

## *Wooden Railway on Durban's Bluff*

No story or record of the Durban railway and its locomotives would be complete if the Bluff Railway were ignored. Four years before the building of the Durban-Point railway, a line just 100 yards short of a mile had been constructed and was in operation on the Bluff side of Durban harbour. There was little glamour in this compared to the fanfare and ceremony experienced across the bay in 1860, and today nothing remains of this venture, which had such an important effect on the viability of the port. To understand the reasons for the building of this little railway it is necessary to examine some of the background.

The Bay of Natal, in essence a great lagoon watered by several rivers, is bordered on the south by the Bluff, a prominent headland. To the north lies a spur of land which from early days was called the Point. The mouth of this bay contains a natural submarine sandbank, the Bar, which at times has a depth of a mere six feet (2 metres) of water at high tide, preventing anything but the smallest sea-going vessels from entering or departing, and then only at great peril to themselves.

As more and more settlers arrived in the late 1840s the necessity of improvements to the harbour entrance became more urgent. Between 1849 and 1850 imports doubled, and it also became apparent that larger and larger ships were being used. The inability of these ships to enter the bay resulted in their remaining in the outer anchorage, which was notorious in bad weather. Between 1845 and 1885 sixty-six ships were blown ashore from this anchorage and wrecked on Durban's South Beach.<sup>1</sup> Thus it became of paramount importance to find a solution to the problem posed by the Bar, and to this end in 1849 a commission was appointed to investigate the matter. As a result of this, the Government of Natal appointed Mr John Milne, a civil engineer who had recently arrived on one of the Byrne immigrant ships, to attend to the matter.

Following his own observations, Milne decided that the tidal velocity into and out of the bay should be increased by reducing the size of the mouth, thereby causing the tides to scour the sandbanks and remove the problem. He proposed building a north pier from the Point and a south pier from the end of the Bluff, and estimated that this would result in a permanent depth of 30 feet (9 metres) at the harbour entrance.

Among his various problems, which included gross underfunding, was the lack of suitable stone within reasonable distance of the harbour. A quarry existed at Cato Manor, on the other side of the Berea ridge, and other stone could be obtained to the north of the Berea at the Umgeni, both of which would have required considerable effort to collect and transport. On the south side of the harbour mouth sandstone existed at the base of the Bluff, and this offered a practicable source. The Bluff sandstone was very calcareous with fossil shell<sup>2</sup>, but Milne, after discussing the matter with Natal's Surveyor-General Dr William Stanger, decided that once submerged the stone would prove durable enough for the building of the north pier.

The stone was initially quarried opposite the Point, at the place where Wests station now stands. Nearly 60 feet (18 metres) of soil had to be removed to expose the stone. This site was worked until 1854, after which the operation was moved to the end of the Bluff, where exposed rock facing the sea, and 50 feet above sea level, could be quarried. Long drills and gunpowder were used to blast the rock loose. To convey it from this new position to a quiet place in the bay itself, from where it could be ferried across the channel, Milne elected to build a railway. It is interesting to note that John Milne always insisted that his new railway, the first in South Africa, was not to be called a tramway. He argued that the industrial tramways of Britain consisted of flanged tracks between which unflanged wheels ran, whereas he had designed and built flanged wheels to run on wooden rails.<sup>3</sup>

William Campbell and Richard Godden tendered, and were awarded the contract for the earthworks for the new railway. Milne proposed that Robert Thompson, a professional sawyer, should be given the job of sawing lengths of timber for the tracks, but was overruled by the harbour committee, which insisted on tenders being called for. A general handyman, whose only other possible claim to fame lay in the fact that he had been one of Dick King's wagon drivers, was duly awarded the contract and he, assisted by a runaway sailor, set about his duties. Milne's amusing description best fits their abilities: '... and having begun work, it soon appeared that the saw, at least, was very perverse. She went out to windward and to leeward, whether they would or not, and that therefore they could not cut the rails straight as they were bound to. Moreover, these unfortunate men blamed not only the saw, but one another, and not agreeing on this latter point, they thrashed one another so tightly that the co-partnership was soon broken up.'



Part of John Milne's Railway on the Bluff.

(Photograph by courtesy of the Killie Campbell Africana Library)

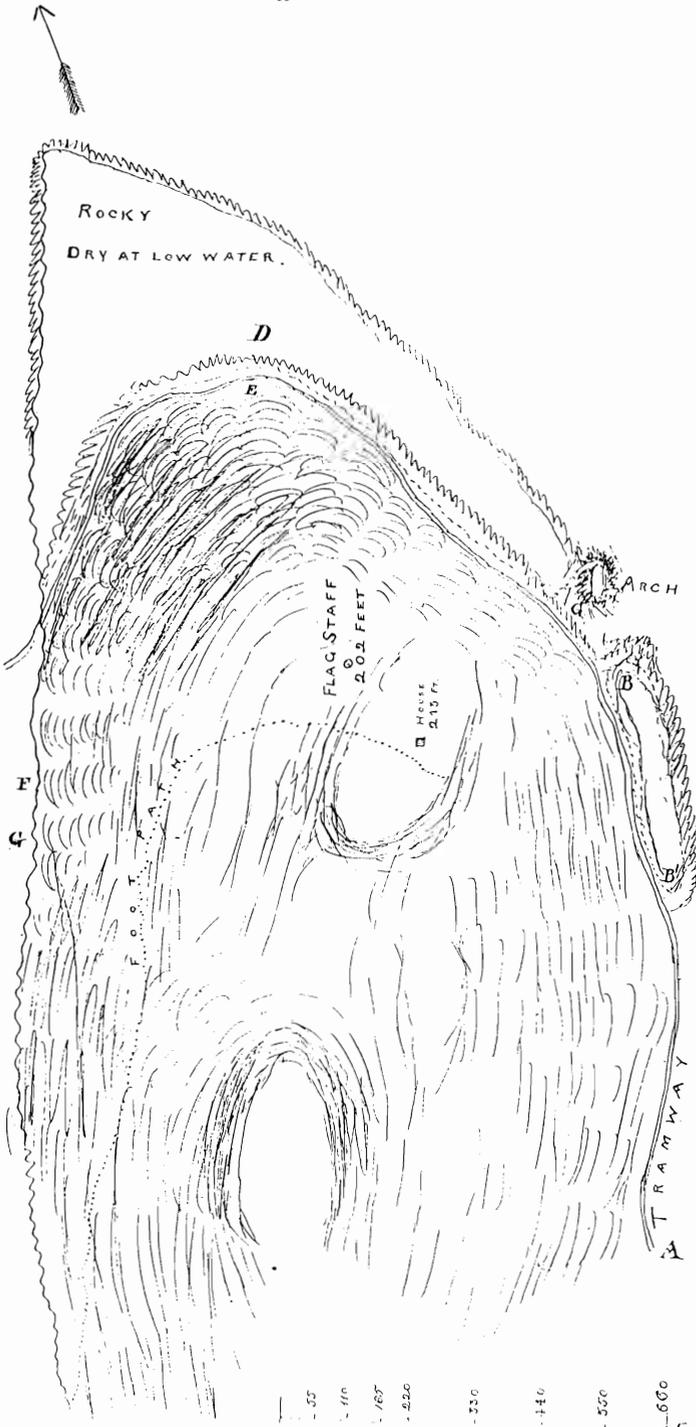
The harbour committee felt these two should be given another chance, but adjusted the work rates, following which the two ne'er-do-wells spent much of their time sharpening their saw and carrying away ruined logs. When the cost of sawing had escalated to five times that quoted by Mr Thompson, the committee finally agreed that Milne could appoint whoever he chose, and Thompson, and later Messrs Charles Gregory and William Hart, completed the work and the track was duly laid.<sup>4</sup>

It was laid at an average height of 6 feet above high tide, and measured just under one mile in length (1,6 km). At the end of the Bluff a rather prominent corner had to be blasted away to allow for the track's curvature. The track hugged the side of the Bluff until it reached the point where the loading jetty was to be built. It was built dead level, with a worst curve of some 100 feet. The gauge used was 4 feet and the sawn timber rails, cut lengthways along the timber, were taken from local milkwood trees, which grew in profusion on the Bluff. They were wedged into cuts made in the rounded tops of half log sleepers, which were laid with their flat sides down.<sup>5</sup> The railway construction began in February 1856 and was completed before the end of that year.

Eight wagons were designed and built to John Milne's specifications. Each four-wheeled wagon, with wooden wheels and flanges, had a capacity of three tons. They were 8 feet long, 5 feet wide and 3 feet high. A train consisting of four of these wagons was hauled by a team of eight oxen. Once a week a fresh span of ten oxen was swum across the bay to relieve the others. It was said that they made such a noise, accompanied by their Zulu drivers who added to the din with shouting and cracking of whips, that they could be heard from around the Bluff long before they came into view.

The stone was cut into squares weighing about 50lbs each, and into shapes which allowed them to be locked into each other.<sup>6</sup> The cost of quarrying was estimated at 1s 9d per ton, and the hire of the lighter 1s 4d per ton. Not too much stone from the new quarry could have been carried on the railway, as the work on the pier, which had reached 150 yards (137 metres) by the end of 1856, was halted in 1857 on instructions from the new Lieut.-Governor John Scott, who believed that the work was taking too long and proving too costly. This latter was despite the fact that Milne had spent only 14% of the original amount voted for his project, and this spending had included the building of a road into town, a jail, and an embankment in addition to some 500 feet of pier.<sup>7</sup> At the loading point the stone had been manually loaded on to a specially constructed flat-bottomed lighter named *Camel*. Milne had proposed building a jetty to facilitate this, but Scott refused to sanction it. He also believed that no further work on the north pier should proceed until the opinion of higher engineering authorities in England had been obtained.<sup>8</sup>

Milne took exception to this, and also to instructions to proceed using methods which he clearly did not agree with, and he was suspended from his duties. As a result he either resigned, or was asked to resign, as Harbour Engineer in 1858. From subsequent reading of the background to this affair, it appears that Milne was harshly and unfairly treated. The committee appointed to investigate and report on the matter included George Cato, a leading personality in Durban, who had long been critical of Milne's proposals and, it is suggested, may have had reason to feel aggrieved that Milne would never agree to buying stone from Cato's own quarry at Cato Manor. In his reply to the committee on this very point, Milne said that he '... never had any great objection to the use of stone from Cato's Manor except that of the great expense of bringing it to the works.' He also said that the calculations of bringing a railroad to Congella and to Cato's Manor (over the ridge behind the Berea) would have proved



Rough sketch-map by P.C. Sutherland, colonial Surveyor-General, showing the route of the Bluff railway, the original quarry site F, and the quarry sites A and B on the ocean side of the Bluff. The map is an annexure to a report (no. 111/9/3) of the Surveyor-General's Office, dated 10 April 1860. The original is in the Natal Archives.

far too costly. It is interesting to speculate on the course Durban's railway development might have taken had these proposals indeed been carried out!

In all the costly later attempts to overcome the problem of the sandbar at the entrance to Durban harbour, Milne's ideas were very close to being vindicated – certainly in respect of where he commenced building the north pier. His railway, albeit of wooden construction and drawn by oxen, proved highly successful, and introduced to the young colony a new method of transport which it was shortly to develop even further.

The Bluff Railway, though it fell into disuse following Milne's resignation, remained *in situ* until at least the early 1870s. The Natal Government Railways constructed a railway in 1896 from a junction on the South Coast line at Clairwood to a terminus at Wests on the Bluff. In the early part of the 20th century an extension to this line was made around the corner of the Bluff to service a number of whaling stations by then established on the seaward side of the promontory. This line was laid over the original wooden railway trackbed, and extended several kilometres further. Although no longer in use since the mid-nineteen-seventies, and largely covered by a gravel road and undergrowth, this track still exists.

#### NOTES

1. Heydenrych, Lucille, in *Enterprise and Exploration in a Victorian Colony*, Ed. Guest, W.R. and Sellers, J.M., Pietermaritzburg, University of Natal Press 1985, p.18.
2. Bender, Colin, *Who Saved Natal? The Story of the Victorian Harbour Engineers of Colonial Port Natal*, Privately published 1988, p.32.
3. *Ibid.* p.32.
4. *Ibid.* pp.32–33.
5. *Ibid.* p.33.
6. Campbell, E.D., *The Birth and Development of the Natal Railways*, Pietermaritzburg, Shuter and Shooter 1951, p.4.
7. Guest and Sellers, *op. cit.*, pp.20–22.
8. Goetsche, Eric, *Father of a City. The Life and Work of George Christopher Cato, First Mayor of Durban*. Pietermaritzburg, Shuter and Shooter 1967, pp.154–155.

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