the district in connection with the alleged nuisance at the estuary ... the meeting was held for the purpose of hearing what had been done by the committee appointed to counteract the machinations of the Drainage Board ... Mr. Bamford said that they all knew what had been done by the committee to prevent the sewage of Christchurch being put down on the Heathcote district. He might say that the Drainage Board went for a picnic to the sewer a few days back, but could smell nothing but seaweed. However, some of them were rather indisposed the next day.

“He would read them a few extracts from letters received from residents near the estuary ... who spoke very strongly of the nuisance caused by the outfall drain on the estuary. One stated that, on summer nights he was unable to sleep on account of the smell from the outfall drain. He also read extracts from letters in reference to the Ferry road drain discharging into the Heathcote as likely to affect the health of the inhabitants, and depreciate the value of property in the neighborhood. Mr. Davis said he saw that the Board were going to have the water of the estuary analysed. This was of no use. It was not the water which smelt; it was the stuff brought down by the drain being left on the flats exposed to the sun, which created the nuisance. He would suggest to Mr Duncan, the member of the Board present, that the Drainage Board should have some of the mud near the outfall drain analysed. “

The Press, 1 Jan 1876

A letter to the editor from one H B Kirk, asking why “the River Heathcote, from the estuary for some miles until it reaches the Halswell district, is allowed to remain almost choked up with vegetation, while that part of it which flows through the Halswell district can be kept so clean [and] the rivers Halswell and Avon are cleaned once a year.”

The Press, October 5 1876

A report of a meeting of the Heathcote Road Board, which discussed the dangerous state of the River Avon by Linwood’s, and the east side of Stanmore Bridge, where “there had been one or two narrow escapes from accidents [and the] bad state of side channels... . There were letters from seven ratepayers, complaining about “nuisances existing from dirty pigstyes, cesspools, and water closets ...”. It was resolved “that a 9 inch pipe be laid across Ferry Road ... so as to drain ... more effectively”.

The Press, 27 Jan 1877

“Sir - In the course of a few days the Christchurch Drainage Board will probably have decided to carry out the scheme of drainage of the city, proposed by ... Mr Carruthers. The result will be that the filth of Christchurch and suburbs will be poured on to the mud flats of the estuary, well distributed by the tide when high, and exposed during low tide to the rays of the sun. The estuary will become a stinking fever bed ...”.

“I have been in the habit of boating on the estuary for years past, and until the outfall drain was completed never noticed any unpleasant smell ... Now however, the estuary is offensive at all times, and during north-east weather can be smelt in the Heathcote Valley, and even at Woolston ...”.

The Press, Feb 2 1877

“Most of our readers who reside in or near Christchurch are pretty well acquainted with the character of the estuary. They know that it consists of a wide flat open tract, covered with water at high tides, and disclosing a hideous expanse of mud at low water ... the pollution of the Heathcote and Avon [is] bad.”

The Press, Feb 23 1877

“Sir - The recent meetings at Christchurch and Woolston brought up many speakers ... the main topics ... the pollution of the estuary ... [and] “the storm waters remaining on the surface of the ground, and lying under people’s houses at Phillipstown, Waltham and elsewhere should have first attention ...”. “Nothing short of a good underground drainage will effect this ...”.

The Press, November 8 1888

A letter-writer: “I walked the other day to Sumner to see them making the tramway, and of course remarked the large extent of mud and water, for the tide was out, which is taken up by the estuary ... I leant over the rough stone breastwork at the side of the road, and my walking stick went in up to the hilt in rich black mud.”

The Star, March 4, 1889

A letter to the editor from Old Chum: “There is no doubt at present the river [Avon] is fast degenerating into an untidy, unsightly ditch, dangerous and dirty ...”.

The Press 12 Jan 1893

“Sir - Permit me ... to draw attention ... to the disgraceful state into which the stakes marking the channel if the Estuary have got. This is especially noticeable in the New

Brighton part of the Estuary [where] the channel itself is becoming blocked with accumulating deposits ...".

The Star, Weds March 17, 1897

Report of a drainage board meeting, where "Mr E Smith said that the work of improving the river must be done by someone, and he thought the Drainage Board the proper body to do it. He attributed the present state of the river to two causes, viz., diminution of flow of water and the accumulation of silt from the side channels and drains. This silting process amounted to about one ton per day, and had been going on for 20 years. He favoured the mud being thoroughly cleaned out ...".

The Press, 6 Jan 1904

A letter-writer suggested that "A systematic dredging of the Avon would help clear the present deposits of mud from the stream ... but if the river were dredged thoroughly, and the volume of the water made larger, the silt would all be carried down to the estuary."

The Star 18 July 1905

In an extended piece of hyperbole, The Star commented on the state of Ferry Road, between Christchurch and Sumner. Tongue-in-cheek, while dismissing a rumour about a canal to connect Sumner with Christchurch as "the product of a wag's brain", the Star said nevertheless it rested on a fairly good foundation of mud and water.

"From the city to St Peter's", wrote the paper's man, "there are no conspicuous features in the landscape. There is mud, of course, a fair enough layer, but it so resembles other streets, whose pasty appearance is evidence of a chronic ailment, that an ordinary citizen scarcely gives the excrescence more than a gentle sigh.

"But past the church the street makes amends for the preceding monotony of surface. The eye is caught by a panorama of all kinds of landscape and waterscape on a small but impressive scale. A couple of creeks wind a yellow way towards the sea. Here and there they debauch into lakes of amber and pools of ochre, that are flanked by ranges of mud.

"The picturesqueness of the journey increases as the tram advances, and attains its zenith after the township of Woolston is reached. Here the caravan casts anchor, and the living cargo is jettisoned into the waste of mud.

The drags wallow through mire for a few hundred yards, and their contents are emptied into another tram, running on newly-laid rails.

"Beyond the bridge the quagmire extends to the quarries ... On the estuary proper are risible countless lines of wheel marks, plainly showing that the drivers of ordinary vehicles have preferred the sea to the devil of a road.

"When the return tram stopped at the bridge, a couple of feminine passengers, who wished to descend, at the Heathcote Road, looked despairingly at the mud and slush ... Bewilderingly, they looked up and down, but everywhere the same vista stared at them.

"Who is going to put the road straight?" is a question which largely interests people whose lives are cast along the route. It has been playfully suggested that the Harbour Board is the responsible body, as the road can be regarded as part of the estuary, and therefore within the Board's province. Others say that the task of solving the problem will be left to the summer sun, which is expected to dry the pulp and allow it to be carried away by the four winds of heaven.

It's reasonable to conclude from these comments that the processes at work – the how of the impact of the new settlement on its watercourses and the estuary – is explained by very early drainage work. A number of large open drains were dug, leading directly to the estuary, and their effect was noticed almost immediately by people living near, and boating on, the estuary. 'Mud', 'silt' and 'pollution' are common words.

Large open drains, discharging into the estuary and the two rivers, abundant surface mud from road-making and construction, clogged rivers, and a polluted estuary bad enough to cause public unrest seems convincing contemporary evidence that the anthropogenic mud layer, still evident in the estuary, dates from the first decades of settlement – from about 1870, to at least 1900.

Is it stretching credibility to assert that all of this visible, pervasive, and recorded, change didn't affect on the estuary, but that a bit of 'river sweeping' in the 1930s and 40s did.

In fact, by the 1920s complaints had declined to nothing as the work of the city council and the drainage board took effect, and it's at about this time that the estuary began to recover ...

On balance ... Deely: wrong, wrong, wrong!