

POLLUTION IN THE TE AROHA DISTRICT CAUSED BY
MINING

Philip Hart

Te Aroha Mining District Working Papers

No. 6

2016

Historical Research Unit
Faculty of Arts & Social Sciences
The University of Waikato
Private Bag 3105
Hamilton, New Zealand

ISSN: 2463-6266

© 2016 Philip Hart

Contact: prhart1940@gmail.com



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

POLLUTION IN THE TE AROHA DISTRICT CAUSED BY MINING

Abstract: *Whereas miners (and their supporters in the Mines Department) felt constrained by the imposition of environmental controls, many Te Aroha residents were concerned about the purity of their domestic water supply, although a vocal minority was more interested in the possibilities of jobs and money. As mullock and tailings were unavoidable consequences of mining, when farmers had fine silt deposited on their land they combined with town-dwellers to seek the removal of the designation of the Waihou River as a sludge channel.*

Efforts to revive mining during the depression of the 1930s revived concerns about pollution, and in the following decade the Auckland Smelting Company's efforts to develop the Tui portion of the field provoked considerable debate about protecting Te Aroha's water supply amongst officials and within the community. The warden, encouraged by departmental officials, permitted mining, but imposed conditions that its opponents considered to be inadequate and which the company sought to evade.

THE IMPACT OF MINING

There has always been a tension between miners and community groups because of mining's impacts, especially environmental. By the mid-twentieth century, when the goldmining industry was nearly extinct, supporters of mining felt beleaguered by both public and official attitudes. For example, Gordon Williams, Dean of the Faculty of Technology at the University of Otago, in 1960 called for 'new thinking' and 'a vigorous approach' to sweep away 'prejudices':

The development of our minerals is beset with peculiar difficulties, many of them artificial. For example our Mining Act is incomprehensible to all except a few solicitors who have devoted their lives to its complicated provisions; the more interesting mineral areas are progressively becoming inaccessible by successive proclamations of National Parks or "wilderness areas" over unreasonably wide areas; Catchment Boards are

making water rights increasingly difficult to obtain; and little encouragement is given to the few good prospectors we have.¹

If miners and their supporters felt beleaguered, so did their opponents, who had had a century of experience of the impacts of inadequately controlled mining. This chapter deals with experiences and conflicts in the Te Aroha Mining District from the start of mining until the mid-1950s.

CLEAN WATER

Worries about polluted drinking water were as old as Te Aroha township. When the first claims were pegged out near the Tui Stream in December 1880, those planning to sell land for a settlement at Ruakaka, below these claims, told the warden, Harry Kenrick,² that, whilst having no objection to a water race being built on the stream that crossed their land, they ‘strongly’ objected to ‘the contamination of the water by tailings being allowed to run into it, or to its being defiled in any way which may make it unfit for domestic purposes’.³ As such concerns continued to worry residents, in October 1882 Kenrick announced that he had

set apart for Domestic Purposes that stream of water at Te Aroha known as the Tutu Mangeo or Lipsey’s Creek. Any person who shall hereafter defile such water, or do any act whatsoever by means of which such water may be defiled or rendered unfit for domestic purposes, will be liable to a Penalty of Five Pounds.⁴

In 1895, the town board was asked by the Mines Department to set apart all streams needed for domestic purposes to avoid them being polluted by mining.⁵ After this was done the periodic attempts to revive mining continued to create concern. In 1909, when there were worries that if

¹ G.J. Williams, ‘The New Zealand Mineral Scene’, in *New Zealand’s Industrial Potential*, ed. R.G. Ward and M.W. Ward (Auckland, 1960), p. 1.

² See paper on his life.

³ James Burke and Samuel Stephenson to Warden, 31 December 1880, Te Aroha Warden’s Court, Mining Applications 1880, BBAV 11289/8a, ANZ-A.

⁴ Te Aroha Warden’s Court, Notice by Warden, 24 October 1882, General Correspondence 1882, BBAV 11584/1c, ANZ-A.

⁵ *Te Aroha News*, 18 December 1895, p. 2.

permitted ‘on the face of the hill to the north of the Bald Spur’ the town’s water supply would be affected, the *Te Aroha News* reassured its readers that the warden would not allow this.⁶ As an example of protecting the hillside from mining, in 1928 the borough council, after a ‘full and free discussion’, informed a prospecting syndicate that ‘it must oppose its application for Mining Rights on any portion of the Borough hydro-electric catchment area, and that no further prospecting work be done therein’.⁷ In May 1932 likewise, the council successfully opposed prospecting that would affect its water supply.⁸

A 1998 thesis proved the existence of significant heavy metal contamination in the streams tested below adits and mine dumps in the Waiorongomai valley.⁹

SILT

Restrictions on polluting streams used for domestic purposes continued, but the main problem for miners was debris and tailings. Although these could be stacked on any spare land, as for example when, in 1884, the Colonist Company was permitted ‘to discharge debris on Hero Claim adjoining Young Colonial’,¹⁰ waste material could wash into waterways. At the end of January 1885 it was reported that ‘for some weeks past there has been contention’ between some Waiorongomai farmers and the battery owners. ‘The farmers complain that the stream is polluted by the tailings from the battery, and claim that the water should be returned to the creek in a state of purity’. In one case, ‘legal proceedings were recently threatened’.¹¹ No such legal action was taken, possibly because of efforts made to minimize this pollution, for, after being partly treated, tailings settled in a large tank. From there, they were ‘automatically raised

⁶ *Te Aroha News*, 2 December 1909, p. 2.

⁷ Te Aroha Borough Council, Minutes of Meeting of 29 August 1928, Minute Book 1925-1933, p. 158, Matamata-Piako District Council Archives, Te Aroha.

⁸ Te Aroha Warden’s Court, Register of Applications 1921-1934, Hearing of 12 May 1932, BBAV 11505/6b, ANZ-A.

⁹ Alan E. Hook, ‘Environmental Geochemistry of the Waiorongomai Valley, Te Aroha, New Zealand’ (M.Sc. thesis, Auckland, 1998), pp. 14, 43-45, 47, 98, 100-102, 104, 110.

¹⁰ Te Aroha Warden’s Court, Register of Applications 1883-1900, 37/1884, BBAV 11505/1a, ANZ-A.

¹¹ *Thames Advertiser*, 31 January 1885, p. 2.

by means of a water jet up an eight- inch pipe some 30 feet in height, running them along a flume to the storage ground, so preventing the formation of sandbanks in the river to which they would otherwise be carried'.¹²

Streams were always an easy way of dumping debris, but when these were likely to be polluted the warden tried to protect them. An 1888 application for a machine site at the Omahu Stream was refused 'as it crossed a creek', and the applicant was required to 'make the creek the boundary, as it had been found when it was allowed to include creeks they were allowed to fill up with tailings, etc'.¹³ In the following year the mining inspector successfully urged Kenrick not to allow a mullock heap for a low-level tunnel to be placed beside the Premier Creek 'as the creek would be filled up'.¹⁴ Walter Joseph Gibbs,¹⁵ who developed a quarry near the old Waiorongomai battery site in the 1920s, openly said that poor quality metal 'would go in the creek'.¹⁶ When it did, a farmer soon complained about 'filling of creek by spoil from Quarry'.¹⁷

In the 1930s, when prospectors talked about a mining revival, the Waihou River Protection League opposed dumping tailings from any battery sites in creeks, instead wanting these stacked.¹⁸ John Francis Downey, the mining inspector, supported stacking, for it was 'not essential to the well-being of mining' that tailings were dumped into a sludge channel; at Broken Hill and Kalgoorlie, for example, tailings were stacked.¹⁹ However, as the Commissioner of Crown Lands pointed out, stacking was neither practicable nor desirable at Te Aroha because the high winds for which it was 'at all times notorious would simply redistribute them in their dry state over the adjoining properties'.²⁰ If stacking was intended, this would have to be on

¹² Special Reporter, 'A Trip to Te Aroha', *Auckland Weekly News*, 30 July 1887, p. 28.

¹³ Warden's Court, *Te Aroha News*, 5 September 1888, p. 2.

¹⁴ Te Aroha Warden's Court, Mining Applications 1889, 50/1889, BBAV 11289/12a, ANZ-A.

¹⁵ See paper on prospectors in the 1930s.

¹⁶ *Te Aroha News*, 27 April 1927, p. 5.

¹⁷ Board of Governors, Thames High School, Minutes of Meeting of 27 September 1927, High School Archives, Thames.

¹⁸ Warden's Court, *Te Aroha News*, 19 March 1934, p. 5.

¹⁹ J.F. Downey to Under-Secretary, Mines Department, 6 October 1932, Mines Department, MD 1, 12/408, ANZ-W.

²⁰ Commissioner of Crown Lands to Under-Secretary, Lands and Survey Department, 31 October 1932, Mines Department, MD 1, 12/408, ANZ-W.

the flat: Malcolm Hardy,²¹ seeking permission to put his tailings into Premier Creek, alongside his small battery, correctly stated that the hillside was too steep for stacking.²² A Waikino resident suggested railing tailings to Karangahake or Paeroa,²³ but was ignored, no doubt because of the cost.

From the time of the first battery it was recognized that, even if mullock was kept out of the river, tailings would inevitably enter it. In April 1881 it was noted that ‘the overflow from the tailings pits in [the] rear of the mill finds its way into the river’.²⁴ A debate in January 1884 in the council was prompted by a report by William Louis Campbell Williams, its chairman, that tailings emptied into the Waiorongomai Stream were entering the river, ‘whereby there was a likelihood of the navigation being impeded, and that steps should be taken to prevent the same’. Williams said ‘it was impossible for the council to deal with two-thirds of the tailings, as that proportion was held in solution, and if prevented from finding a natural outlet into the river would find a way somehow, causing eventually more damage than before’. One councillor, William Thornton Firth, who was interested in the latest American technology,²⁵ wanted a committee appointed ‘to watch the results of the present method of disposing of the tailings, and to communicate with California and other mining authorities as to the plans adopted for their disposal’.²⁶ Although one was instructed to report to the next meeting, it was never heard from. That the issue did not go away was illustrated by a January 1885 report that ‘for some weeks’ there had been ‘contention’ between some Waiorongomai farmers and the battery-owners. The farmers complained that the stream was polluted by tailings, and wanted the water ‘returned to the creek in a state of purity’. In one instance legal proceedings were threatened,²⁷ but none eventuated. In 1889 a deputation to the Minister of Public Works about the silting of the river between Paeroa and Te Aroha reported that it was ‘more and more difficult for navigation every year’ and that ‘the larger steamers could not

²¹ See paper on his life.

²² Malcolm Hardy to Minister of Mines, 2 July 1938, Mines Department, MD 1, 23/4/54, ANZ-W.

²³ Letter from ‘Progress’, *Te Aroha News*, 5 September 1934, p. 4.

²⁴ *Thames Advertiser*, 25 April 1881, p. 3.

²⁵ See *Te Aroha News*, 5 September 1885, pp. 2, 3, 26 July 1935, p. 4.

²⁶ Piako County Council, *Waikato Times*, 5 January 1884, p. 2.

²⁷ *Thames Advertiser*, 31 January 1885, p. 2.

get up'.²⁸ This silting was not caused solely by mining: clearing bush and developing farmland contributed, as did the practice of the Te Aroha flax mill of dumping its waste into the river.²⁹

In 1895, when the Waihou River was designated a sludge channel because of the new Waikino battery, the Acclimatisation Society asked the council to get the warden to 'preserve' some streams from cyanide pollution.³⁰ By 1907 the silting of the Waihou and Ohinemuri Rivers had caused so much trouble that farmers petitioned parliament. The mining industry argued against the farmers' claims, Thomas Gilmour,³¹ for instance, then a consulting engineer for the Waihi Company, claiming that the silt at Te Aroha was no worse than when first he visited in the early 1880s.³² The *Te Aroha News* thought farmers' interests must come first, and in March 1909 urged the holding of a meeting to protest at tailings silting up the river.³³ Three months later, the borough council asked the Minister of Mines to revoke the proclamation of the sludge channel because of the needs of farmers and its desire to preserve the attractiveness of Te Aroha as a health resort.³⁴ The following month, in the county council Charles Manuel, then actively attempting to revive mining at Waiorongomai,³⁵ opposed taking any decision that would handicap mining; councillors agreed to co-operate with the Ohinemuri River Silting Association in asking the government to 'minimize any evils caused by tailings, and to subsidise efforts for clearing the river of willows'.³⁶ Three months later, in another council debate Manuel argued the solution to silting was clearing the willows, but his solution of letting the tailings go down river to be dredged

²⁸ *Te Aroha News*, 4 May 1889, p. 2.

²⁹ *Te Aroha News*, 16 January 1889, p. 2.

³⁰ Piako County Council, *Te Aroha News*, 16 March 1895, p. 2.

³¹ See *Thames Star*, 11 September 1901, p. 2; *Observer*, 16 April 1904, p. 16, 27 March 1909, p. 4; *New Zealand Herald*, 22 December 1923, p. 12.

³² Goldfields and Mines Committee, 'Reports on Petitions Relating to the Silting of the Ohinemuri and Waihou Rivers', *AJHR*, 1907, I-4A, p. 42; see pp. 1-11, 29-31, 41-43 for evidence of silting.

³³ *Te Aroha News*, editorial, 9 May 1907, p. 2, 25 March 1909, p. 2.

³⁴ F.W. Wild (Town Clerk) to Minister of Mines, 29 June 1909, Mines Department, MD 1, 09/1057, ANZ-W.

³⁵ See paper on his life.

³⁶ Piako County Council, *Auckland Weekly News*, 29 July 1909, p. 36.

was rejected by ‘Anti-Silt’, a Te Aroha farmer who had once been a miner.³⁷ The following year a Silting Commission heard evidence from farmers about polluted water and mining debris being deposited on farmland by floodwaters;³⁸ but because of the needs of the mining industry the rivers remained sludge channels.

As the problem did not go away, a Rivers Commission heard more evidence in 1921. William Francis (‘Daldy’) McWilliams,³⁹ a former miner who had lived in the Karangahake area since 1875,⁴⁰ was one witness:

He knew the Waihou for many years, and had frequently crossed at [Joseph Harris] Smallman’s,⁴¹ about a mile or more below Te Aroha. The river bed up to about 1880 was firm, but since then the sands were shifting and the crossing became increasingly difficult, there being a moving mass of sand. He had lost cattle in the sands there. Floods accentuated the trouble. The crossing was not used now.⁴²

Because of the relatively limited amount of mining in the Te Aroha Mining District, much of this sand probably resulted from swamp draining and bush clearance. These concerns continued until the river ceased to be a sludge channel.⁴³ In 1933 ‘A Hauraki Farmer’, who remembered fishing close to the mouth of the Waihou, stressed how Maori were affected by the pollution:

Regarding the outrageous proclamation of 1895 it may not be generally remembered that up to the time of the poisonous tailings being discharged into the Ohinemuri river, the lower Waihou was a valuable fishing ground used extensively by European and Maori, a score of whom could always be seen on Kopu wharf “on the tide” fishing for schnapper and kahawai –

³⁷ *Auckland Weekly News*, 28 October 1909, p. 23; letter from ‘Anti-Silt’, *Te Aroha News*, 9 November 1909, p. 3.

³⁸ *Auckland Weekly News*, 26 May 1910, p. 25.

³⁹ See paper on the Daldy McWilliams incident.

⁴⁰ See *Waihi Daily Telegraph*, 20 January 1931, p. 2.

⁴¹ See paper on his life.

⁴² *Te Aroha News*, 10 August 1921, p. 1.

⁴³ For instance, Norman Annabell (Borough Engineer, Te Aroha Borough) to Conservator of Forests, 7 December 1950, A/26/6/1, Matamata-Piako District Council Archives, Te Aroha.

and catching them, too. There was always good fishing from Kirikiri wharf. Within the mouth of the river schnapper fishing was actually thrilling, fifty being quite an ordinary haul for a man, and two or us (then children) for less than an hour's fishing in the "top of the tide." Also a short distance below Kopu wharf the Maoris had a weir which caught a variety of fish. Immediately the mining companies used the Ohinemuri as a sludge channel there were no more edible fish to be caught within the river. We lost our sport and no doubt many a poor Maori went hungry. The confiscation of the fishing rights, which, probably, were intended to be protected by the Treaty of Waitangi, caused great hardship to the Maori and their restoration, particularly at these hard times, would be not only welcome but also an attempt to right a wrong. As to the settlers effected, the damage done to their land, their waterway and water supply is well known to be out of all reckoning and since their rights were wrongly confiscated there certainly can be no unfairness in rightly restoring them. The waters of the beautiful Waihou once ran clear and may they again be allowed to do so.⁴⁴

SEWAGE

One other form of pollution caused problems for farmers. In February 1929 ratepayers in the Mangaiti area met to discuss Te Aroha's untreated sewage being discharged into the river. The *Te Aroha News* was sympathetic to the farmers' needs for pure water:

As far as the Waihou is concerned it is claimed that because it has been declared a sludge channel drainage of any kind into the river is permissible. The privilege claimed dates back to the early days when were it not necessary in the interests of mining it would never have been granted. There may be still sufficient reasons for preserving the old rights enjoyed by miners but it may be possible to show that the wide interpretation [of these rights] ... is not in the best interests of the people and some limitation of these powers may be found necessary. The settlers claim that one of their first rights is the free use of water from the river and many good arguments could be put forward in support of this claim. Rivers like the Waihou flowing over a long course serve man in many ways and it does not appear proper that one section

⁴⁴ Letter from 'A Hauraki Farmer', *Hauraki Plains Gazette*, n.d., reprinted in *Te Aroha News*, 13 December 1933, p. 5.

of the people ... should take to themselves a privilege which interferes with the exercise of the privileges of others.⁴⁵

THE 1930s

Because of the Depression, the *Te Aroha News* became concerned less with clean water for farmers and wanted the river retained as a sludge channel to assist any mining revival. When the Te Aroha Gold Syndicate proposed erecting a battery at Ruakaka, the borough council held a special meeting to question the promoters about, in particular, noise and water pollution. It was assured there would be little noise, and that 'residents should get accustomed to it so as not to notice it'. When the mayor asked whether the creek would be contaminated, he was told that contamination would quickly pass into the river and 'any effect would be gone within half a mile'. Councillors responded positively to the prospect of having the largest battery in the Auckland region (over-optimistically intended to treat 500 tons daily), the mayor expecting more work for the local foundry, increased use of the borough's electric power supply, the unemployed being 'absorbed', businessmen doing increased business, and rates income rising. Consent was granted on condition that all water was extracted from below the outflow from the power station to avoid interfering with drinking water and power generation.⁴⁶ Any worries about the down-stream effects on farmers were eased by an assurance during the councillors' inspection of the site that

only fine silt would go into Lipsey Creek and the harmful effect would be negligible. There can be no bathing in the creek, neither could cattle drink the water, but as a tributary to the Waihou the creek comes under the sludge channel proclamation. The amount of silt passing down the creek would be so small that it is not expected to have any effect upon the condition of the large volume of water in the Waihou River.⁴⁷

In an editorial headlined 'Unnecessary Anxiety', the *Te Aroha News* reassured those worried about pollution; as for noise, it repeated the syndicate's view that residents would just have to get used to it, for if Te

⁴⁵ Editorial, *Te Aroha News*, 27 February 1929, p. 4.

⁴⁶ *Te Aroha News*, 5 October 1932, p. 5.

⁴⁷ *Te Aroha News*, 5 October 1932, p. 5.

Aroha was 'to have a quiet rural atmosphere it will not be possible to have any industrial progress'.⁴⁸

Downstream from the proposed battery, farmers and Paeroa businessmen worried about yet more tailings entering the river. For several years there had been agitation to revoke the proclamation of the sludge channel, and a Paeroa-based surveyor who had been 'familiar' with the Waihou River for over 30 years warned that 'almost irreparable damage' would be caused by the new battery. He denied the statement by its proponent that 'any deleterious effect' would 'disappear in a distance of half a mile below the discharge': instead, sand banks would form at the bends of the river and the built-up silt would cause flooding. River transport would cease, and its beauty would be lost. As even the best mining was 'only a transient industry, while agriculture, and all allied with it', would last 'for all time', he wanted the revocation of the river being a sludge channel rather than let it be irreparably changed by 'a possibly successful mining venture that at best will only have a life of a few years'.⁴⁹ A petition seeking revocation organized by the Paeroa Chamber of Commerce, signed by over 121 farmers, was before the Mines Committee of Parliament.⁵⁰ As the Te Aroha Chamber of Commerce opposed this Paeroa initiative because it hoped for a revival of mining, it sent a deputation to Wellington to lobby the committee.⁵¹ Under pressure from some over-optimistic prospectors, the Minister of Mines, Charles Edward de la Barca McMillan, told a persistent proponent of Te Aroha becoming a mining bonanza that, as proof of his hope that the area was auriferous, he had 'retained the Upper Waihou as a sludge channel'.⁵² The *Te Aroha News* was pleased, arguing that it was

⁴⁸ Editorial, *Te Aroha News*, 7 October 1932, p. 4.

⁴⁹ Letter from Courtney Kenny, MNZIS, in *Hauraki Plains Gazette*, 17 October 1932, cutting in H. Rodenwald Scrapbook, vol. 3, no pagination, MS 98/92, Library of the Auckland Institute and War Memorial Museum.

⁵⁰ A.H. Kimbell (Under-Secretary, Mines Department) to Under-Secretary, Lands and Survey Department, 13 October 1932; J.H. Bartlett (Secretary, Paeroa Chamber of Commerce) to Commissioner of Crown Lands, Auckland, 28 October 1932, Mines Department, MD 1, 12/408, ANZ-W.

⁵¹ *Te Aroha News*, 13 April 1932, p. 6, 21 October 1932, p. 5.

⁵² Minister of Mines to Charles Scott, 6 December 1932, Mines Department, MD 1, 23/1/31, ANZ-W.

unfair to require miners to stack tailings; but it hoped farms would not be affected, and certainly did not want the river silting up.⁵³

This political decision was partly based on advice from John Francis Downey,⁵⁴ the mining inspector, who did not consider the issue was a real one because Te Aroha was not a viable mining centre. Should any mining take place, the ore would need ‘extremely fine grinding’, meaning residues would ‘in all cases be reduced largely, if not wholly, to slimes’. Evidence before the 1910 Commission had shown that these tailings were

so highly charged with water, and the slimes themselves were so slowly precipitated and were of such a character that the solids in them had so little tendency ever to consolidate to any degree, that it was a matter almost of impossibility to retain them, or, in any case, that any possible means of doing this would be of so costly a nature that it would prohibit the profitable mining of the low grade ores which form so large a proportion of the reefs.

As there were no suitable impounding areas at Waiorongomai, it was ‘very difficult to know what should be done for the best’. He recommended retaining the sludge channel to enable those who thought they could develop large-scale mining to ‘test their belief’. Any ‘small amount of slimes’ would ‘not do any serious harm to navigation or to farming or other local interest’, for this would not settle or foul the water ‘to any great extent’ and would be swept away by the current. If mining didn’t revive, then the proclamation should be revoked.⁵⁵

As the Public Works Department had spent £800,000 dealing with tailings in the Ohinemuri River, its chief engineer warned that discharging tailings would bind ‘the free moving course sands of the Waihou River, causing these to sit in beds’ and not flow freely to the sea.⁵⁶ The farming community shared these worries, and the Member of Parliament for Waikato even suggested that Te Aroha’s mayor supported retaining the

⁵³ *Te Aroha News*, 16 November 1932, p. 4.

⁵⁴ See *Evening Post*, 6 July 1917, p. 2; John Francis Downey, *Gold-mines of the Hauraki District, New Zealand* (Wellington, 1935).

⁵⁵ J.F. Downey to A.H. Kimbell, 13 October 1932, Inspector of Mines, BBDO A902, MM113, ANZ-A.

⁵⁶ J.H. Bartlett to J.G. Coates (Minister of Public Works), 19 October 1932; C.J. McKenzie (Engineer in Chief, Public Works Department, Wellington) to A.H. Kimbell, 7 December 1932, Inspector of Mines, BBDO A902, MM113, ANZ-A.

sludge channel so his council could continue discharging raw sewage into it.⁵⁷

These arguments continued for as long as the Waihou remained a sludge channel. The Thames Valley and Hauraki Plains Farm Lands Protection League, whose secretary was also secretary of the Paeroa Chamber of Commerce, opposed even small-scale mining applications at Waiorongomai. This league was comprised of representatives from local authorities and other bodies concerned to protect the purity of the water, the stopbanks, and the drainage schemes of the Hauraki Plains.⁵⁸ Heeding their views, battery sites and tailraces were granted on condition that no tailings, debris, or slimes entered the river.⁵⁹ Faced in 1934 with another petition to revoke the proclamation, Macmillan required tailings to be stacked and slimes ponded.⁶⁰ To protect the work done under the Waihou and Ohinemuri Rivers Improvements Acts of 1910, the Public Works Department objected in the warden's court to any developments that might mean tailings entering the river.⁶¹

As the under-capitalized individuals and syndicates proposing to mine at Waiorongomai wanted to avoid extra costs, they did not want to stack tailings. At a meeting in Te Aroha in February 1935, McMillan told miners that any big company would be able to use the Waiorongomai Stream as a sludge channel, even if that meant the river would have to be dredged, but until one were formed it was 'better to stack the tailings'. In response to Malcolm Hardy's request that tailings from his one-stamp battery be dumped in the Premier Creek, he said this 'small quantity would not make any difference'.⁶² Hardy then sought to put the tailings from crushing 20 tons daily in the stream, a request rejected by the mining inspector as far too high (and quite unreal, because Hardy had neither the ore nor the water

⁵⁷ Press cuttings, especially F. Lye M.P. in *New Zealand Herald*, 12 November 1932, Inspector of Mines, BBDO A902, MM113, ANZ-A.

⁵⁸ J.H. Bartlett, Objection to an Application, 9 December 1933, Te Aroha Warden's Court, Mining Applications 1933, 52/1933, BCDG 11289/2a, ANZ-A.

⁵⁹ Te Aroha Warden's Court, Register of Applications 1934-1961, 4/1934, BBAV 1505/2a, ANZ-A.

⁶⁰ A.H. Kimbell to J.F. Downey, 10 October 1934, Inspector of Mines, BBDO A902, MM113, ANZ-A.

⁶¹ Te Aroha Warden's Court, Mining Applications 1934, 24/1934, BCDG 11289/3a, ANZ-A.

⁶² Minutes of Meeting of 25 February 1935 between Minister of Mines, Waiorongomai Gold Mines, and Malcolm Hardy, Inspector of Mines, BBDO A902, MM113, ANZ-A.

power to treat 6,000 tons a year).⁶³ Hardy, with typical persistence coupled with grandiose dreams,⁶⁴ in 1938 was still pestering the Mines Department for permission to put 15 tons per day into the stream for ten years.⁶⁵

THE TOWN WATER SUPPLY AND MINING IN THE 1940s

In the late 1930s, prospectors sought access to the borough water catchment area. At first the council refused permission because of fears of polluting their water supply, but rescinded this decision because pollution was unlikely and it wanted to encourage prospecting; but prospectors were warned that, should the water be affected, their claims would be forfeited.⁶⁶

The appointment of Norman Annabell as engineer to the Te Aroha Borough Council in 1942 had significant repercussions for future council debates over pollution.⁶⁷ Under pressure from the Medical Officer of Health, John Francis Dawson, he was required to improve the quality of the borough's water supply. After discussions with Annabell during 1946, in the following January Dawson asked the council when it would 'effectively chlorinate' this, reminding it that as the water was 'liable to contamination' the 'only safe precaution' was 'effective chlorination'.⁶⁸ Annabell responded by sending a sketch of the temporary chlorination plant being installed at the quarry reservoir which, if satisfactory, would be used at the Ruakaka one. As he was proposing major changes to reservoirs and feeder mains 'it would be wasteful to put in an elaborate and expensive chlorine plant at present' that might be scrapped later.⁶⁹

⁶³ J.F. Downey to A.H. Kimbell, 15 March 1935, Inspector of Mines, BBDO A902, MM113, ANZ-A.

⁶⁴ See paper on his life.

⁶⁵ P.C. Webb (Minister of Mines) to Malcolm Hardy, 11 September 1938, Inspector of Mines, BBDO A902, MM113, ANZ-A.

⁶⁶ Warden's Court, *Te Aroha News*, 30 April 1937, p. 5, 14 May 1937, p. 5.

⁶⁷ *Te Aroha News*, 2 February 1942, p. 4.

⁶⁸ J.F. Dawson (Medical Officer of Health) to Town Clerk, Te Aroha, 15 January 1947, Health Department, YCBE 1990/404a, ANZ-A.

⁶⁹ Norman Annabell to J.F. Dawson, 10 February 1947, Health Department, YCBE 1990/404a, ANZ-A.

Early in 1948, when Benjamin John Dunsheath, promoter of the Auckland Smelting Company,⁷⁰ and his assistant, Harold James Samuel Bassett,⁷¹ applied to prospect within the catchment, Annabell sought Dawson's advice about controlling this area. Dawson considered it 'possible that even a rumour of success' might bring 'an influx' of other prospectors, 'with consequent danger of polluting' the water supply, and warned that 'too much reliance' should not be placed on the present chlorinating system. He recommended that the council use Section 62 of the Health Act of 1920 to obtain control over the catchment.⁷² Although the council formally objected to the prospecting license, it withdrew its opposition after the prospectors promised they would open up their ground by tunnelling either from the Mangakino Valley or from below the catchment, which would be unaffected apart from ventilation shafts.⁷³

In May 1948, when Annabell recommended that the council take control of the catchment, some councillors did not want to jeopardize mining, one in particular, William Charles Kennedy,⁷⁴ a consistent proponent of mining,⁷⁵ dismissing this 'pet scheme of the engineer' because there was 'no need to be unduly alarmed':

This matter has been considered by past councils, who have always been satisfied with the present position and opposed to creating any impression that they were against mining. I suggest that when the Council gives an indication that it doesn't want these things, the engineer should just forget them.

Although two other councillors agreed, the majority voted to reserve the area.⁷⁶ In July Dunsheath announced plans to produce 4,000 tons of lead annually, claiming his company would treat its ore 'by a modern method which would not give rise to harmful fumes in the atmosphere'. He complained to the *Te Aroha News* that although the project had government

⁷⁰ See paper on this company.

⁷¹ See paper on prospectors in the 1930s.

⁷² J.F. Dawson to Town Clerk, 26 April 1948, Health Department, YCBE 1990/404a, ANZ-A.

⁷³ Norman Annabell to Te Aroha Borough Council, 14 November 1948, A/26/6/1, Matamata-Piako District Council Archives, Te Aroha.

⁷⁴ See Charles Kingsley-Smith, *This is Te Aroha* (Te Aroha, 1980), p. 97.

⁷⁵ See paper on the Depression years.

⁷⁶ *Te Aroha News*, 21 May 1948, p. 5.

approval, the council had so far refused permission to work the ore from the surface because the seam was within the waterworks reserve. He stressed the value to New Zealand of his mine providing all its lead needs at a time when supplies from overseas were difficult to obtain, and promised to create 100 jobs. There would be no pollution: 'The slag from the smelting works, which by the process used trapped the sulphur fumes, broke down into a fine dust, and could readily be used for filling swampy land in the vicinity of the borough. The sulphur was then water-soluble and would drain away into the subsoil'. As debris would not enter a stream, the water supply would not be polluted. Bassett produced an analyst's report on the Tui, Omahu, and Tunakohoa Streams showing them to be first-class drinking water.⁷⁷ Annabell responded that granting this license would mean all future applicants would also receive licenses, leading to mining 'over the whole water catchment area within a short period', with 'disastrous' effect. If mining was permitted, the Health Department might require a chlorinating plant, new and larger pipes, larger reservoirs, and ultimately even a new supply from the Waiorongomai Valley, possibly costing £42,400. In recommending that the council avoid all risks of pollution, he argued that 'a pure water supply was probably of more value to the residents of Te Aroha than all the mining, past and future'.⁷⁸

Annabell had reported that water was drawn for domestic purposes from the Omahu and North and South Tunakohoa Streams. The demand for water was 'steadily increasing', and 'the whole of the summer flow, and a considerable part of the winter flow' would be required from these streams 'for many years to come'. He reminded councillors of their predecessors' successful resistance to mining applications in the catchment, and estimated the cost of providing a new supply as £10,000 higher than the *Te Aroha News* had reported.⁷⁹ Two days later he pointed out that when Dunsheath and Bassett had applied for a prospecting license in May, the State Forest Department, the owner of the land, had objected because prospecting within the catchment 'would be contrary to the public interest'. The Health and State Forest Departments should be consulted before concessions were granted. Cutting mining timber, if on a large scale, would spoil the scenery and could create a fire danger. Dawson had indicated 'a

⁷⁷ *Te Aroha News*, 2 July 1948, p. 5.

⁷⁸ *Te Aroha News*, 2 July 1948, p. 5.

⁷⁹ Norman Annabell to Te Aroha Borough Council, 28 June 1948, Health Department, YCBE 1990/404a, ANZ-A.

possibility of lead poisoning or other effects from the mine water', and wanted to check the applications so he could advise on filtration. As for sewage, although latrines would be provided for the up-to-30 men Dunsheath expected to employ, it was

reasonable to assume that men working in the mine (probably half a mile away) would leave their excreta there, to be pumped out with the mine water. This could flow via the streams and water service pipes to parts of the Borough within a few hours. If any man is a "carrier" of disease the danger would be great. It is understood that even chlorination is not fully effective against certain germs. In any case the idea is repulsive.

He concluded that there was no need to use the catchment if the mine entrance was, as first proposed, on the eastern, or Mangakino Valley side, of the ridge.⁸⁰

On 3 July, Dunsheath assured the mayor, William Alexander Clark,⁸¹ that he would not contaminate the water supply and would 'take all necessary steps and precautions', such as providing lavatories, 'TO THE SATISFACTION OF THE MINISTER OF HEALTH'. An additional offer, provided Clark granted his request 'at once', was to deliver 'free at the swamp at town end of the Bridge the Slag from the Smelting Works'.⁸²

These arguments resulted in several visits to the site of the proposed workings by councillors, Annabell, and Dawson, and the latter sent water samples provided by Annabell to be tested for lead content.⁸³ While testing was underway, Clark discovered that the State Forest Service, not his council, controlled the catchment. Once informed, councillors again debated the issue, some wanting to prevent pollution and incurring the costs of chlorination and filtration while others did not believe there would be any pollution and anticipated local prosperity. They acknowledged that the warden and the Conservator of Forests would make the decision.⁸⁴

⁸⁰ Norman Annabell to Te Aroha Borough Council, 30 June 1948, Health Department, YCBE 1990/404a, ANZ-A.

⁸¹ *Piako Electoral Roll, 1949*, p. 42.

⁸² B.J. Dunsheath to W.A. Clark, 3 July 1948, Health Department, YCBE 1990/404a, ANZ-A.

⁸³ J.F. Dawson to K.M. Griffin, 12 July 1948, Health Department, YCBE 1990/404a, ANZ-A.

⁸⁴ *Te Aroha News*, 23 July 1948, p. 5.

While the warden's decision was awaited, Dunsheath informed ministers that Annabell 'was biased' about pollution.⁸⁵ One of his associates sent the Minister of Public Works a leaflet about the company's plans and sought his support against Annabell, who was described as placing 'every possible obstacle' in their way. 'We do not know to what extent he is serious in his opposition to our scheme on the grounds that we might contaminate the Borough Water Supply as a result of one of our men possibly being a Typhoid carrier. This is, to our minds and the minds of practically every councillor there, very fantastic'. He claimed the council wanted the mine, and complained that Annabell had the support of Dawson, who in refusing to discuss the issue told the company to 'leave it to the Borough Council', which was 'very unfair'. They recommended removing the Tui Stream from the water supply.⁸⁶ Dunsheath's arguments were repeated verbatim by one of Te Aroha's self-styled mining experts, Charles Scott,⁸⁷ in a letter to the Minister of Mines at the end of August.⁸⁸

When the warden's court met in mid-August, the *Te Aroha News* reported that a 'formidable list of objections, 14 in all from five different sources, met the application'. Dunsheath's counsel stated that, 'while there was an apparently formidable list of objections and it was proper for local bodies to be on the alert', he 'suggested that many of their fears were groundless, and their officers had probably been prompted more by fear of possibilities than of actual probabilities'. He gave assurances that 'no debris would be deposited in the Waihou or its tributaries, and no trees or other vegetation would be moved apart from the actual tunnel mouths'. His client was 'prepared to accept any reasonable' conditions. As for polluting the water, he insisted 'there had been no evidence of pollution in the past when there had been other mining'; as for the exposed lead, 'the supply had been running over lead deposits for years without complaint'. He provided details 'of methods by which the Tui stream could be cut out of the water supply altogether'.⁸⁹

⁸⁵ Chief Private Secretary to Prime Minister to Private Secretary to Minister of Mines, 4 August 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

⁸⁶ William Daubney to Minister of Public Works, 5 August 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

⁸⁷ See paper on prospectors during the Depression.

⁸⁸ Charles Scott to Minister of Mines, 31 August 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

⁸⁹ *Te Aroha News*, 13 August 1948, p. 5.

Dunsheath, the first person to give evidence, claimed to be ‘prepared to negotiate’ and meet objections ‘within reason’. There would be no surface working, only a yet unknown number of tunnels; the alternative access to the lode from the Waitawheta side was ‘ridiculous’. In reply to the council’s solicitor, he insisted that ‘no debris’ would end up in the river. ‘Intend using spoil for filling areas. Is agreeable to condition being imposed’. Trees would only be removed when ‘necessary for tunnelling’. His metallurgist, Bassett, insisted that the ‘only approach to reef is Tui gully’, and that the Tui Stream alone would be affected.⁹⁰ ‘There was not much water in the Tui creek at the mine site and he understood it was dry in summer’.⁹¹ They would drive to ‘pick up reef & run along reef. Possibly 2 other drives. No necessity [to] have other surface workings. Main drive [to] go through [to] Paeroa side without breaking surface. Not a great deal of water.... No impurities there to contaminate water’. Water already came from the existing drives into the stream, and he did not ‘envisage any worsening water’. As for slag from the smelting process, it would be ‘suitable for filling. Very useful for fillings. Can be disposed of without dumping’. Although he did not know what treatment process would be used, there would be ‘no sulphur treatment’, and the fumes would be no worse than the smoke from railway engines. He stated there had been ‘no complaints in Auckland’,⁹² where he operated ‘a similar plant in the heart of the city’.⁹³

Kennedy claimed to have known the area for 70 years; ‘Never heard of contamination before’. An ex-miner from Waiorongomai, Norman Neilson,⁹⁴ also claimed to know the area well. ‘Water comes through tunnel. No water at head’. Neither was questioned.⁹⁵ The tunnel Neilson referred to ‘was known as No. 4 tunnel’, through which the Tui Stream had run ‘for years’.⁹⁶

The council’s solicitor, Peter Gilchrist, opened his case by noting that, as ‘mining had been considered a thing of the past’, with ‘the tacit assent of

⁹⁰ Te Aroha Warden’s Court, Notes of Evidence at Hearing of 11 August 1948, General Correspondence 1948, BBAV 11584/7a, ANZ-A.

⁹¹ *Te Aroha News*, 13 August 1948, p. 5.

⁹² Te Aroha Warden’s Court, Notes of Evidence at Hearing of 11 August 1948, General Correspondence 1948, BBAV 11584/7a, ANZ-A.

⁹³ *Te Aroha News*, 13 August 1948, p. 5.

⁹⁴ See paper on prospectors in the 1930s.

⁹⁵ Te Aroha Warden’s Court, Notes of Evidence at Hearing of 11 August 1948, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

⁹⁶ *Te Aroha News*, 13 August 1948, p. 5.

State Departments the Borough had harnessed the streams for its water supply, and today had one alternative only, an expensive one, to that supply'.⁹⁷ None of the 2,500 residents or 699 farmers supplying the co-operative dairy had an alternative supply. He considered there was a 'grave risk' of contamination, with pollution 'certain' and lead poisoning a possibility.⁹⁸ Both the council and the Health Department considered that having 'men in the catchment area made pollution a certainty. Chlorination and filtration to eliminate pollution and lead poisoning would cost far more than the Borough could afford. It was a question of the health of the community versus the wealth of a few'.⁹⁹

Annabell stated that until the present there had been 'no cause to worry over pollution'. Of the 300,000 gallons required daily, over the past 20 or so years about half had come from the Tui catchment, and in dry weather there would be insufficient if this water could not be used.¹⁰⁰ 'The borough was a hundred thousand gallons a day short during dry spells', and this supply 'had been made pure after consultation with the Health Department over protective measures, which included closing the catchment area to trespass'. To preserve water purity, men must be kept out of the catchment. It would cost £15,800 to build a proper chlorination and filtration plant.¹⁰¹ Tests had shown that the water was impure.

For 6 years trying to get pure supply. My reasons:

Human pollution
& Lead poisoning

Human Pollution:-

Afraid improper use of conveniences. Miners not careful excreta.

Goat contractors:

Cut off water for about 3 weeks

Whilst these contractors worked there, 'we do not chlorinate for minor risks. Med Officer wants something better'. He had been inside the No. 4 level, and seen water flowing into the Tui Stream. 'More working more risk.

⁹⁷ *Te Aroha News*, 13 August 1948, p. 5.

⁹⁸ Te Aroha Warden's Court, Notes of Evidence at Hearing of 11 August 1948, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

⁹⁹ *Te Aroha News*, 13 August 1948, p. 5.

¹⁰⁰ Te Aroha Warden's Court, Notes of Evidence at Hearing of 11 August 1948, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹⁰¹ *Te Aroha News*, 13 August 1948, p. 5.

I must adopt a cautious attitude'. Under questioning, he agreed there could be more storage and admitted having spent only one hour at the site.

Dawson agreed that filtration would remove lead and chlorination would 'purify b/coli', and revealed that his inspection had only lasted about half an hour.¹⁰² His tests

were not considered as strict evidence as they had come from the whole supply. A sample drawn from a pool at the entrance to the old working showed a lead content of 4.38 parts per million, and the standard of safety was .1. The Department was not over-anxious regarded infection from *b. collae* in view of past outbreaks of typhoid traceable to water supplies. He agreed ... that there was no more danger in the future than in the past.¹⁰³

The medical officer of health at Paeroa, Lionel Stanley Davis, confirmed Dawson's opinion about contamination, which 'must be regarded as serious'.¹⁰⁴ The clerk of the Hauraki Catchment Board provided supporting, but unrecorded, evidence.¹⁰⁵

Warden Freeman, a strong supporter of mining,¹⁰⁶ was clearly irritated by Annabell's evidence, as indicated by the following exchange when goat hunters were mentioned:

Witness said that they were under control, which drew the remark from the Bench that if goat-shooters were under witness' control then of course they must do the right thing. Mr Freeman asked what guarantee witness could give that goat-shooters operating out of sight would not contaminate the supply. Witness also agreed that he had known no case of lead poisoning.¹⁰⁷

¹⁰² Te Aroha Warden's Court, Notes of Evidence at Hearing of 11 August 1948, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹⁰³ *Te Aroha News*, 13 August 1948, p. 5.

¹⁰⁴ Te Aroha Warden's Court, Notes of Evidence at Hearing of 11 August 1948, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹⁰⁵ *Te Aroha News*, 13 August 1948, p. 5.

¹⁰⁶ Statement by Cecil Henry Benney (Under-Secretary, Mines Department), in Town Clerk's Office, 'Confidential Report of Delegation to Wellington to meet members of the Government in connection with Water Rights over the Waiorongomai and Pohomihi Streams', 9 February 1951, Health Department, YCBE 1990/524a, ANZ-A.

¹⁰⁷ *Te Aroha News*, 13 August 1948, p. 5.

Freeman also clashed with Annabell when the latter was asked whether the mayor had been correctly reported as stating that, whilst the council did not want to prevent prospecting, it did not want to throw away the water rights of the residents:

Mr Annabell: "I wouldn't say that; it is the opinion of one man."

Mr Sinclair: "All I want to know is whether it is a fair report."

The Warden, Mr W. H. Freeman, S.M.: "Just give a straight answer to the question, Mr Annabell. Did Mr Clark say that?"

Mr Annabell: "Yes."

Mr Freeman: "Then that is the answer to the question. You are an employee of the Council, you know, not the Council itself."¹⁰⁸

Freeman's comments after all the evidence was given provided a strong indication of his likely decision: 'Asking why a genuine effort to mine lead and not shareholders should be stopped, Mr Freeman observed that a community had either to progress or sit down and die. He was just as vitally interested in the health of the community as in opening a potentially valuable mineral deposit'.¹⁰⁹ When he adjourned the matter 'to enable Dept heads' in Wellington 'to determine whether Mining should be carried on or not', Dunsheath's counsel asked for an immediate decision because his clients were ready to start work. 'Health must be safeguarded. Ways & means can be found to overcome objection. In public interest even to British Commonwealth'.¹¹⁰ However, Freeman adjourned giving his decision until the next sitting, on 15 September, for the reason given.¹¹¹

Immediately after the hearing, two letters to the *Te Aroha News* applauded Freeman's comment that 'a community had either to progress or sit down and die'. These correspondents wanted the prosperity they were certain mining would bring; should there be any pollution, the government

¹⁰⁸ *Te Aroha News*, 17 August 1948, p. 5.

¹⁰⁹ *Te Aroha News*, 13 August 1848, p. 5.

¹¹⁰ Te Aroha Warden's Court, Notes of Evidence at Hearing of 11 August 1948, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹¹¹ Objection by Paeroa Borough Council, 16 August 1948; Objection by Te Aroha Borough Council, 19 August 1948; Carden and Sinclair to Ministers of Health, Lands, and Mines, 25 August 1948, Te Aroha Warden's Court, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

could give back some of its large mining royalties to bring in a new supply from the Waiorongomai and Wairakau Streams.¹¹²

Almost immediately, the Paeroa Borough Council lodged an objection, for although its water supply was safe if there was no mining within 50 feet of the surface, it feared that Te Aroha's supply would be polluted. It wanted the issue 'fully investigated now before it is too late, to determine whether or not mining should be permitted at all, under any conditions, in the Catchment area'.¹¹³ Three days later, the Te Aroha Borough Council expressed its fear of 'the complete loss of the major portion' of its water supply. 'Mining has been almost dead here for many years', and restarting it would pollute the supply, which it could not afford to chlorinate or filtrate. More applications for prospecting were likely, Dunsheath having two awaiting decisions on 15 September.

The matter is a very urgent and vital one and the Council submits that the question of mining or preservation of its water supply and the health of the inhabitants should be thoroughly investigated by the departments concerned before the present mining application is taken further. The Council considers a decision should be made before it is too late as to whether or not mining under any conditions should be permitted in this area.¹¹⁴

Dunsheath's solicitor, who had received copies of these submissions, which had been sent to the ministers of Mines, Forestry, Health, and Lands, expressed 'great surprise' at the statement that 'at the hearing it was stressed by Counsel for the Paeroa Borough Council that the case covered extremely important policy matters which should be referred to the appropriate Heads in Wellington for discussion and decision'. He denied Freeman had adjourned his decision 'to enable all Counsel to make submissions to the Heads of departments concerned'. As the issue was sub judice, 'any attempt to invoke Departmental interference with the jurisdiction of the Warden is improper'. Departments should delay making

¹¹² Letters from 'Ratepayer' and 'Argus', *Te Aroha News*, 17 August 1948, p. 4.

¹¹³ Objection by Paeroa Borough Council, 16 August 1948, Te Aroha Warden's Court, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹¹⁴ Objection by Te Aroha Borough Council, 19 August 1948, Te Aroha Warden's Court, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

submissions until after the decision had been announced.¹¹⁵ The solicitor, in sending a copy of this opinion to Freeman for his information, explained that, despite considering the matter sub judice, as the borough councils had made submissions he had responded in it.¹¹⁶

Freeman's delivered his decision on 15 September, as planned. He covered all the objections raised, starting with Dawson's claims about lead entering the water from mining and miners spreading b.coli, quickly disposing of both:

The evidence falls far short of satisfying me that a real danger of lead poisoning will be created by the proposed operations. The witnesses admit that at the present time a certain amount of water gathered for the water supply passes over numerous outcrops of lead ore in the Tui area and there has been no undue concentration of lead content discovered in the main water supply. This position has existed over a long period. Reference was made to a certain sample taken from a semi-stagnant pool in a lead face which showed an excessive proportion of lead. Dr Dawson, however, admitted that this could not be taken as an indication of any danger by reason of the fact that by the time this water would reach the main reservoir dilution would render any undue lead content harmless. The witnesses expressed fear of undue pollution by reason of the fact that further lead surfaces would be exposed to the water by the workings. To my mind, the evidence is insufficient to support this.

As to b.coli ... it is admitted that at the present time a number of people ... roam about the area. The water supply is not contaminated at present.

Adequate sanitary arrangements would prevent any dangers. He rejected as 'not supported at all by evidence' the council's objections that there was 'grave risk of damage' to its pipelines, flumings, dams and reservoirs, and that there would be 'grave risk of fire'. He dismissed the Paeroa Borough Council's worries about pollution of its water supply and the Hauraki Catchment Board's concerns about tailings entering the Waihou and about clearing vegetation resulting in erosion. As there was 'no evidence' that the bush was 'likely to be damaged in any way whatsoever'

¹¹⁵ Carden and Sinclair to Ministers of Health, Lands, and Mines, 25 August 1948, Te Aroha Warden's Court, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹¹⁶ Carden and Sinclair to Warden, 25 August 1948, Te Aroha Warden's Court, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

he rejected the objection of the Conservator of Forests. In an addition to his original draft decision,¹¹⁷ he commented that ‘although the opposition to this application appeared somewhat formidable at the commencement of the hearing, the evidence produced was to my mind very weak’, and accordingly granted the application for a special quartz claim covering 100 acres.¹¹⁸

The *Te Aroha News* commented that ‘progressive elements’ would be pleased, and agreed with Freeman that the opposition was ‘only weakly supported in evidence’. Either medical knowledge about lead poisoning and the incidence of b.Coli was ‘insufficient to be the basis of a case, or else the case was not prepared as thoroughly as it might have been’. The evidence was ‘vague and inconclusive’, and ‘much more investigation by sampling should have been made to enable the evidence to be produced in concrete form. As it was the witnesses’ remarks were confined largely to impressive generalisations’. It recommended diverting the upper portion of the Tui Stream, thereby making little impact on the water supply and fully protecting its purity, and concluded by hoping the mine would be the success its promoters anticipated.¹¹⁹

The fight was not over. Dunsheath, when telling the Mines Department of his victory, added that ‘it was very noticeable that the Borough Engineer strongly resented the Warden’s decision and ... made an audible comment at the close of proceedings to the effect that “this is not the last word”’.¹²⁰ Immediately after the judgment was given, Annabell wrote privately to Dawson:

I’m not jubilant about the Wardens finding etc. He seemed to follow one line and was not impressed with other evidence. Cannot find any record of contra evidence. If the Minister of Mines grants the mining license we will certainly have some problems to face - thanks to the failure in backing up your original recommendations last year!

¹¹⁷ Draft Decision of Warden, n.d., Te Aroha Warden’s Court, Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹¹⁸ Judgment of W.H. Freeman (Warden), 15 September 1948, Health Department, YCBE 1990/404a, ANZ-A.

¹¹⁹ Editorial, *Te Aroha News*, 17 September 1948, p. 4.

¹²⁰ B.J. Dunsheath to C.H. Benney, 16 September 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

If the Tui gully is “cut out” from our water service we could get over the lead poisoning problem, but we would not have any control whatever over the miners or their movements. In event of the Minister failing to protect the water supply in connection with this present application, we must move “heaven & earth” to get the remaining catchment area removed from the provisions of the Mining Act before any further licenses were granted.¹²¹

The day before Freeman’s decision was delivered Dawson had told a Te Aroha doctor, William Richard Lawrence,¹²² that because the sample taken from a small stream coming from one of the old workings had 4.38 parts of lead per million he had had the town’s water supply tested for lead, and the result, just received, revealed lead of 0.1 parts per million.

The American standard to lead content indicates that water should not contain more than .01 parts per 100,000, so it will be seen that the Te Aroha water contains a fair proportion of lead. Although this is the case I doubt very much if it has had any adverse effect on the health of the people of Te Aroha but as you have been in practice there for a long time you might perhaps be able to give me some information as to whether you consider that the water may have been responsible for any of the illnesses occurring in your patients over the long period.¹²³

Lawrence replied that in his 27 years of practice there no patients had been affected by lead.¹²⁴

The lawyer who had represented the Paeroa Borough Council asked his Member of Parliament who would ‘foot the bill that would be necessary to stop a huge mining concern in full blast when it is discovered that the medical officers were right?’¹²⁵ The day after Freeman’s decision, the Te Aroha council’s solicitors asked Dawson to support their submission to the Mines Department:

¹²¹ Norman Annabell to J.F. Dawson, 15 September 1948, Health Department, YCBE 1990/404a, ANZ-A.

¹²² See Kingsley-Smith, pp. 96, 121.

¹²³ J.F. Dawson to W.R. Lawrence, 14 September 1948, Health Department, YCBE 1990/404a, ANZ-A.

¹²⁴ W.R. Lawrence to J.F. Dawson, 21 September 1948, Health Department, YCBE 1990/404a, ANZ-A.

¹²⁵ O’Neill and Harris to A.S. Sutherland, M.P., 16 September 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

The questions of the preservation of the quality of the Borough Water supply is a very urgent and serious one and it would appear that the Warden has treated the evidence very lightly and has ignored that given by both Dr Davis [Medical Officer of Health in Ohinemuri] and yourself.

The Warden makes no recommendation as to any course or action or any protection for the supply for the future. We think at least he should in his recommendation state that conditions should be on the license granted, either for immediate cancellation in event of pollution or for the Borough of Te Aroha to have some remedy available. He allows nothing.¹²⁶

Dawson sent a copy of this letter along with Freeman's judgment to T.R. Ritchie, the Director-General of Health, and reported on the tests for lead. He noted that the bacteriological quality of the water varied sometimes and that in January 1948 a sample revealed 180 b.coli per 100 millilitres, meaning there was 'more than a possibility of the lead content' becoming higher than the United States' minimum standard. 'In view of the disaster which occurred in the borough of Croydon some years ago' he would 'feel very perturbed if mining was to be allowed on the Borough Catchment area unless every precaution was taken' to protect residents' health. If mining took place, 'the water supply should be both filtered and chlorinated', but at present the chlorination equipment was 'very primitive' and did not 'always render the water safe'. He urged the Health Department to make submissions to the Minister of Mines.¹²⁷

At the end of September, the Mines Department informed the mining registrar at Te Aroha that Dunsheath's application would be approved 'provided the following conditions were endorsed on the license':

1. Latrines and sanitation were to be approved by the Medical Officer of Health, and 'all excreta must be disposed of beyond the confines of the Watershed'.
2. All water entering the Tui dam was to be chlorinated, Dunsheath 'to bear such proportion of the cost' as the warden determined.
3. No timber was to be cut nor any trees felled.

¹²⁶ Gilchrist Sons & Burns to J.F. Dawson, 16 September 1948, Health Department, YCBE 1990/404a, ANZ-A.

¹²⁷ J.F. Dawson to T.R. Ritchie (Director-General of Health), 20 September 1948, Health Department, YCBE 1990/404a, ANZ-A.

4. Only underground mining was permitted, and the licensee was 'to do as little damage as possible to the surface of the land'.
5. No tailings, debris, or refuse was to be deposited or discharged into any stream.
6. Ore broken out was to be removed 'as rapidly as possible and stockpiles of ore shall be kept at a minimum'.
7. The Inspector of Mines was to approve all stockpiles, which were to be securely covered to prevent rain coming into contact with the ore.
8. No ore was to be treated within the watershed.
9. The Medical Officer of Health could order any water from the workings to be piped into a stream 'below the point of intake of the Borough water supply'.
10. If 'the lead content of the water should rise approaching the margin of safety, any remedial action that the Medical Officer of Health should require will be carried out and if need be all mining operations [must] be discontinued'.¹²⁸

During October, officials considered the likelihood of the water being poisoned by lead. Felix John Theodore Grigg,¹²⁹ Director of the Dominion Laboratory, Department of Scientific and Industrial Research, commonly known as the Dominion Analyst, warned the under-secretary of the Mines Department, Cecil Henry Benney, that lead could pollute water; one day later he was presumably misquoted as having said 'off hand' that the solubility of galena in water was 'so low as to be negligible'.¹³⁰ Kenneth Massy Griffin,¹³¹ Government Analyst in Auckland, considered Freeman had wrongly dismissed the dangers of contamination and urged a closer

¹²⁸ C.H. Benney to Mining Registrar, Te Aroha, 30 September 1948, Te Aroha Warden's Court, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹²⁹ See *New Zealand Herald*, 15 January 1916, p. 5, 14 May 1925, p. 10, 5 March 1937, p. 12; *Auckland Star*, 8 December 1945, p. 7.

¹³⁰ F.J.T. Grigg (Director, Dominion Laboratory, DSIR) to C.H. Benney, 13 October 1948; J.H. Baxter to C.H. Benney, 14 October 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

¹³¹ See *New Zealand Herald*, 6 August 1926, p. 15, 29 November 1945, p. 9; Probates, BBAE 1570, P610/1972, ANZ-A.

investigation by the Department of Health.¹³² Robert Faulks Landreth, a mining engineer working for the Mines Department, assured Benney there would be no dangerous lead contamination: 'The area of lead ore made available to the action of rain water by prospecting must be negligible compared to the whole area over which rain falls in the catchment area'.¹³³

Two different recommendations were submitted to the Minister of Mines on 2 November. Benney recommended vigorous prospecting without mentioning the lead poisoning or b.coli issues, merely noting that Dunsheath had promised to put any treatment plant 'on the flat well below the water works'.¹³⁴ In contrast, the Minister of Health warned that the danger of typhoid from men working continuously in the watershed required the water supply to be chlorinated. Lead exposed by mining could be dissolved because the water was 'of an acid nature', and as there was no known way by which dissolved lead could be removed he strongly recommended that Freeman's recommendation be refused.¹³⁵ The Minister preferred his department's view, assuring his colleague that New Zealand would benefit from the development of a lead mine and the health dangers could be avoided.¹³⁶

Simultaneously with these discussions, Annabell provided more details to those involved in the debate. Dawson was given a chronology of the attempt after 18 May to take control over all the catchment area, and how the Conservator of Forests, although declining to vest the requested 1,000 acres in the council, had promised to protect the water. Freeman had ignored all objections to mining and placed no conditions on it despite having three months previously permitted prospecting 'subject to certain partly satisfactory conditions' that no surface prospecting take place without prior written consent from the council and that precautions to its satisfaction must be taken 'to prevent damage to the bush by fire or by

¹³² K.M. Griffin to Dominion Analyst, 15 October 1948, Health Department, YCBE 1990/404a, ANZ-A.

¹³³ R.F. Landreth to C.H. Benney, 21 October 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

¹³⁴ C.H. Benney, to Minister of Mines, 2 November 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

¹³⁵ Minister of Health to Minister of Mines, 2 November 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

¹³⁶ Minister of Mines to Minister of Health, 11 November 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

Prospecting or work of any kind'. He requested help from the Health Department to obtain control of the catchment.¹³⁷ Annabell next wrote to Grigg explaining that Dunsheath had promised, in May, to open the mine either from the Mangakino Valley or by tunnelling below the catchment area, and would have no surface working of any kind in it. After listing all the objections raised at the hearing he argued that Freeman had 'failed to note many of the important points, particularly the dangers to public health through B coli and lead poisoning' from this and future mining licenses.

Under sections 61 and 63 of the Health Act action can only be taken against offenders AFTER pollution - but apparently not before the event! As all the streams, except the Omahu, are sludge channels there does not appear to be any means of preventing pollution if the mining licenses are issued. Apparently the Borough Council would be almost powerless to prevent licensed miners putting tailings, sludge, polluted or poisoned mine water into the streams.

If the water supply was polluted and the Health Department required the borough to find another one, the most feasible one was the Waiorongomai Stream, a sludge channel in an area with extant mining rights. £20,000 had been spent providing a supply, and another £40,000 or more could be required to provide a new one, all 'to allow private enterprise to dig out a small quantity of minerals'. Another two applications for licenses in the Te Aroha and Paeroa catchments had been lodged, more were likely, 'and the waterworks will be overrun with trespassers and workers. It will then be impossible to prove who has polluted or poisoned the water supply'. He concluded that 'the safest protection to the public, both for health and finance, would be to prevent mining in water catchment areas which are at present free. They should be withdrawn from the Mining Act and reserved for Water Supply'.¹³⁸ After Grigg visited, he informed the Mines Department that he could not devise a way of satisfying both the mining interests and meeting the health concerns, and recommended that

¹³⁷ Norman Annabell to J.F. Dawson, 1 November 1948, Health Department, YCBE 1990/404a, ANZ-A.

¹³⁸ Norman Annabell to F.J.T. Grigg, 10 November 1948, Health Department, YCBE 1990/404a, ANZ-A.

the applicants not be granted a license 'in view of the difficulties in controlling their activities'.¹³⁹

Impatient to start work, on 2 December Dunsheath sought an interview between himself and his 'technical adviser' with the Minister of Mines. Benney responded that this was 'premature' until agreement had been reached on conditions, but promised to send him the draft conditions before submitting these to the Minister.¹⁴⁰ Dunsheath then relayed his 'very interesting interview with the Mayor and Town Clerk', which had revealed that 'for personal reasons, and personal reasons alone, the opposition of the Health Department is being kept alive and indeed intensified', without explaining the nature of these 'personal reasons'.

The danger to health of the citizens of Te Aroha is already present, for at the Council Meeting of 16th November the Medical Officer of Health told the Council that samples of water he had taken within the Borough had shown a count of 35 b.collae per 100 cubic centimetres, which he said was not a satisfactory result in a chlorinated supply. The Borough Engineer, at the same Council Meeting, said they had had similar trouble with previous samples and he blames the tourists' domain as being the cause. Councillors of Te Aroha state that the Borough Council Quarry which adjoins their water reservoir close to the town, has no proper sanitation for all its workmen, and these same Councillors strongly resent attempts by the Engineer to hold up Lead Mining three miles away from the town on the score of possible contamination, when existing contamination is right within the Borough within a quarter of a mile of the Council Chambers.

We have the highest skilled engineers, both mining and geological and sanitary, operating on our behalf, as well as the advice of some of the leading medical men in the Dominion, including some from Wellington. All these gentlemen are most emphatic in stating that we should "get on with the job and produce the Lead," because any danger which does exist or is likely to be confronted in the near future can be counteracted in a really very elementary fashion.

The Borough Engineer induced the Manager of the local factory of the N.Z. Co-operative Dairy Co. Ltd., to write a letter stating that he could not make butter if these mining people started

¹³⁹ F.J.T. Grigg to C.H. Benney, 23 November 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

¹⁴⁰ Copies of telegrams in B.J. Dunsheath to C.H. Benney, 6 December 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

chlorinating the water. As you will see, this letter was inspired for a purpose,

once again unspecified. Dunsheath now proposed to follow Benney's advice of 2 December to diamond drill and overcome the opposition of the Health Department 'by obtaining access below the water catchment area'. A contract for the drilling had been arranged, and 'there would be no contamination whatever from water and sludge leaving the bores' because it required all sludge to be 'collected and taken away for complete examination along with the cores'. The contractor would house workers 'at approved locations, and guaranteed non-contamination of any streams'. He emphasized the great economic benefit of his proposed mine and the extra cost drilling would cost him:

I am sure you will appreciate my terrific efforts in this direction and would you be good enough to please solicit the interest of the Minister of Mines to overcome this pettifogging objection which is being raised and kept alive by one man, who in the Te Aroha District is not considered capable and reliable in respects of this kind. It is only necessary for you to send your representative to Te Aroha to discuss the matter with the various members of the Te Aroha Borough Council.¹⁴¹

When Dunsheath discussed his drilling proposal with the council on 14 December, Keith Beatson, the director of the Waihi School of Mines, assured it sludge from diamond drilling would not cause pollution: 'Washings from hold tapped to tank'.¹⁴² As Dunsheath described the discussion as 'long and acrimonious',¹⁴³ perhaps he did not have the degree of support amongst councillors he claimed.

Dawson considered the Mines Department's conditions to safeguard water quality were inadequate and wanted filtration and chlorination of the water supply because there was no guarantee workers would always use latrines, and disturbing the land would cause slips and pollution. In particular, 'any additional exposure of lead ore on the catchment area would

¹⁴¹ B.J. Dunsheath to C.H. Benney, 6 December 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

¹⁴² 'Notes of Statements made by Dunsheath and Beeson [correctly Beatson] to Council, 14 December 1948', A26/6/1, Matamata-Piako District Council Archives, Te Aroha.

¹⁴³ B.J. Dunsheath to C.H. Benney, 16 December 1948, Mines Department, MD 1, 10/27/124, ANZ-W.

considerably increase the risk of water passing the limits of safety for lead content'. As he doubted filtration would remove lead, he suggested that 'the possibility of removing it by some other process might be referred to the Department of Scientific and Industrial Research'. Ideally, tunnelling should be done from outside the catchment, as first proposed by Dunsheath.¹⁴⁴ The latter meanwhile protested that he was losing money by having to pay men who were not yet mining.

The instigator of the fourteen objections lodged against my application has boasted that he had taken steps to prevent my Mining Scheme going forward. He seems particularly jubilant and has even this last few days erected a large notice prohibiting any person passing through the pathway which leads to the Mine.¹⁴⁵

Dunsheath would have several more months of frustrating delays. On 28 April, the catchment and the proposed mine site was inspected by Dawson, Annabell, the mining inspector (Edward John Scoble), and the Director of the Division of Public Hygiene, after which the latter reported to the Director-General of Health:

At the higher levels the slopes are very steep and are literally dripping water, so that any pollution on the surface of the ground would inevitably and rapidly be washed down to enter the supply. In addition to its steepness the ground is very rocky so that the satisfactory burial of excreta will be difficult and likely to be done in a perfunctory manner. In many places water can be seen exuding from cracks in the rocks, so that even complete burial of faecal matter cannot be relied on to exclude the possibility of infection passing through fissured rock and entering the stream. The claim is well within the borough catchment area, and employees will have to pass through the catchment area, along about two miles of track, before reaching it. In addition to the original claim at least three other claims have been pegged and I understand that if the working of this claim is permitted very extensive mining activity is likely over a very large portion of the watershed.

¹⁴⁴ J.F. Dawson to Director-General of Health, 16 December 1948, Health Department, YCBE 1990/404a, ANZ-A.

¹⁴⁵ B.J. Dunsheath to C.H. Benney, 26 January 1949, Mines Department, MD 1, 10/27/124, ANZ-W.

He recommended that the borough operate 'an efficient automatic chlorinating plant' during mining and for at least one month after it ceased. It should analyze the water frequently, and if the lead content became 'unduly high' either mining must cease or 'water be obtained from a new source or the water be satisfactorily treated if an efficient method of lead removal' was 'practicable'.¹⁴⁶ The Director-General accepted his advise, informing the Mines Department that, as the amount of lead before mining had started was approaching the safe level, several claims could made this level dangerous, in which case mining might have to stop.¹⁴⁷

Although Scoble had explained that there should be no pollution from drilling, and that treatment at the foot of the mountain would not effect the water supply, he warned Benney that Dunsheath 'proposed to erect a smelting plant if operations reach the crushing stage, but in my opinion this should not be consented to as it would cause the destruction of all forest in the vicinity. Instead, the concentrates could be shipped to Australia for treatment'. Samples of lead pollution were obtained from high up the mountain, and although this might have little impact on the town supply he recommended that the Tui Stream, presently diverted into the reservoir, be restored to its natural channel. As for Annabell's insistence that the borough must have this water, Scoble commented that he seemed 'biased to an unreasonable extent against mining on the area', having 'nothing to say in favour of Mr Dunsheath's proposals'. He suggested as 'a possible solution to the impasse' that Dunsheath be asked to withdraw his present applications and then apply for a prospecting license over the area he planned to drill. Conditions would be imposed on this 'restricting his operations to drilling only, and ensuring that proper sanitary arrangements were made'.¹⁴⁸

The result of these discussions was that in May the Mines Department slightly revised its conditions by providing details of the types of latrines required.¹⁴⁹ Not till late August were these proposals approved by the

¹⁴⁶ F.S. Maclean (Director, Division of Public Hygiene) to T.R. Ritchie, 3 May 1949, Health Department, YCBE 1990/404a, ANZ-A.

¹⁴⁷ T.R. Ritchie to C.H. Benney, 4 May 1949, Mines Department, MD 1, 10/27/124, ANZ-W.

¹⁴⁸ E.J. Scoble (Inspector of Mines) to C.H. Benney, 6 May 1949, Mines Department, MD 1, 10/27/124, ANZ-W.

¹⁴⁹ C.H. Benney to T.R. Ritchie, 25 May 1949, Health Department, YCBE 1990/404a; for the conditions laid down in September 1948, see C.H. Benney to Mining Registrar, Te

Department of Health.¹⁵⁰ Presumably to end any more conflicts, Benney also recommended revoking the proclamation of the Tui Stream as a sludge channel.¹⁵¹ Annabell's immediate reaction to these revised conditions was that Dunsheath should meet the entire cost of chlorinating the water supply.¹⁵² Dawson's response was to worry about the 'difficulty of preventing careless miners from indiscriminate urination and defecation', having been informed by a sanitary inspector who had worked in Waihi 'for a considerable number of years' that appointing a miner as a vigilance officer had 'not been satisfactory'.¹⁵³ He told the council's works committee he was concerned 'about a possible outbreak of typhoid or other serious trouble', particularly if a carrier worked in the catchment, and insisted the water must be chlorinated.¹⁵⁴ In a special report produced in November, Annabell repeated the history of the controversy, emphasizing that the original agreement to avoid tunnelling within the catchment area had been dropped by Freeman:

It is because of this serious omission and deviation from the agreements that objections have since been necessary. It does not appear fair or reasonable that the issue of mining licenses, to benefit a few private individuals, should be considered more important than the danger of disease or pollution to the ratepayers' water supply. It is also unfair that the costs of the protective measures should be borne in any way by the ratepayers, who will not receive any direct financial benefit or royalties from the mining.

Aroha, 30 September 1948, Te Aroha Warden's Court, General Correspondence 1948, BBAV 11584/7d, ANZ-A.

¹⁵⁰ F.S. Maclean to Under-Secretary, Mines Department, 26 August 1949, Health Department, YCBE 1990/404a, ANZ-A.

¹⁵¹ C.H. Benney to Minister of Mines, 2 September 1949, Mines Department, MD 1, 10/27/124, ANZ-W.

¹⁵² Norman Annabell to J.F. Dawson, 6 September 1949, Health Department, YCBE 1990/404a, ANZ-A.

¹⁵³ J.F. Dawson to T.R. Ritchie, 9 September 1949, Health Department, YCBE 1990/404a, ANZ-A.

¹⁵⁴ Te Aroha Borough Council, Minutes of Meeting of the Works Committee held on 14 September 1949, A/26/6/1, Matamata-Piako District Council Archives, Te Aroha.

Mining could mean a cost of £500 a year to chlorinate and control the water supply, and its dangers outweighed 'all possible benefits from minerals which might be obtained'. The conditions suggested by the Mines and Health Departments placed 'enormous responsibilities and liabilities on the Council'.¹⁵⁵

A special council meeting held on 22 November was attended by Dawson, Arthur William Satchwell (Inspector of Health),¹⁵⁶ Annabell, the borough's solicitor and three representatives of the company, including the mine manager (Bert McAra) and Julius Hogben, its solicitor.¹⁵⁷ Hogben assured them only small samples would be taken for assaying, that 'it was the desire of the Company to give complete protection to the Council for its Water Supply', and suggested conditions to achieve this. The council approved prospecting on conditions that only six men would work within the catchment and if any danger to health was created Dawson was to stop all work until the pollution ceased.¹⁵⁸ The main change was that the licensee was to pay 'all costs and expenses in connection with Chlorination, Filtration and any other treatment required' by Dawson.¹⁵⁹ On the following day, when Freeman considered these new conditions, Hogben stressed that 'prospecting was not mining and if and when mining licenses were applied for, it might be necessary to make further conditions to safeguard the water supply'. After 'heated discussion' over the catchment board's worries about debris entering the river, worsening the existing flood problem, it was agreed that the new conditions would prevent this.¹⁶⁰ Some residents were still concerned about pollution, but McAra assured the

¹⁵⁵ Norman Annabell to Te Aroha Borough Councillors, 14 November 1949, A/26/6/1, Matamata-Piako District Council Archives, Te Aroha.

¹⁵⁶ See *Evening Post*, 17 February 1938, p. 14; Probates, AAOY 21078, W3298, box 541, 0443/68, ANZ-W.

¹⁵⁷ See paper on the Auckland Smelting Company.

¹⁵⁸ Te Aroha Borough Council, Minutes of Special Meeting of 22 November 1949, Te Aroha Borough Council Minute Book 1947-1950, pp. 436-437, Matamata-Piako District Council Archives, Te Aroha.

¹⁵⁹ Applications for Prospecting Licenses, 6, 7, 10/1949, A/26/6/1, Matamata-Piako District Council Archives, Te Aroha.

¹⁶⁰ A.W. Satchwell (Inspector of Health) to J.F. Dawson, 24 November 1949, A/26/6/1, Matamata-Piako District Council Archives, Te Aroha.

president of the Te Aroha Chamber of Commerce that this would not occur.¹⁶¹

In mid-January 1950, Dunsheath informed Dawson that the company had ‘undertaken the chlorination of the water coming from our area’ and hoped there would be ‘no further difficulty to encounter in this direction’.¹⁶² On the following day, when he, Hogben, and McAra, met Annabell, the latter declined their request to hold further discussions with the council because it was ‘not possible or desirable as he had full instructions to require nothing less than the full conditions’. Only when they had signed the agreement and ‘carried out the conditions in full’ would he permit mining. During discussions lasting over 90 minutes, Dunsheath and McAra argued that, as their works would not be near the Omahu Creek or the catchment, they should not have to chlorinate the water. However, when Hogben stated that he approved of the conditions, the others agreed that expert advice be sought over the best chlorination plant to treat all water entering the Ruakaka reservoir and promised to sign the agreement.¹⁶³ At the same time, the borough’s solicitor recommended that the government make ‘a thorough investigation’ to define the areas ‘most suitable for minerals and water supplies, and to have all uneconomic mining areas exempted from the provisions of the Mining Act’.¹⁶⁴ The company immediately installed a temporary chlorination plant at the Ruakaka reservoir.¹⁶⁵

No health risks were detected from the samples of faeces taken between 1950 and 1952 from all those working on the claim.¹⁶⁶ Dawson informed the mayor in February 1952 that when he visited the workings he

¹⁶¹ *Te Aroha News*, 9 December 1949, p. 5.

¹⁶² B.J. Dunsheath to J.F. Dawson, 16 January 1950, Health Department, YCBE 1990/524a, ANZ-A.

¹⁶³ A.W. Satchwell to J.F. Dawson, 20 January 1950, Health Department, YCBE 1990/524a, ANZ-A; see also Report of Works Committee Meeting of 18 January 1950, Te Aroha Borough Council Minute Book 1947-1950, p. 465, Matamata-Piako District Council Archives, Te Aroha.

¹⁶⁴ Report of Works Committee Meeting of 6 December 1950, Te Aroha Borough Council, Minute Book 1950-1953, p. 17, Matamata-Piako District Council Archives, Te Aroha.

¹⁶⁵ Te Aroha Borough Council, Minutes of Works Committee Meeting of 15 February 1950, Minute Book 1947-1950, p. 473, Matamata-Piako District Council Archives, Te Aroha.

¹⁶⁶ Details of all men who gave samples recorded in Health Department, YCBE 1990/524a, ANZ-A.

noticed 'that workers in the various places always had their sanitary buckets close at hand' and that Satchwell had found them 'very co-operative regarding their personal habits'.¹⁶⁷ Chlorination continued to cause friction between Annabell and Dunsheath. When Satchwell checked the water supply in January 1950, he found that, because of a water shortage, Annabell was extracting water from the southern branch of the Tunakohoia Stream, which was not normally used. Satchwell felt it was

a doubtful practice to pump untreated water from the creek at a time when so much stress is being made on precautionary measures for the prospecting areas. Mr Dunsheath carefully pointed this out to me, also the fact that the creek at about the point of intake of pump is much more open to contamination from humans and animals, it being at the foot of the mountain, than the catchment area above the reservoir. This certainly is true up to a point but I doubt if many persons visit this area which is on private land while it is certain that there will be persons on the catchment area.¹⁶⁸

Dawson and Satchwell agreed that, as the temporary chlorination plant provided by the company was ineffective and the borough chlorination plant was unsatisfactory, a modern plant should be installed with the borough and the company sharing the costs.¹⁶⁹ Shortage of water forcing the borough to pump water from the river directly into the mains for 45 days during February to April 1950 led to a delegation to Wellington in the following January seeking funds for an improved supply. When it was suggested that all mining licenses be revoked to safeguard water quality, Benney said this would not be done while the company was testing to find payable quantities of lead. Although he considered there was 'a 1000 to 1 chance against it being a success', until that was proved 'no action could be recommended'. Regarding the unworked claims at Waiorongomai held by Malcolm Hardy,¹⁷⁰ he considered that 'the chances of forfeiture under a Warden who was regarded as sympathetic to mining interests were remote'.

¹⁶⁷ J.F. Dawson to Mayor of Te Aroha, 13 February 1952, Health Department, YCBE, 1990/524a, ANZ-A.

¹⁶⁸ A.W. Satchwell to J.F. Dawson, 26 January 1950, Health Department, YCBE 1990/524a, ANZ-A.

¹⁶⁹ J.F. Dawson to Town Clerk, Te Aroha, 7 February 1950, Health Department, YCBE 1990/524a, ANZ-A.

¹⁷⁰ See paper on his life.

Should Dunsheath's venture prove unsuccessful, 'he was prepared to recommend the Government to wipe out Mining in the Te Aroha area and the Streams in the district would therefore be no longer Sludge Channels'.¹⁷¹ In July, the council accepted Annabell's recommendation that the Mines Department be asked to exempt the district from mining and end the designation as sludge channels of streams needed for water supply.¹⁷² When in September Dunsheath sought a mineral prospecting warrant over 2,000 acres of the Tui, Waiorongomai, and Mangakino Valley areas, in expressing his concern to the Mines Department Annabell gratuitously wondered whether the application was 'for the purpose of an enlarged Company promotion scheme'. Though he would prefer all 2,000 acres to be exempt from prospecting, he asked the department to prevent prospecting at Waiorongomai at least and hoped for its 'continued support in protecting the domestic water supply'.¹⁷³ Although both the county and borough councils objected to the granting of the additional areas, Freeman approved them in July 1952.¹⁷⁴

1951 ended with more harsh words between Annabell and the company. After blaming its road making for discolouring the water supply during heavy rain, Annabell reminded it of the conditions on its license and stated that Dawson required the replacement of the chlorination plant with a modern plant:

If debris is allowed to wash into the streams it is possible a filtration plant will also be requisitioned.

Under the agreements made, your Company is to pay the costs of any chlorination or filtration.

I suggest your Company might consider what your future plans are to be, whether you propose diamond drilling operations from above or below our intakes, and what valleys are proposed for

¹⁷¹ Town Clerk's Office, Te Aroha, 'Confidential Report of Delegation to Wellington to meet members of the Government in connection with Water Rights over the Waiorongomai and Pohomihi Streams', 9 February 1951; note also memorandum by C.J.W. Parsons (District Commissioner of Works), 26 October 1951, Health Department, YCBE 1990/524a, ANZ-A.

¹⁷² *Te Aroha News*, 27 July 1951, p. 5.

¹⁷³ Norman Annabell to C.H. Benney, 28 September 1951, Health Department, YCBE 1990/524a, ANZ-A.

¹⁷⁴ Te Aroha Warden's Court, Register of Applications 1934-1961, 17/51, BBAV 11505/2a, ANZ-A.

future workings. If you intend concentrating at the Tui area some alternative water scheme might be considered.

It would be necessary to treat this subject as urgent because the Council is at present considering its policy for future water supplies.¹⁷⁵

The company responded by demanding proof that it had polluted the streams, and said exploratory work would continue for another 18 months before it was decided where most of the mining would take place. It refused to accept additional financial commitments to deal with pollution concerns.¹⁷⁶ In February 1952, after more discolouration after heavy rain, Annabell suggested to Satchwell that the company 'had probably pumped out old mine workings into the Tui Creek', but Satchwell 'very much' doubted this, as he had

made an inspection of the mining area on the 5th instant, when it was noted that No. 4 shaft is not yet timbered to allow reasonable access thereto seeing the shaft is about 400ft from the mine entrance. This is the only shaft I am aware of, which if pumped out would be likely to affect the waters of the Tui Creek....

Adjacent to No. 4 shaft, some road formation has been carried out and a track is being made to carry a light railway to permit spoil from the shaft to be deposited away from the shaft entrance. It is possible that heavy rain might cause loose materials from these formations to gravitate to the Tui Creek bed. Sanitary conditions in the vicinity of both shafts was satisfactory. I very much doubt if this Company would do anything knowingly which would be likely to queer their pitch, as they fully realise the Borough Engineer is opposed to mining operations on the watershed.¹⁷⁷

In May 1952, a letter from Dawson to the council gave the company an excuse to evade paying for purification. He had written that, as the 'antiquated and hopelessly inadequate' system of chlorination predated its mining, the company could not be expected 'to provide an effective plant for treating of the whole town supply'. He felt the council had been playing off

¹⁷⁵ Norman Annabell to Manager, Auckland Smelting Company, 16 November 1951, Health Department, YCBE 1990/524a, ANZ-A.

¹⁷⁶ T.L. Gick (Secretary, Auckland Smelting Company) to Norman Annabell, 30 January 1952, Health Department, YCBE 1990/524a, ANZ-A.

¹⁷⁷ A.W. Satchwell to J.F. Dawson, 11 February 1952, Health Department, YCBE 1990/524a, ANZ-A.

the Health Department against the company 'in order to evade the issue of providing a good water supply'. His tests had shown that the 'waterfall creek' behind Te Aroha was far more polluted than the Tui, and he could not say 'with any certainty' that the company had polluted the latter.¹⁷⁸ After reading the newspaper report of this letter, Trevor Lewis Gick, the company's secretary, told the town clerk 'that his Directors were of the opinion they had been unfairly coerced by the Council into providing chlorination facilities and services', and requested a refund of all money paid.¹⁷⁹ Annabell's response was that the agreement should remain unaltered and the company should meet the future costs.¹⁸⁰ In late July, Hogben, by then chairman of directors, discussed with Dawson what Gick described as 'alleged pollution', and was told that the company's and the borough's chlorination systems were both 'hopeless'. Hogben told Dawson that 'he found it more satisfactory' to deal with the Health Department than with the council.¹⁸¹ This, Satchwell claimed in a letter to Dawson, was not only because Annabell in October 1951 had asked the company to provide a more efficient chlorination plant but because there had been 'some obstruction caused in connection with a sub-division of land being carried out privately' by Annabell, and possibly 'some retaliation has occurred'.¹⁸²

The company was so reluctant to meet the cost of chlorination that in 1950 it failed to pay four accounts, prompting the council to attempt to enforce payment by threatening to deprive it of access to its mine.¹⁸³ The May 1952 request for a refund was declined, but in August £294 0s 2d was owed and legal action was threatened; accounts rendered later that year

¹⁷⁸ *Te Aroha News*, 28 March 1952, p. 5.

¹⁷⁹ Te Aroha Borough Council, Report of Works Committee Meeting of 14 May 1952, Te Aroha Borough Council Minute Book 1950-1953, p. 290, Matamata-Piako District Council Archives, Te Aroha.

¹⁸⁰ Te Aroha Borough Council, Minutes of Works Committee Meeting of 14 May 1952, Minute Book 1950-1953, pp. 290-292, Matamata-Piako District Council Archives, Te Aroha.

¹⁸¹ T.L. Gick to J.F. Dawson, 24 July 1952; memorandum by J.F. Dawson, n.d., Health Department, YCBE 1990/524a, ANZ-A.

¹⁸² A.W. Satchwell to J.F. Dawson, 28 July 1952, Health Department, YCBE 1990/524a, ANZ-A.

¹⁸³ Te Aroha Borough Council, Report of Works Committee Meeting of 31 October 1950, Te Aroha Borough Council Minute Book 1947-1950, p. 630, Matamata-Piako District Council Archives, Te Aroha.

and in 1953 were ignored - the collapse of the company then making collection impossible.¹⁸⁴

Some residents were angered by these attempts to control the effects of mining. When one of the councillors most concerned about pollution denied that the council was against mining as such, being only against 'indiscriminate mining' in its watershed,¹⁸⁵ he was immediately attacked by proponents of mining. 'S. Ignatius' protested at wasting ratepayers' money in the 'forlorn hope of endeavouring to block the greatest progressive movement' in Te Aroha's history.¹⁸⁶ Kennedy pointed out that this councillor had been the only one to vote against the resolution that the council oppose the company's application for mining rights, for he had 'considered that the mining activities could do no great harm to the watershed'. Other, newer, councillors,

in their innocence and simplicity and lack of knowledge ... were carried away by the bogey that a few men working up on the mountain might be the means of poisoning half the people in Te Aroha; notwithstanding the fact that during all the years mining was carried out in the same locality, there was no record of anyone being poisoned as a result.¹⁸⁷

While this debate continued, the company failed to develop a successful mine, and on 1 July 1953 ceased all operations.¹⁸⁸ Because it hoped to recommence mining, it protested against efforts to revoke the proclamation of the Waihou as a sludge channel, for preventing mining would be 'little short of a tragedy'.¹⁸⁹ 'Objector' agreed, forecasting the economic doom of Te Aroha because 'mining interests would be very detrimentally affected, and the Borough Council might be called upon to

¹⁸⁴ Te Aroha Borough Council, Report of Works Committee Meeting of 13 August 1952; Minutes of Meeting of Borough Council of 21 July 1953, Te Aroha Borough Council Minute Book 1950-1953, pp. 343, 531, Matamata-Piako District Council Archives, Te Aroha.

¹⁸⁵ *Te Aroha News*, 18 July 1952, p. 5.

¹⁸⁶ Letter from 'S. Ignatius', *Te Aroha News*, 22 July 1952, p. 5.

¹⁸⁷ *Te Aroha News*, 22 July 1952, p. 5.

¹⁸⁸ T.L. Gick to J.F. Dawson, 17 August 1953, Health Department, YCBE 1990/524a, ANZ-A.

¹⁸⁹ T.L. Gick to C.H. Benney, 2 October 1953, Mines Department, MD 1, 23/2/1218, Part 2, ANZ-W.

institute a city system of drainage at a cost of £50,000 to £100,000'.¹⁹⁰ 'Argus' claimed there was 'strong feeling' against a proposal 'so inimical to the interests of Te Aroha', and proposed a deputation to the Minister of Mines.¹⁹¹ There was no deputation, and the Ohinemuri and Waihou rivers ceased to be sludge channels in 1954.¹⁹² Te Aroha in time obtained a modern sewage system, and because there were few mining proposals during the following decade debate over pollution largely ceased. In 1954, when Annabell wanted Waiorongomai excluded from mining, 'several councillors were of the opinion that the Council should not put obstacles in the way of the Auckland Smelting Company as there was a possibility of an American firm sending representatives to the district to investigate the mineral wealth', and accordingly the matter was held over.¹⁹³ Two years later, when other prospectors wanted to renew their Waiorongomai prospecting license, the council did oppose them on the grounds that the water might be needed for Te Aroha. Freeman responded, 'Haven't I heard this for the past 18 years?', and granted the renewal.¹⁹⁴ His irritation illustrated how those supporting mining felt that the pollution debate had exaggerated the dangers. Many years later, McAra noted that lead had leached off the mountain for centuries and there had never been any sign of lead poisoning amongst Tui miners.¹⁹⁵

CONCLUSION

The battles between the Auckland Smelting Company and those who feared its impact on the environment foreshadowed those caused by Norpac mining in the same area in the 1960s and 1970s. There were the same pollution issues, the same desire by this company to avoid spending money on anything other than mining, the equally strong desire of local bodies not to have to spend ratepayers' money cleaning up other people's messes, the same disagreements over whether jobs were more important than potential environmental impacts, and the same conflicts between strong-minded men.

¹⁹⁰ Letter from 'Objector', *Te Aroha News*, 29 September 1953, p. 5.

¹⁹¹ Letter from 'Argus', *Te Aroha News*, 29 September 1952, p. 5.

¹⁹² *New Zealand Gazette*, 27 May 1954, p. 889.

¹⁹³ *Te Aroha News*, 2 November 1954, p. 5.

¹⁹⁴ Warden's Court, *Te Aroha News*, 19 June 1956, p. 5.

¹⁹⁵ J.B.McAra, 'Recollections of my association with the Tui mine, Te Aroha, 1950-1973', (typescript, 1985), pp. 7-8, in possession of author.

In the event, the pollution produced by Norpac was actual not potential, and left long-term problems after mining ended that were not solved until a great deal of public money was spent in the twenty-first century.

Appendix

Figure 1: Te Aroha Warden's Court, Plan attached to application for Special Quartz Claim, September 1948, Mining Applications 1948, 6/1948, B.J. Dunsheath file, BCDG 11289/4a, ANZ-A [Archives New Zealand/Te Rua Mahara o te Kawanatanga, Auckland Regional Office]; used with permission.

Figure 1: Te Aroha Warden's Court, Plan attached to application for Special Quartz Claim, September 1948, Mining Applications 1948, 6/1948, B.J. Dunsheath file, BCDG 11289/4a, ANZ-A [Archives New Zealand/Te Rua Mahara o te Kawanatanga, Auckland Regional Office]; used with permission.

