

Karangahake Battery

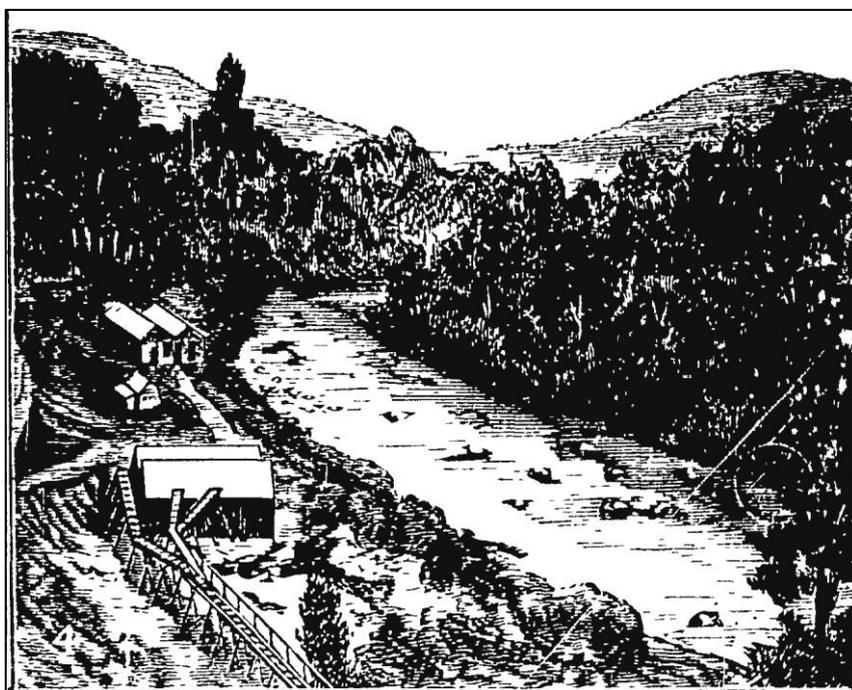
The Karangahake Company determine to erect a stamper battery at Battery Flat. They talk about it from early 1875, but it is not established until mid 1876.

Results are very poor, and crushing is suspended late August.

In 1882 the Karangahake Battery becomes Hauraki Battery, then the Ivanhoe Battery in 1887.

14 years of unsuccessful to marginally successful operation comes to an end when the Ivanhoe Battery is sold for removal to Puriri in 1890.

A lack of photographs of this battery has added to the relative invisibility of this battery's contribution to the early history of Karangahake.



View from the Tokano [Taukani] Hill. ^{1 2} NZ Herald.

Water race, tramway and battery. Tramway Hotel behind. Ohinemuri River at right, looking downstream.

The only image known of the battery. Early 1885.

¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18851221.2.20.2>

New Zealand Herald, Volume XXII, Issue 7516, 21 December 1885, Page 4

² <https://paperspast.natlib.govt.nz/newspapers/new-zealand-herald/1885/12/24/19>

New Zealand Herald, Volume XXII, Issue 7519, 24 December 1885, Page 13 (Supplement)

Karangahake Battery

Karangahake/Hauraki/Ivanhoe battery	
1875	Talk of erecting a battery.
1876	16 (or 20) stamp Karangahake battery erected powered by water race from Waitawheta River ³ , battery “started” June 24. ⁴ The battery powered by turbine, crushing wet over amalgamated mercury plates (the “ordinary battery process”). 12 head of stampers operating August 7. ⁵ Late August crushing stopped due to very poor return. ⁶
1877	Karangahake mine and battery on tribute. ⁷ Coutts and party. ⁸
1881	Consideration was given to removing the battery to Waihi. ⁹ This never happened.
1882	Hauraki claim established. ¹⁰ Liddell, Mc Williams, and McCombie. ¹¹ Karangahake Battery becomes Hauraki Battery. ¹² First section of tramway beside Waitawheta River, and first cable way.
1883	First crushings at Hauraki battery very poor. Ivanhoe (Ohinemuri side of Taukani Hill) are to connect to the battery. ¹³
1884	Sir Walter Scott erecting a shoot by which they will be able to tip their dirt into the mill (Hauraki). ¹⁴
1885	January. The Hauraki battery plant is now in first-class working order, having undergone thorough overhaul since the holidays. ¹⁵
1886	July. The repairs are all but completed in the battery. There is a rumour, as to the Sir Walter Scott and this mine amalgamating. ¹⁶

³ <https://paperspast.natlib.govt.nz/newspapers/THA18760509.2.15>

Thames Advertiser, Volume IX, Issue 2352, 9 May 1876, Page 3

⁴ <https://paperspast.natlib.govt.nz/newspapers/AS18760626.2.21.1>

Auckland Star, Volume VII, Issue 1990, 26 June 1876, Page 3

⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18760810.2.19>

New Zealand Herald, Volume XIII, Issue 4599, 10 August 1876, Page 1 (Supplement)

⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18760826.2.32>

New Zealand Herald, Volume XIII, Issue 4613, 26 August 1876, Page 6

⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18770226.2.16>

Thames Advertiser, Volume XII, Issue 2557, 26 February 1877, Page 3

⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18770328.2.14>

Thames Advertiser, Volume XII, Issue 2583, 28 March 1877, Page 3

⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18811124.2.21.2>

Thames Star, Volume XII, Issue 4027, 24 November 1881, Page 3

¹⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18820425.2.17>

Thames Advertiser, Volume XIV, Issue 4308, 25 April 1882, Page 3

¹¹ <https://paperspast.natlib.govt.nz/newspapers/THA18820919.2.9>

Thames Advertiser, Volume XIV, Issue 4420, 19 September 1882, Page 2

¹² <https://paperspast.natlib.govt.nz/newspapers/NZH18820807.2.37>

New Zealand Herald, Volume XIX, Issue 6465, 7 August 1882, Page 6

¹³ <https://paperspast.natlib.govt.nz/newspapers/NZH18831011.2.45>

New Zealand Herald, Volume XX, Issue 6833, 11 October 1883, Page 5

¹⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18840301.2.26>

Thames Star, Volume XV, Issue 4727, 1 March 1884, Page 4

¹⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18850127.2.7>

Thames Advertiser, Volume XVI, Issue 5084, 27 January 1885, Page 2

¹⁶ <https://paperspast.natlib.govt.nz/newspapers/WT18860703.2.28>

Waikato Times, Volume XXVII, Issue 2182, 3 July 1886, Page 3

Karangahake Battery

1887	March. Ivanhoe . — The owners ... renovating their battery plant, so as to meet the requirements of the district. Excepting the stampers the present plant will be entirely removed, and a number of Railey pans substituted. ¹⁷
1889	June. Ivanhoe Battery: The repairs to the water-race having been completed, this Battery is again at work on a parcel of tailings. ¹⁸
1890	March. Ivanhoe Battery sold for removal to Puriri. ¹⁹ Gone, after 14 years.

¹⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18870305.2.9>

Te Aroha News, Volume IV, Issue 193, 5 March 1887, Page 2

¹⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18890601.2.12.1>

Te Aroha News, Volume VI, Issue 373, 1 June 1889, Page 2

¹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18900324.2.74>

New Zealand Herald, Volume XXVII, Issue 8211, 24 March 1890, Page 6

1875

13 May

The manager and principal shareholders of the Karangahake claim, Ohinemuri (the prospectors), have been for some time past engaged in negotiating for a battery, to be erected on their machine site. This has not yet been accomplished, and it is now intended to form the claim into a company.²⁰

14 June

Karangahake Spur. It is stated that the prospectors are unable to get machinery on their ground, owing to its not being sufficiently developed, and that present prospects are not sufficiently good to induce the Banks to advance money for the purpose.²¹

This is the Karangahake/The Prospectors' Claim/company?

“Karangahake Spur”. This appears to describe the area behind Battery Flat and upstream to the Plum Pudding/Woodstock Blow (the area between the valleys of the Hauraki Stream (Scotchman’s Gully) and the valley on the west of the Woodstock Blow). Where was the claim?²² The NZGS No16_1913_Karangahake mines map shows a Karangahake Company adit in the gully to the west of the Woodstock Blow.

18 June

KARANGAHAKE (OHINEMURI).

The prospectors on the Karangahake have made a definite step in the direction of progress, though from what I have learned it would appear to be owing rather to the energy of a few of the party than to the combined purpose of the whole. For a long time the great drawback to this claim, which should have given better results before now, has been the want of machinery with which to treat the stone taken from the mine, and a great deal of talk has occurred without much appearance of practical issue. Although it was perfectly obvious that the great desideratum was to obtain crushing power, there happened to be a friendly contention amongst them as to the extent of the power it would be desirable to secure.

The obvious conclusion to most men would have been that a battery of any sort whatever would be better than nothing; but, there was a difference of opinion, some of the prospectors wishing to get an extensive plant, the getting of which, however, not one of them could see their way to. It is satisfactory to find, now, that arrangements have been made for getting machinery on the ground.

Messrs Thorpe and Verral are now in town, and have completed negotiations for the battery (of six head of stamps) known as Somerville's [may be Sommerville], which will be erected on the ground as soon as possible. There

²⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18750513.2.9>

Thames Advertiser, Volume VIII, Issue 2043, 13 May 1875, Page 2

²¹ <https://paperspast.natlib.govt.nz/newspapers/THS18750614.2.14>

Thames Star, Volume VII, Issue 2010, 14 June 1875, Page 2

²² There is a hint in the AJHRs I think.1888:

AJHR 88. Mammoth Mine. —This is owned by an English syndicate, who sent out a gentleman from England—Mr. Argill—to carry on prospecting operations to test the mine, previous to erecting machinery. The ground belonging to this syndicate is situated on the face of the range, on the westward side of the Woodstock Mine, and prospecting operations were being carried on at the time of my visit. This is the same ground where a rush took place in 1875.

Karangahake Battery

appears to be no abatement in the confidence of most as to the payable nature of the quartz being taken from the mine, and we may therefore look for a speedy return, as the present action of the company indicates a determination to set to work in real earnest, and thoroughly prove the ground, which at one time was the source of so much excitement and hope.²³

This battery came from Mitchelltown.²⁴ Presumably this is Karaka in Thames (see below).

19 June

Ohinemuri, Thursday. The shareholders of the Karangahake claim have made arrangements for the purchase of a six stamper battery, with tables, &c, and intend to have it removed from its present site on the Karaka to their own on the Waitawheta, without delay. As the motive power will be water, the necessary fluming and wheel will be constructed immediately. It is proposed to procure two new berdans to work in connection with the mill.²⁵

3 November

Thames Advertiser

We are informed on reliable authority that arrangements for the erection of a 20-stamper battery at the foot of the Karangahake Spur, Ohinemuri, in connection with the Karangahake prospectors' claim, have been completed, and that no time will now be lost in starting to work.

Clarkson's battery of twelve head, formerly erected in the Shellback Creek, is to form the principal portion of the plant. There is a six-head battery already on the ground, and an additional two-head will be procured to complete the number. The terms arranged between the shareholders and the capitalists who have agreed to erect the battery are the same as those agreed to by the Waitekauri Company, the shareholders are to get a third of the mine, or rather shares to that amount in the company. It is expected that the mill will be erected and working a little more than three months from the present.²⁶

Shellback Creek (Pukehinou Stream) is north Thames. Who are the capitalists? Messrs Thorpe and Verral? Or Messrs. Stewart, Darrow and Co? (see below: 22 June 1876 - Stewart, Darrow and Co).

1876

21 February

At the Karangahake Company's mine the intermediate level is being pushed in The battery building is complete, and the machinery is on the ground and in course of erection, and will probably be completed without further stoppage. A contract for the continuation of fluming has also been let.²⁷

²³ <https://paperspast.natlib.govt.nz/newspapers/THS18750618.2.13.1>

Thames Star, Volume VII, Issue 2014, 18 June 1875, Page 2

²⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18750702.2.10>

Thames Star, Volume VII, Issue 2026, 2 July 1875, Page 2

²⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18750619.2.18>

New Zealand Herald, Volume XII, Issue 4243, 19 June 1875, Page 3

²⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18751103.2.9>

Thames Advertiser, Volume VIII, Issue 2189, 3 November 1875, Page 2

²⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18760221.2.16>

New Zealand Herald, Volume XIII, Issue 4453, 21 February 1876, Page 3

18 April

Reporting on the Karangahake Company:-

Mr. Cornes mine manager...

The millhouse is erected—framing, logs, stamper-boxes and tables, with berdans, in position. The stamper-rods and other items require to go up, but all are on the spot. The motive power is water driven by turbine. The erection of this part has been let to Mr. Coote, who proceeds at once with his job. The water race is in hand, partially done, and will comprise 1700 feet [518m] of fluming. The completion of the mill and the first crushing from the mine will probably be six weeks hence.²⁸

The wooden water race can be seen in the lithograph No.1, and dam in No.2²⁹ (see entry for end 1885 for more discussion of these images). This is the Waitawheta River. The water race length strongly suggests the dam is at the location of the later Talisman dam (probably the same dam). See map below.

The remains to be seen today are the wooden bed log with some planking, the tunnel in the cliff, concrete by-wash and gate structure, and steel pipe. Other than the steel pipe, how much of this dates to this time is unclear (but see below).

Mr. Cornes mine manager continues:-

The rise from the lower level has been completed to the upper one, secured, and well timbered... The drive on No. 2 level has been continued 20 feet beyond the pass, and the reef is now to hand in the drive. The course of the lode will now be followed, the stone tipped down the pass to hopper on bottom level, from thence it is trucked to the shoot and hopper, now being erected. From this point the stone will have to be sleighed down hill a short distance, and re-tipped to shoot and hopper No. 2, where it is again trucked and shot into the battery. As the mine is gradually opened, it is probable that the irksome method of having to sledge the quartz will be avoided.³⁰

So there are two levels, connected by a rise, and a rise has been carried to the surface³¹. Maps only show one level. See map below.

It is not at all clear how this description would fit into the landscape, mine to battery. The description indicates that ore moves downhill. A tramway along the Waitawheta River is not constructed until 1882.

9 May

A slightly longer length is given for the water race by the Thames Advertiser.

Mr Cullen has also the contract for the water race, and it is now in a very forward state. The length is about 1,800 feet [549m], and one portion of it required some heavy rock cutting on an almost perpendicular face. There is a good deal of trestle work in it, and the whole is being done in a most substantial manner, which reflects great credit on the contractor. The contract

²⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18760418.2.25>

New Zealand Herald, Volume XIII, Issue 4502, 18 April 1876, Page 3

²⁹ <https://paperspast.natlib.govt.nz/newspapers/new-zealand-herald/1885/12/24/19>

New Zealand Herald, Supplement, 24 December 1885

³⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18760418.2.25>

New Zealand Herald, Volume XIII, Issue 4502, 18 April 1876, Page 3

³¹ <https://paperspast.natlib.govt.nz/newspapers/THA18760509.2.15>

Thames Advertiser, Volume IX, Issue 2352, 9 May 1876, Page 3

Karangahake Battery

for fixing the turbine and cutting the tail race is being rapidly carried out by Mr Coutts...³²

The heavy rock cutting is presumably where the water race collects its water from the dam via a tunnel in the cliff (can be seen today), in which case, this at least would be an original feature. The photograph Waitawheta Gorge 485³³ shows the dam and wooden flume. Note no Crown tramway in cliff on right, not there till '92.



485 RIC 356 Waitawheta Gorge dam 485 AkLib JD Richardson.

Looking upstream Waitawheta River. The water race wooden flume can be glimpsed at the image bottom, to right of the punga. Date not determined.

First Infrastructure at Karangahake

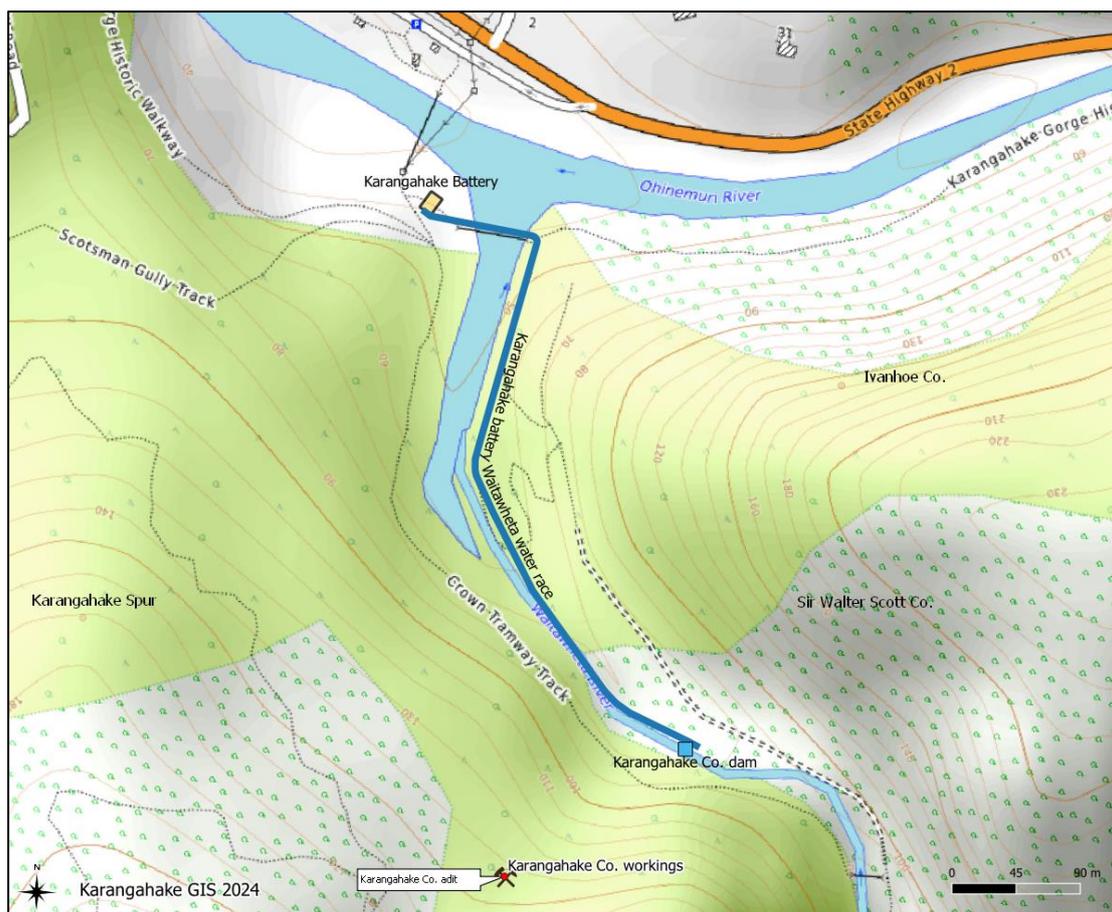
The dam on the Waitawheta, wooden flume, hoppers, chutes, tramways, trestle bridges across the river, and of course the battery, are the first infrastructure constructed at Karangahake for mining. The reports don't mention if a tramway crossed the river with the flume.

³² <https://paperspast.natlib.govt.nz/newspapers/THA18760509.2.15>

Thames Advertiser, Volume IX, Issue 2352, 9 May 1876, Page 3

³³ <https://digitalnz.org/records/30085605/waitawheta-gorge>

Karangahake Battery



Map showing the Karangahake battery, water race and dam, as imagined by this writer. The GIS calculates the water race length at 507m (cf 518 given above³⁴). The position of the dam has been assumed to be that of the Talisman dam.

No attempt has been made to show a possible ore transport route, from the workings to the battery.

3 June

Karangahake.—The battery would have made a start by this time, but, unfortunately, the fluming was carried away for about 130 feet, and, as the timber will have to be supplied from Shortland, some short time must elapse before damages are repaired. Stone is being broken down from the intermediate level, and the large quantity in paddock will be sledged down to the mill this week.³⁵

6 June

At the Karangahake the manager and men are busy blasting the rocks near the dam to make a good channel for the flume.³⁶

13 June

The Karangahake mine is well opened out, and Mr. Cornes, the manager, has connected the mine with the battery [yes, but how/where?], so that a good supply of stone, and that of good character, will be ready for milling with 16

³⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18760418.2.25>
New Zealand Herald, Volume XIII, Issue 4502, 18 April 1876, Page 3

³⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18760603.2.43>
New Zealand Herald, Volume XIII, Issue 4541, 3 June 1876, Page 6

³⁶ <https://paperspast.natlib.govt.nz/newspapers/DSC18760606.2.18.3>
Daily Southern Cross, Volume XXXII, Issue 5195, 6 June 1876, Page 3

Karangahake Battery

head of stampers in the course of a fortnight. The battery, fluming, and turbine are ready, the tail race being the only portion unfinished. The successful working of this mill will not only prove the value of the company's mine, but will enhance the adjoining properties, comprised in the All nations, Democrat, Mormon City, Banyan, and others.³⁷

26 June

The Karangahake Battery, Ohinemuri, was successfully started on Saturday, for the satisfaction of directors and valuers. It was run up to 90 strokes a minute with only a third of the water power available. It will be immediately taken over by the Company and started to crush quartz.³⁸

The 26th was a Monday, so the battery "started" June 24 1876, but not an official opening yet? See below: 11 July.

29 June

...The water was laid on and the turbine set in motion upon the whole of the stampers at once (16 head), and proved that, with only half supply of water at present available, there was force enough to drive double the number of stampers. No quartz was put through, but blocks of wood were placed in the boxes to receive the fall of the stampers. The whole affair worked satisfactorily, and reflected credit upon the contractors, Messrs. Cullen and Fitzpatrick, who have reviewed a receipt for the due performance of their contract. A contract has been let for transit of quartz from the hopper to the company's shoot at the mill, and a large supply being to hand, no time need be lost after the battery has been officially received by the Karangahake G.M.Co., who may think themselves well off at having a first class battery of 16 head stampers, with two berdans, driven by water power, for the price fixed by the umpire chosen by the arbitrators (Mr. Price of Price Brothers, Grahamstown) £3000. The foundation and bed logs laid are sufficient for extra 8 head stampers.³⁹

7 July

July 5, The Karangahake battery was started on quartz for the first time to-day, but was only kept running for about half an hour, sufficiently long to shake off some of the old stamper shoes... Mr Marsh has started sledging down quartz from the paddock at the bottom of the shoot to the hopper near the battery...⁴⁰

This still doesn't help us understand the route from the mine.

11 July

We are requested to state that the official start of the Karangahake Company's battery, which was to take place to-morrow, has been postponed until further notice, and the reason is this: A portion of the fluming which conveys the water to the turbine wheel is too low. It is believed to have sunk, but at all events the fact remains that it is too low, and the water, which it should

³⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18760613.2.17>

New Zealand Herald, Volume XIII, Issue 4549, 13 June 1876, Page 2

³⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18760626.2.21.1>

Auckland Star, Volume VII, Issue 1990, 26 June 1876, Page 3

³⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18760629.2.22.3>

New Zealand Herald, Volume XIII, Issue 4563, 29 June 1876, Page 5 (Supplement)

⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18760707.2.15>

Thames Advertiser, Volume IX, Issue 2361, 7 July 1876, Page 3

Karangahake Battery

convey to the battery, is wasted over its side. In consequence of this there does not appear to be sufficient water conveyed to drive the full force of the battery at proper speed. Of course had there been timber available the sides of the flume could readily be raised to a sufficient height to prevent overflow, but unfortunately there was none available in Mackaytown. The manager had therefore to send to Shortland for some boards. Those will not leave the Thames until to-morrow, and it will be impossible therefore to have the necessary work done in time to effect a satisfactory start on the day originally named. We make the announcement so that there may be no disappointment, for a considerable number of people from the Thames had made arrangements to be present at the opening ceremonies.⁴¹

Karangahake Battery opens

The battery, powered by a turbine, will use amalgamated mercury plates to recover the gold from the crushed ore (the “ordinary battery process”).

No date for the official opening of the battery, but on or before July 19?

19 July

The Karangahake battery, as I told you in my last, after crushing, a few tons of quartz had to knock off for want of power. Mr. Gibbons has during the last, few days been engaged in enlarging the race, and intends raising the height of the dam 18 inches, as in his opinion it is the want of water that is the cause of the want of power. This will be accomplished by the end of the week should the weather prove favourable, which is rather unlikely.⁴²

9 August

The Karangahake battery is working full swing in capital order.⁴³

10 August

Ohinemuri, August 7. The Karangahake battery has made a start with 12 head stampers; it seems the driving belt is too light to serve the other four. A new belt has been sent for, and when it arrives, the whole force of the mill will be set and kept going. The race has been considerably enlarged, and there is water to spare.⁴⁴

12 head, four not operating; all suggests mortar boxes of four stamps each.

26 August

We regret that we cannot report a favourable issue to the start of the Karangahake Company's crushing, for although the stone undoubtedly contains gold in payable quantities, it cannot, in consequence of some mineral with which it is mixed and which prevents its amalgamation with mercury, be saved by the ordinary battery process. The crushing has, therefore, been stopped, and scientific men are now experimenting as to the best method of treating the stuff.⁴⁵

⁴¹ <https://paperspast.natlib.govt.nz/newspapers/THA18760711.2.9>

Thames Advertiser, Volume IX, Issue 2364, 11 July 1876, Page 2

⁴² <https://paperspast.natlib.govt.nz/newspapers/NZH18760722.2.24>

New Zealand Herald, Volume XIII, Issue 4583, 22 July 1876, Page 3

⁴³ <https://paperspast.natlib.govt.nz/newspapers/NZH18760809.2.17>

New Zealand Herald, Volume XIII, Issue 4598, 9 August 1876, Page 3

⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18760810.2.19>

New Zealand Herald, Volume XIII, Issue 4599, 10 August 1876, Page 1 (Supplement)

⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18760826.2.32>

6 September

KARANGAHAKE GOLD MINING COMPANY.

HALF-YEARLY MEETING. The first general meeting of the Karangahake Gold Mining Company was held yesterday in the Mechanics' Institute. Mr Marshall was called to the chair, on the motion of Mr Bennett. The advertisement having been read, the legal manager, Mr MacDonnell, read the annual report and balance-sheet, also, the reports of the mine manager and surveyors.

The directors' report gave a history of the formation of the company and the agreement with Messrs Pouter and others to erect a crushing mill of 16 head of stampers and construct a water race, in consideration of receiving a third of the company's interest and subject to purchase at a valuation. The battery and race were valued at £3,000 by Messrs Dewar and Brown, with Mr. Price as umpire, and the directors took over the plant on the 28th of June. They then found that the water race was insufficient, and expended nearly £200 for the purpose of completing the battery and water race. The report alluded to the poor yield (23ozs from 300 tons), and expressed regret at its poverty, which was attributed to the presence of some mineral either in the stone or in the water which prevented the gold from amalgamating. The directors then stopped the battery, and paid off all hands except the mine manager and two men, until some means could be devised for saving the gold.⁴⁶

1877

26 February

Karangahake District.—Number of miners, 12; women, 5; children, 19; battery — Karangahake Company's, of 16 stamps, water power, turbine; at present on tribute. At one time there was a large population here, but in consequent of the falling off in the gold return there was a general clearing out. But there is hope that the tributes will get something in the Karangahake mine, which will encourage miners to do some prospecting. There is a half-time school at this place; the attendance about 16.⁴⁷

1881

4 May

TENDERS are invited for the Removal and re-Erection of the Karangahake Battery from its present site, to a site on the Ohinemuri River, at Waitete. Plans, &c, can be seen at; Mr. Bayldon's Office, on or after Saturday, 7th instant. Tenders will be received until Saturday, 14th inst. E. B. FRASER.⁴⁸

24 November

Tenders MARTHA GOLD MINING COMPANY (Limited). Tenders will be received up till noon of SATURDAY, the 26th day of November, for the

New Zealand Herald, Volume XIII, Issue 4613, 26 August 1876, Page 6

⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18760906.2.17>

Thames Advertiser, Volume IX, Issue 2412, 6 September 1876, Page 3

⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18770226.2.16>

Thames Advertiser, Volume XII, Issue 2557, 26 February 1877, Page 3

⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18810504.2.9.3>

Thames Advertiser, Volume XIV, Issue 3905, 4 May 1881, Page 2

Karangahake Battery

REMOVAL and RE-ERECTION of the Karangahake Battery to Waihi. Plans and specifications can be seen at the Office of Mr D. H. Bayldon, Surveyor, Grahamstown, to whom Tenders will be addressed.⁴⁹

This was to be for the Martha Company in Waihi (William Nicholl and associates).⁵⁰ However, the battery did not leave Karangahake.

1882

Hauraki claim

25 April

MINING MATTERS.

Karangahake.—At the Hauraki claim, the prospectors [Liddell, Mc Williams, and McCombie⁵¹] are now building whares and cutting a track to enable them to get from the flat to the mine.

Arrangements are now being made with a view to securing the Karangahake battery, a distance of half a mile from the claim, and which could be easily connected by self-acting or wire tramway.⁵²

Half a mile (804m) is the straight line distance from the battery to the Hauraki adit, as identified on the GIS.

14 June

Arrangements have been completed [though the 7 August report below suggests not yet completed] to connect the Hauraki mine with the battery by means of a wire tram, as it has been found difficult to get a site for a ground tramway, there being 400 feet to rise in 30 chains. The prospects of the Hauraki mine are improving.⁵³

Karangahake Battery becomes Hauraki Battery

7 August

These various claims are situated almost immediately behind the old battery, but are from 500 to 1000 feet above it, if not more. A tramway is in course of erection from the battery to the foot of the range, a distance of some 330 yards [302m]. This will be connected with the Hauraki mine by a wire tramway.

The Hauraki (or Prospector's) claim contains an area of 45 men's ground...

The shareholders of this claim have purchased the old Karangahake battery, which contains 16 head of stampers, and a contract has been let for repairing the same, and also for making the tramway, and bringing in the water-race

⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18811124.2.21.2>

Thames Star, Volume XII, Issue 4027, 24 November 1881, Page 3

⁵⁰ For a discussion of activities in Waihi at this time, see: A History of the Waihi/Martha/Silverton/Union Battery Waihi 1882 – 1915.

<http://www.ohinemuri.org.nz/research/silverton-battery-site>

⁵¹ <https://paperspast.natlib.govt.nz/newspapers/THA18820919.2.9>

Thames Advertiser, Volume XIV, Issue 4420, 19 September 1882, Page 2

⁵² <https://paperspast.natlib.govt.nz/newspapers/THA18820425.2.17>

Thames Advertiser, Volume XIV, Issue 4308, 25 April 1882, Page 3

⁵³ <https://paperspast.natlib.govt.nz/newspapers/NZH18820614.2.45>

New Zealand Herald, Volume XIX, Issue 6419, 14 June 1882, Page 6

Karangahake Battery

from the Waitawheta river. These works are in operation now, and are being pushed on as speedily as possible.⁵⁴

Hence now the battery is called the **Hauraki Battery**.

The tramway to the foot of the range sounds like the first version of the tramway along the Waitawheta, true left bank (the lowest section of what we now call the Crown track). This is the same tramway we encounter with Woodstock and furnace 1885.

Then a cableway. Does this cableway connect to the area to the north/north east of the Plum Pudding? Or to the west?.

First section of tramway beside Waitawheta River, and first cable way

19 September

A TRIP TO KARANGAHAKE.

The first claim visited, upon reaching the scene of mining operations, was the Hauraki G.M. Co.'s, embracing an area of 15 acres. This claim was located about 5 months ago by Messrs Liddell, Mc Williams, and McCombie, who had been prospecting for several months in the neighbourhood...

The proprietors of this mine have purchased the Karangahake battery, which is situate immediately below, and within easy distance of the mine. The battery, comprising 16 head of stampers, berdans, &c., complete, and driven by a turbine, is now undergoing a thorough renovation. The timber for a new water race is being cut, and a tram-way connecting the mine and battery is also in course of construction. The share-holders hope to be able to start crushing about the end of October next.⁵⁵

The new water race must surely be a repair/replacement of the old one beside the Waitawheta Stream.

20 September

Hauraki (Karangahake). —The manager reports:...

The hopper built near the entrance to the low level and the shoot connecting the hopper with the intermediate level were completed last week. This hopper is capable of holding 300 tons of quartz, and in future all crushing dirt broken out from the intermediate level will be shot into it, awaiting completion of tramway and repairs to battery. —John McCombie⁵⁶

⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18820807.2.37>

New Zealand Herald, Volume XIX, Issue 6465, 7 August 1882, Page 6

⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18820919.2.9>

Thames Advertiser, Volume XIV, Issue 4420, 19 September 1882, Page 2

⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18820920.2.40>

New Zealand Herald, Issue 6503, 20 September 1882, Page 6

Karangahake Battery



7307 Karangahake Gorge 495, Auckland Library. JD Richardson.

Looking upstream Waitawheta River, Woodstock Blow top right. At the horizon, on the shoulder of the Woodstock Blow, can be seen a double ore chute above twin wooden ore hoppers. Ore would have been transported here by tramway behind the hill.

The aerial tramway terminates above the river, at the end of the tramway from Battery Flat. Several cables can be seen, two main cables and two control lines? These are likely of the Woodstock No. 2 level.

More cables head up to the right, the early Hauraki cableway? The left of the photograph may show the ore chute from the Sir Walter Scott on the side of Taukani, completed mid 1884.

Photograph taken from a flume across the Waitawheta near the confluence? The date of this photograph is unknown, but after mid 1886.

Karangahake Battery

There are two similar photographs by JD Richardson, this one, 495, and another 358. I believe this is the earlier one. The double chute and hopper configuration is not seen again on any of the subsequent images of this cableway. The scrub on the steep slopes appears thicker on the other image (358).

1883

14 February

Karangahake.— The repairs to the battery tram and water race are slowly progressing. The contractor has thrown up the contract and left, and the work is now being carried on under the superintendence of Mr. E. M. Corbett. It will be some time before everything is in readiness to make a start, as timber is scarce, and has to be obtained from Waihi and carried up the Karangahake, 600 feet in height.⁵⁷

The 600 feet in height may refer to the hoppers required at the head of the cable way, which, as can be seen in the images, is near the top of the “Plum Pudding” or “Woodstock Blow”. The “Woodstock Blow” is 715 ft [218m] at summit⁵⁸.

6 August

Hauraki G.M.Co,—The tressilwork, which was blown down by the late heavy gale, has been re erected, and appears to be but little the worse for its mishap. Upon the wire section of this company's tramway the travelling wire was found to be by far too cumbrous for the work required of it, and a smaller and lighter wire is now being substituted, and a few other defects remedied which will render the tramway fit for service in a few days time. The country over which this tramway passes is admirably adapted for a series of self-acting grades of ground tramway, and why this system was not adopted in preference to the antiquated system now about to be used is a mystery to all beholders who cometh from afar.⁵⁹

Despite that comment, aerial cableways will be used extensively at Karangahake. Few self-acting grades of ground tramway (inclines) will be built. The tressilwork (trestle-work); is that the bridge/water race structure that crosses the Waitawheta to the battery?

31 August

A preliminary trial of the Hauraki Company's battery, Karangahake, was made yesterday; everything worked smoothly, and the speed attained was 60 strokes per minute.⁶⁰

It has taken 15 months for these works to be completed.

11 October

Hauraki (Karangahake).— The return, 106ozs. of gold from 300 tons quartz, is disappointing, but is capable of favourable explanation, namely, that owing to the presence of a great proportion of base minerals, much of the gold was not saved. That a large percentage of the gold was not amalgamated, is shown by the statement of my informant; that whenever a dishful of the tailings—all of which have been carefully saved—is washed, a good prospect is obtained...

⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18830214.2.42>

New Zealand Herald, Volume XX, Issue 6628, 14 February 1883, Page 6

⁵⁸ See map from Geological Bulletin 16

⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18830806.2.14>

Thames Star, Volume XIV, Issue 4551, 6 August 1883, Page 2

⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18830831.2.14>

Thames Star, Volume XIV, Issue 4573, 31 August 1883, Page 2

Karangahake Battery

Ivanhoe (Karangahake).—The return of 8oz. from 4 tons quartz is very satisfactory, as the lode is 5 feet wide. Connection with the Hauraki battery will soon be completed.⁶¹

The Ivanhoe is on the Ohinemuri side of Taukani Hill.

1884

1 March

The Hauraki battery is working on company's dirt [ie Hauraki mine ore], the Sir Walter Scott is erecting a shoot by which they will be able to tip their dirt into the mill, and the Golden Crown intend to erect a battery of their own should the reef prove good in a low level now being put in; a few other mines are also working.⁶²

The Sir Walter Scott mine is on the side of Taukani Ridge, true right bank of the Waitawheta River. The shoot (chute) must be what can be seen in the lithographs.

15 April

Sir Walter Scott.—The shoot, tramway, &c, connecting this mine with the Hauraki Co.'s battery is rapidly approaching completion, after which crushing operations, will at once be started.⁶³

Sir Walter Scott shoot, tramway

10 May

The proprietors of the Sir Walter Scott claim, Karangahake, commenced sending quartz to the battery on Monday last, and a capital return is anticipated.⁶⁴

5 July

Ivanhoe G.M.Co. The rope for the aerial tramway reached the mine yesterday, and I suppose that notwithstanding all the arguments that have been advanced against it, the powers that be will still persist in carrying out this very questionable scheme. The late crushing from the Sir Walter Scott establishes, beyond the shadow of a doubt, the value of the reef that runs throughout the whole length of this claim.⁶⁵

Ivanhoe, on the Ohinemuri side of Taukani, intend to erect a cableway. The above writer's discomfort may suggest that there was already a process for getting the ore to the ground tramway, and a cable was therefore not necessary. Perhaps a chute arrangement, hinted at in the lithograph 3.

Is this a cableway from mine atop Taukani to the head of the new tramway⁶⁶ on true left bank of the Ohinemuri? There are remains of the head of a cableway on this north side of Taukani.

⁶¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18831011.2.45>

New Zealand Herald, Volume XX, Issue 6833, 11 October 1883, Page 5

⁶² <https://paperspast.natlib.govt.nz/newspapers/THS18840301.2.26>

Thames Star, Volume XV, Issue 4727, 1 March 1884, Page 4

⁶³ <https://paperspast.natlib.govt.nz/newspapers/THS18840415.2.18>

Thames Star, Volume XV, Issue 4763, 15 April 1884, Page 2

⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18840510.2.3>

Thames Advertiser, Volume XV, Issue 4859, 10 May 1884, Page 2

⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18840705.2.25>

Thames Star, Volume XV, Issue 4833, 5 July 1884, Page 2

⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18851224.2.77.2>

Karangahake Battery

Was this cableway installed at this time? It appears to be mentioned 4 September 1885: “The manager is at present engaged constructing an aerial wire tramway 800 feet [244m] in length, to come north of the hoppers; thence to the battery is a ground tramway.”⁶⁷

Is this the infrastructure we see in the 1885 Christmas Supplement image 3? The article below indicates that the tramway had been built. It’s not clear if this included the cableway.

A length of railway iron remains on the tramway formation beside the walkway, a little upstream from the Woodstock battery.

1 August

The first annual meeting of the **Ivanhoe G. M. Co.** was held yesterday afternoon at the office of Mr. F. A. White, the legal manager. Mr. C. Alexander occupied the chair. From the directors' report, which was read, it appeared that a tramway had been constructed at a cost of about £600, and, when completed, a small crushing had taken place, which gave a return of 10ozs. 17dwts, melted gold.⁶⁸

2 August

The Karangahake deputation asked for a portion of the gold duty as a subsidy for a tramway from the **Sir Walter Scott** mine to the battery, the cost of which would be between £200 and £300. In this case the Committee took the Government policy as their basis, and recommended that goldfields revenue to the extent of two thirds of the cost of the tramway be allowed to the company, the tramway to be open to the use of other mines at a tariff approved of by the Council. The works in both instances are to be carried out in a manner approved by the Council's Engineer. The committee have treated both deputations in a liberal spirit, and the companies should lose no time in getting the works in hand.⁶⁹

Tramway costs could be subsidized, and tramways open to the use of other mines at a tariff. Sir Walter Scott is on the Waitawheta side of Taukani. Is this tramway showing on the 1885 images?

Summary 1884

Ivanhoe on the Ohinemuri side of Taukani, Sir Walter Scott on Waitawheta side of Taukani, with Argentine near the confluence of the two rivers. The Karangahake above the Waitawheta true left bank, on the Karangahake Spur, with the Hauraki south of them. On the eastern side of the Plum Pudding (or Woodstock Blow) is Woodstock.

In August 1882 work starts to construct a ground tramway on the true left bank of the Waitawheta River from the Hauraki Battery, and from the end of this a cableway up to the Hauraki workings. This ground tramway is the start of the Crown walking track of today. By end August 1883 this is operational.

New Zealand Herald, Volume XXII, Issue 7519, 24 December 1885, Page 13 (Supplement)

“Down the face of the cliff on the Ohinemuri side of the river is seen the Ivanhoe Mine tramway”

⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18840801.2.38>

New Zealand Herald, Volume XXI, Issue 7085, 1 August 1884, Page 6

⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18840802.2.12>

Thames Star, Volume XV, Issue 4856, 2 August 1884, Page 2

Karangahake Battery

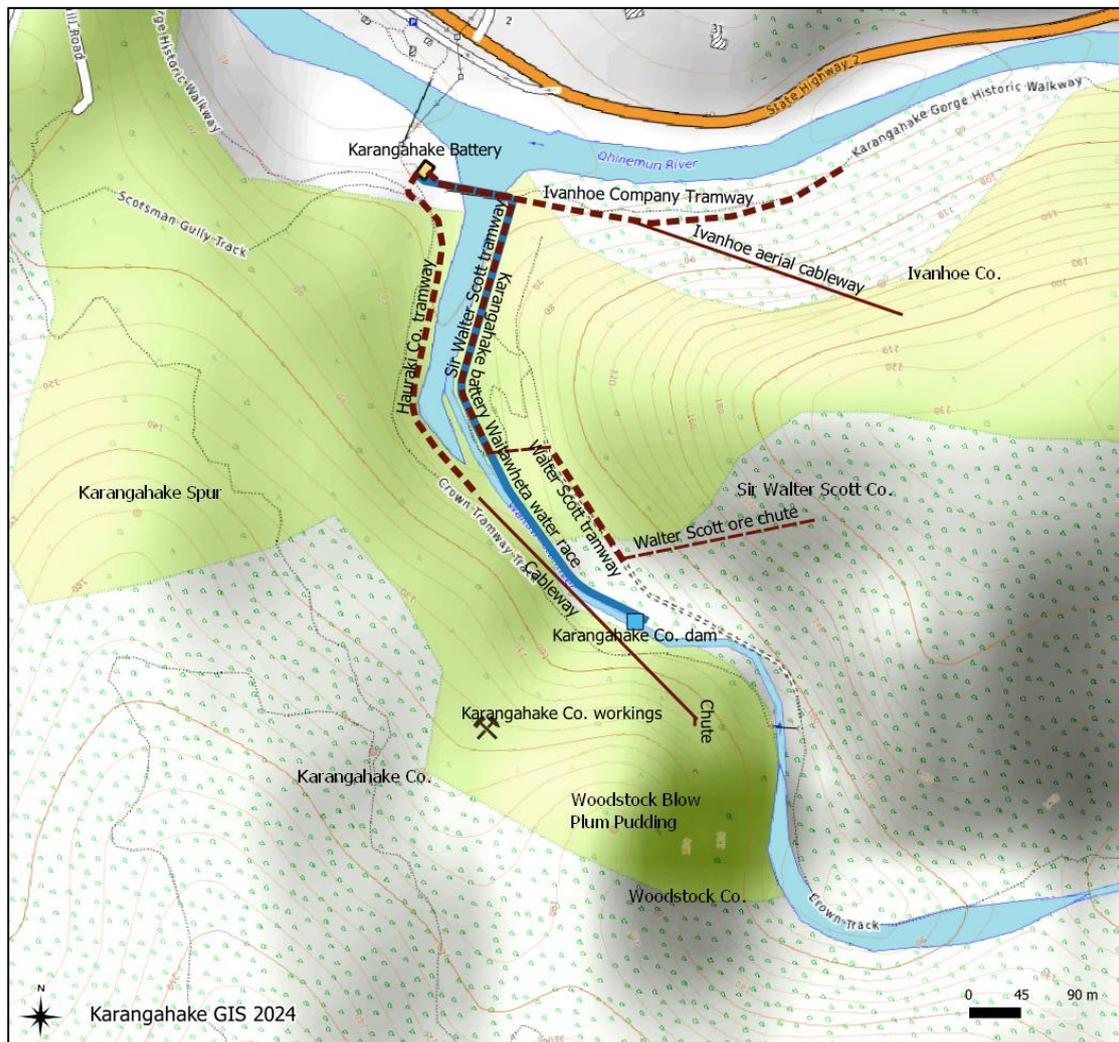
The County Road, and maybe Scotchman's Gully, are constructed.

By early May 1884 Sir Walter Scott have a chute and tramway on the Waitawheta side of Taukani Ridge. July 1884 the Ivanhoe Company intend erecting a cableway, but may already have a chute and ground tramway, on the Ohinemuri side of Taukani.

The Woodstock Company are operating on, or to the east of, the Woodstock Blow (Plum Pudding). In 1885 they will construct connections with the Hauraki wire tram, and hence to Battery Flat where they will commence construction of the La Monte furnace (opening in late 1885).

A bridge over the Ohinemuri River is proposed, it is completed mid 1885.

Tests as high as 800oz. of silver to the ton have been obtained from some ore. A way to successfully treat this ore is urgently required.



This map attempts to show the infrastructure described so far (roughly end 1884).

Hauraki Battery showing Hauraki Co. tramway (303m) and aerial cableway on true left bank of Waitawheta River, the Sir Walter Scott tramways and chutes on the true right bank, and the Ivanhoe tramway and cableway on the true left bank of the Ohinemuri River.

The Sir Walter Scott tramway is shown here, as it appears to be shown in the 1885 lithograph image, on top of the water race. Or maybe it is beside the flume?

The Ivanhoe aerial cableway (244m) and the Sir Walter Scott infrastructure are uncertain.

1885

27 January

The Hauraki battery plant is now in first-class working order, having undergone thorough overhaul since the holidays. The dam, as well as the head of the water race, which have always been a source of trouble to the manager during flood time, have been considerably strengthened by means of a stone wall built right across, the face of the one and, both sides of the other, so that nothing short of a perfect deluge will ever effect either of those two points again.⁷⁰

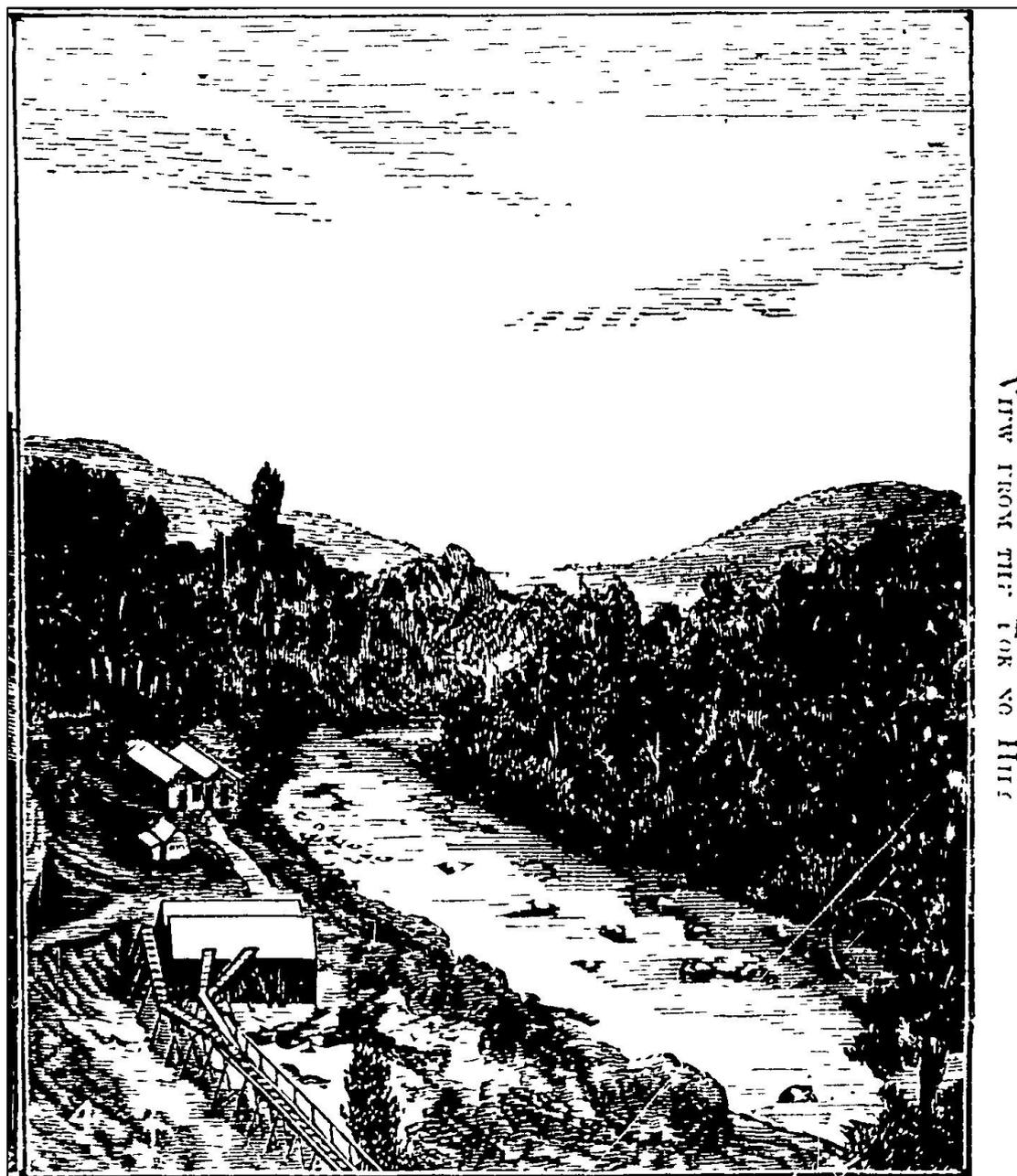
More overhauling of the battery.

Stones have been placed in front of the dam, effectively to armour the wooden structure. Thus only the very top edge of the woodwork is vulnerable during flood. These stones can be seen in many of the photographs of this dam.

⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18850127.2.7>
Thames Advertiser, Volume XVI, Issue 5084, 27 January 1885, Page 2

Views of Karangahake Goldfield⁷¹

These lithographs are art works, possibly based on photographs.



Pictorial Christmas Supplement to the New Zealand Herald, December 1885

“Well-executed Views of New Zealand scenery, and drawn by local artists and engraved at the Herald office. Views embrace a large variety of subjects...The sketches will be accompanied by a letter-press description.⁷²”

No. 4: This view is taken from the Tokano [Taukani] Hill, and represents in the foreground the water race supplying the Ivanhoe Battery, Shepherd's Hotel in the distance, with the Ohinemuri River, having

⁷¹ <https://paperspast.natlib.govt.nz/newspapers/new-zealand-herald/1885/12/24/19>

New Zealand Herald, Volume XXII, Issue 7519, 24 December 1885, Page 13 (Supplement)

⁷² <https://paperspast.natlib.govt.nz/newspapers/NZH18851221.2.20.2>

New Zealand Herald, Volume XXII, Issue 7516, 21 December 1885, Page 4

Karangahake Battery

on its right timber-covered spurs. A solitary kauri tree is to be seen growing against the sky line, towering above the forest growth below.”

Image “taken” from a little way up the track ascending Taukani, as seen in image No. 3. Water race and tramway. The building in the foreground is the Hauraki Battery. The Ivanhoe Company acquired the battery from the Hauraki Company circa August 1885⁷³. The description, if written in December, has updated the ownership/name.

The image shows the tramway dividing at the battery building. Maybe this allowed ore from the different mines to be kept separate, eg from Sir Walter Scott, and from Ivanhoe. Or this was simply a way of distributing the ore across the battery hoppers. This divided tramway can be seen in later photographs taken after the battery is removed.

No buildings shown on true right bank of Ohinemuri, nor bridge (completed June 1885⁷⁴). No sign of the La Monte furnace building under construction. This also began in June 1885. Hogg’s Store opened early September, and is also not seen in the images.

This seems to date these images early in June at the very latest. They are no earlier than early May 1884, when the Sir Walter Scott install their ore chute.

Hauraki Battery becomes Ivanhoe Battery

17 August

Ivanhoe. The manager has also men at work upon the company's additional lease, the Victoria. This came into their hands through the purchase of the Hauraki plant, the ground being held for the Hauraki by Messrs. Hansen and Wick.⁷⁵

Thus the Hauraki battery is acquired by the Ivanhoe Company.

Ivanhoe.—This is the mine which has brought Karangahake to the front, and as yet its only rival is the Crown. It consists of 77 men's ground. The mine is portion of a great cone, at the base of which the Ohinemuri and Waitawheta Rivers course onward till they junction. This monster sugar loaf is capped by the Ivanhoe lease. On the Waitawheta side are the Sir Walter Scott, Gladys, Truro, and Argentine claims. On the fall towards the Ohinemuri River are the Ohinemuri and City of London leases. It may be mentioned, by the way, that both this spur and the Woodstock are bald, being devoid of timber. The approach to the Ivanhoe mine is up a veritable serpentine track. The workings have been entered on the north—that is, the Ohinemuri River side of the cone...

The manager is at present engaged constructing an aerial wire tramway 800 feet [244m] in length, to come north of the hoppers; thence to the battery is a ground tramway.⁷⁶

Today, a short tunnel, and anchoring bolts are remnants of the top of this cableway. The ground tramway is what we can see in the lithograph 3? It runs along the side of the Ohinemuri River, a little above the present walking track.

The “veritable serpentine track” shows on the 1885 Christmas Supplement image 3. And then on many subsequent photographs.

⁷³ <https://paperspast.natlib.govt.nz/newspapers/NZH18850817.2.36>

New Zealand Herald, Volume XXII, Issue 7408, 17 August 1885, Page 6

⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18850604.2.10>

Thames Advertiser, Volume XVI, Issue 5185, 4 June 1885, Page 3

⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18850817.2.36>

New Zealand Herald, Volume XXII, Issue 7408, 17 August 1885, Page 6

⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

Karangahake Battery

Both Taukani Ridge and Woodstock Blow are devoid of timber. Why? Were they burnt at an early stage? The Mackaytown fern was burnt before the opening of the field.

Towards the northern boundary of the mine is a lode known as Liddell's reef. It is about three feet wide, and the quartz is apparently very kindly. A considerable amount of driving has been done on it.

The battery consists of 10 stampers and four berdans; it is driven by water from the Waitawheta stream. The battery was not working at the time of my visit.⁷⁷

The Ivanhoe (ex Hauraki ex Karangahake battery) has been reduced to 10 stamps from the original 16 stamps.

1886

3 July

Ivanhoe. — The repairs are all but completed in the battery. There is a rumour, as to the Sir Walter Scott and this mine amalgamating. This is a desideratum, as the two mines can be very economically worked from one main level.⁷⁸

8 July

Ivanhoe. — The work of renovating and refitting the machinery is now complete in the battery. The new Pelton wheel placed in lieu of the turbine appears to work well, and an early start will be made on quartz from the Adeline mine.⁷⁹

6 November

Ivanhoe.—The formation of the line for the tramway from Liddell's reef to connect with the wire section at the old workings is being rapidly advanced towards completion. When this line is open for traffic the manager will start permanent work on the reef, from which, he expects to obtain sufficient good stone to keep the battery moving for some time to come.⁸⁰

⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/WT18860703.2.28>

Waikato Times, Volume XXVII, Issue 2182, 3 July 1886, Page 3

⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860708.2.12>

Bay of Plenty Times, Volume XIV, Issue 2009, 8 July 1886, Page 3

⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18861106.2.16>

Thames Advertiser, Volume XVII, Issue 5629, 6 November 1886, Page 2



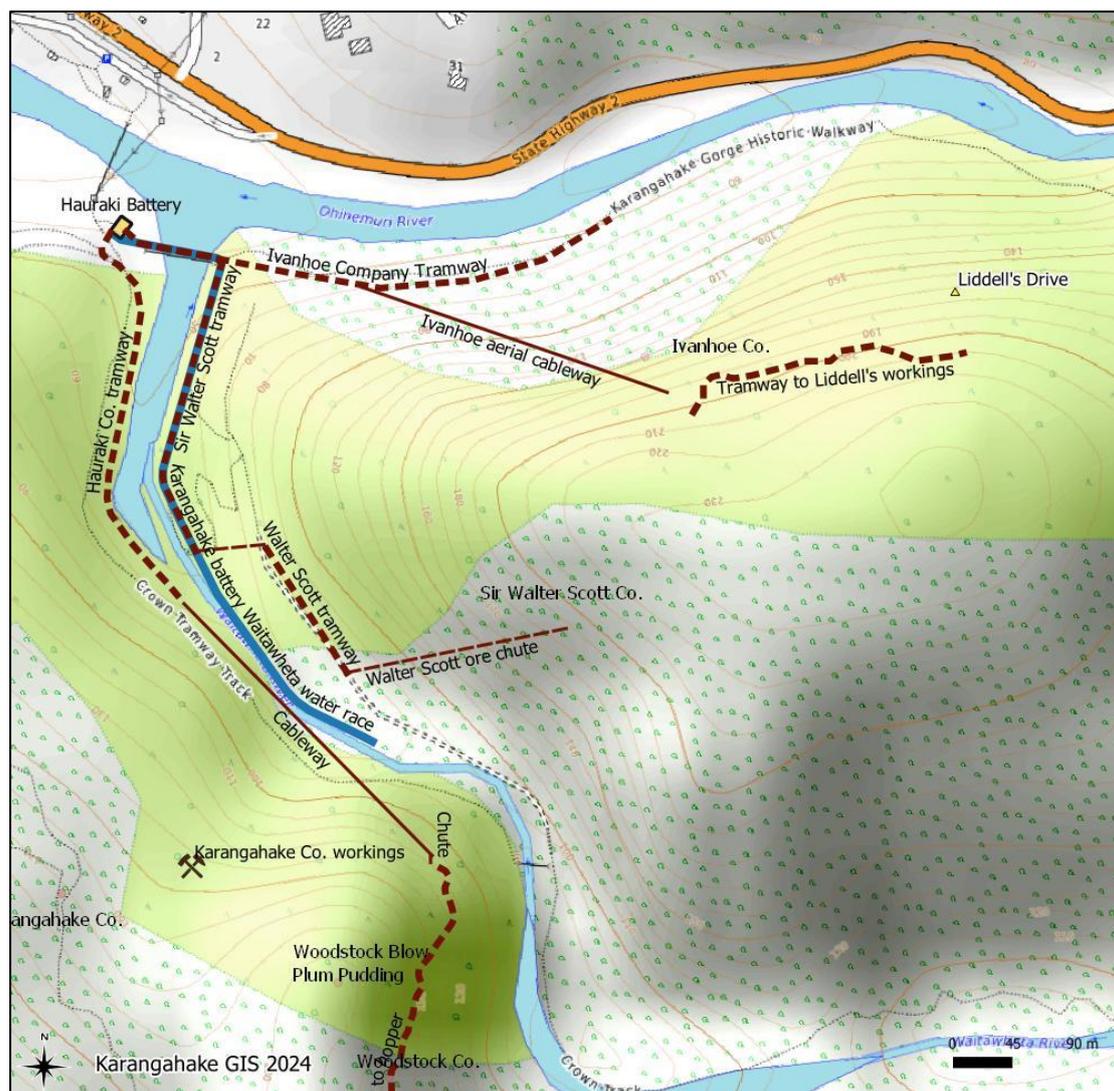
Ohinemuri Gorge 489 Auckland Library, JD Richardson, from Butlers track.
Right of centre skyline shows the tramway to Liddell's reef workings. Tramway established 1886.
Butler's track was completed mid 1885.

9 December

Ivanhoe (Karangahake). —The crushing now proceeding is shaping very satisfactorily, and the manager will put on all stampers next week.⁸¹

⁸¹ <https://paperspast.natlib.govt.nz/newspapers/WT18861209.2.9>
Waikato Times, Volume XXVII, Issue 2250, 9 December 1886, Page 2

Karangahake Battery



Liddell's tramway and workings, 1886.

1887

5 March

KARANGAHAKE. Ivanhoe. — The owners of this mine have at last determined upon renovating their battery plant, so as to meet the requirements of the district. Excepting the stampers the present plant will be entirely removed, and a number of Railey pans substituted. These pans are now being manufactured at Messrs Price Bros., Thames, and no time will be lost in getting them into position, so that the work of quartz reduction may be resumed as quickly as possible.⁸²

4 June

We are informed Messrs Littlejohn and party have taken the Ivanhoe battery, Karangahake, on lease for six months; and that crushing thereat will be recommenced without delay; a parcel of ore from the Scott portion of the Ivanhoe being now conveyed to the battery.⁸³

⁸² <https://paperspast.natlib.govt.nz/newspapers/TAN18870305.2.9>

Te Aroha News, Volume IV, Issue 193, 5 March 1887, Page 2

⁸³ <https://paperspast.natlib.govt.nz/newspapers/TAN18870604.2.7>

13 June

Karangahake, Friday. The Ivanhoe battery has been leased to Messrs Hogg and Littlejohn, who are now constructing a road in lieu of the damaged tramway, so as to enable mine proprietors to send their quartz to the mill for treatment, the price for same having been fixed at 12s per ton.⁸⁴

2 July

Woodstock tributers sent parcels of ore to both Railey's plant and the Ivanhoe battery, and after a discussion of costs, the following:

But, then, what about the percentage of bullion saved at the "respective plants"? In round numbers Railey's process extracted bullion to the amount of L4 per ton, whilst the Ivanhoe battery only saved L2 worth of bullion per ton. Of course, it is a matter of £.s.d with the tributers, and, as Ivanhoe battery gives them the largest margin of profit, they have determined to continue sending their ore to that plant.⁸⁵

1889

23 February

The old Ivanhoe battery has not been working for some time past, that is not the stampers, but grinding of tailings is progressing daily, under the supervision of Mr W. Littlejohn.⁸⁶

24 April

The old Ivanhoe battery is pounding away on a large parcel of low grade ore from White and party's (Ivanhoe) tribute. The stuff is easily broken, and half ounce to the ton would pay, judging, however, from the show on the plates it should turn out something better than half ounce.⁸⁷

1 June

Ivanhoe Battery: The repairs to the water-race having been completed, this Battery is again at work on a parcel of tailings.⁸⁸

1890

24 March

The old Ivanhoe Battery, which is, or was the most complete plant of its kind in the district, has been sold for removal to Puriri, where it is to be re-erected on behalf of an Auckland syndicate.⁸⁹

Te Aroha News, Volume IV, Issue 206, 4 June 1887, Page 2

⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/AS18870613.2.29>

Auckland Star, Volume XVIII, Issue 138, 13 June 1887, Page 5

⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18870702.2.13>

Auckland Star, Volume XVIII, Issue 54, 2 July 1887, Page 5

⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18890223.2.14>

Te Aroha News, Volume VI, Issue 345, 23 February 1889, Page 2

⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18890424.2.9>

Te Aroha News, Volume VI, Issue 362, 24 April 1889, Page 2

⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18890601.2.12.1>

Te Aroha News, Volume VI, Issue 373, 1 June 1889, Page 2

⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18900324.2.74>

New Zealand Herald, Volume XXVII, Issue 8211, 24 March 1890, Page 6

Ivanhoe Battery sold for removal to Puriri

That is the last mention of the “old Ivanhoe Battery”. Gone, after 14 years.



Staples collection.

Photograph taken from up the bank, across the Waitawheta River.

There is no Crown Company water race flume shown; it was built during 1892.

Bottom left of the image are the water race flume and tramway bridge which served the battery. On close inspection, a rectangular shape is visible on the ground just to the right of the end of the tramway.

Foundation of the battery building? To the left of this, at the end of the water race, some structure excavated into the ground. Turbine/pelton wheel pit?

The white sandy area appears to be tailings(?). To the right of this appears to be a wooden ground flume; tailings discharge?

Like photographing dolphins, we have photographs of where the battery was. This image not long after the battery was removed. Late 1890, or 1891?

Karangahake Battery



Title: Karangahake Township. Auckland Library; photographer JD Richardson.

To the left of the image can be seen an area of white sand, beyond which the location of the removed Karangahake/Hauraki/Ivanhoe battery. Below the two water race flumes are the remains of the tramway trestle bridge and water race flume for the battery.

Visible are the Crown Company tramway and water race flume, completed towards the end of 1892.

Photograph taken from well above the road, c. 1893+?