

## The Railways and Tramlines of Rabaul

By Michael R Pearson.

### **Mioko Tramline**

In 1891 the Deutsche Handels and Plantagen Gesellschaft(DH&PG), were operating a tramline between their wharf and store on their station at Mioko<sup>1</sup>. The exact date that it was built is not known. The trading station was established by Emma Forsayth in 1875<sup>2</sup> and purchased by DH&PG in 1886<sup>3</sup>.

### **Herbertshoho Tramline**

The 1892 German New Guinea Annual Report indicated that materials were ordered for a narrow gauge tramway at the Herbertshohe (Kokopo) station to link the landing place with a cotton store. The tramway was to be 300m long and have 3 sets of points<sup>4</sup>. A later report indicated that 1000m of tramway was completed by November 1894<sup>5</sup>. In 1896 a landing jetty, 30m long, was completed with a new transit shed which made "it possible to bring the narrow-gauge railway trucks with goods from the jetty into dry storage quickly"<sup>6</sup>.

### **Raniolo Funicular Railway**

The 1898 German New Guinea Annual Report notes that Raniolo Plantation had a funicular railway across a steep sided valley to the plantation<sup>7</sup>.

### **Nord Deutsche Lloyd and Rabaul Tramway Network.**

In 1905 the Nord Deutsche Lloyd(NDL) established a settlement and wharf at Simpson Harbour(Rabaul)<sup>8</sup>. The town plan included wide tree lined avenues which provided space for footpaths, a tramline and road way under the shady trees. Before the introduction of motor vehicles a 2ft 6in<sup>9</sup> gauge tramway network over 2km long was built up from this site to connect with various stores and administration departments including the Government School and European Hospital at Namanula<sup>10</sup>. In 1914 the *Sydney Mail* reported "it is a curious fact that each residence in the settlement has a line like this (photograph of a hand pushed wagon conveying mail) connecting it with the wharf, so that goods can be conveyed direct from the boat side"<sup>11</sup>. Although the NDL wharf was damaged by fire in 1923 the rest of the tramway was used until 1937 when the volcanic eruption of Matapit covered the the tiny rails with debris<sup>12</sup>. Plans to move the capital of New Guinea to Lae meant that there was little concern to have the tramlines repaired<sup>13</sup>. the Native Hospital and Compound at Rapaindik was

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removed to Nonga on the North Coast and so the locomotive, truck and carriage of the Public railway to Rapindik were put up for disposal<sup>14</sup>. The tramlines on the wharves, however, remained in use during the Japanese occupation until Rabaul was reduced to rubble by Allied Bombing in 1945<sup>15</sup>.

By the Beginning of World War I the German colony had established permanent tramlines at in the Gazelle region at Mioko, Herbertshohe, Ralum, Raniolo, Kabakaul and Rabaul. Under the German settlement programme from 1910 onwards the German Administration had proposed and begun construction of a railway along the coast from Rabaul to the Baining. The materials for this railway were in the process of being shipped to New Guinea when war was declared as the shipment only got as far as the Philippines<sup>16</sup>.

### **The First World War and The Australian Occupation**

In September 1914 an Australian Expeditionary force captured Rabaul. German New Guinea (GNG) became an occupied territory. During this occupation no further development of railways took place. The tramlines established in Rabaul and on plantations operated for the next 12 years without any more capital expenditure. The German owners were required to run their business and plantations for the Australians administration. Because the Germans were unsure of their future they were both unable and unwilling to make any improvements to the capital assets of their businesses<sup>17</sup>.

### **Expropriation**

When the war was over Australia retained control of GNG. Under the Terms of the Armistice German New Guinea became the Mandated Territory of New Guinea (MTNG) in 1920. All German properties were taken by the Australian Government (expropriated) and were sold to pay the cost of the war. After 1927 the tramlines established by the Germans became the property of Australian Companies who continued using them.

Prior to 1920 trading in German New Guinea had been dominated by the Neuguinea Kompagnie (NGK), Deutsche Handels und Plantagen Gesellschaft and Hernstein & Company, After the war the properties of these firms were expropriated by the Australians. WR Carpenters, an offshoot of the NGK from Western Samoa and Fiji, bought out most of the NGK holdings. Burns Philps also expanded its activities into the MTNG by buying up the properties of German trading companies and taking over the shipping services<sup>18</sup>.

### **Mandated Territory of New Guinea**

The Rabaul tramway system continued to expand with the return of peace. In 1923 the Australian Administration began construction of a 1.5 mile railway of 2ft 6in gauge to connect the NDL wharf with the proposed new Native Hospital at Rapindik. This light railway provided transport for native patients from Rabaul (old native Hospital) to the new Hospital at Rapindik. It had a small Muir Hill diesel mechanical locomotive, a bogie flat car and a passenger carriage. Although the tramline was completed in 1923 it was to be 1928 before the hospital was completed and in November 1928 the railway began carrying passengers<sup>19</sup> After only one year operating from the old hospital it was then operated from the new clinic near the customs house to Rapindik. The Administration also built a 2ft gauge tramline to service the Malaguna coaling wharf. W. R. Carpenters also built a short 2ft gauge tramline from Ah Tams Wharf to his copra store which Carpenters used. The Australian Administration

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had planned to connect all these tramlines into a system that went from Rapindik to Malaguna. Around the harbour at Toboi W .R. Carpenters in 1928 constructed another 2ft gauge tramline to carry copra from the wharf to their new storage sheds . Hand-pushed bogie wagons were used on the tramway. Using man power and these bogie wagons it was possible to handle from 800 to 900 tonnes of copra per day when ships were being loaded. In 1930 Ah Tams wharf and tramline were destroyed by fire. Had all these tramlines been built with the same gauge (space between the rails) it would have been an easy matter to link all of them together. Unfortunately there was no compromise or cooperation and the Australian Administration and the Australian companies build to different gauges rather than keeping to the one already used by the Germans and so the plan of both the Germans and the Australians never eventuated. The German gauge would have been 750mm while the Australians built to 762mm the extra 12mm would have made little difference to the operation of the line by vehicles of the larger gauge while vehicles of the narrower gauge would have fauled the check rails of the large gauge track. The 609mm built by the Australian companies was only 9mm larger than the German 600mm with the same problem.

### **The Depression and the motor car.**

The Depression years saw the prices of plantation products sink to the lowest pre-war prices. The tramlines built during the developmental stage of Rabaul remained an efficient transport system which was still operated and enabled the economy of Rabaul to servive the depression.

Prior to the depression Rabaul was a wealthy trading town and was able to claim in 1929 to have the highest motor car ownership per head of population in the world and the highest petrol consumption<sup>20</sup>. Deaths to motor vehicles were also alarmingly high. In this modern motor age the little railway of Rabaul often became the target of synical comments in the Rabaul Times, the local newspaper of the day<sup>21</sup>. which was unashamedly derogatory of anything which benefitted the native.

### **Volcanic Eruption**

On 29th May 1937 Vulcan and Matupit, two small volcanoes one each side of Simpson Harbour, erupted showering ash all over the town causing wide spread damage and lost of life to the local populace<sup>22</sup>. There was extensive damage to property and it was decided to move the capital to Lae<sup>23</sup>. This was the beginning of the end for the Rabaul tramways as they were buried under ash. Although the roads were quickly cleared, most of the tramway, which were already in a poor state of repair because of the years of neglected maintenance during the depression and the advance of the automobile ,were abandoned and only the lines on the wharves remained in use. The locomotive, bogie flat car and passenger carriage of the Rapindik railway were placed up for tender<sup>24</sup> as the line to Rapindik was no longer of use because the hospital which had been too close to the erupting volcano was destroyed. A new hospital was to be built on a site at Nonga and it was to be serviced by buses<sup>25</sup>.

### **The Second World War**

On 23rd January 1942 Japanese forces landed at Rabaul. Most Australians had already been evacuated. Nearly all of those who remained were captured and kept in POW camps at Rabaul. In to Rabaul came not only Japanese soldiers but also Indian prisoners of war who worked on the wharves and in the many tunnel dug into the mountain side of Rabaul<sup>26</sup>.

### **Japanese Occupation**

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The Japanese built numerous tramlines for the construction of airstrips and the exploitation of timber stands. These were constructed by the Japanese Imperial Navy to 2ft(610mm) gauge. Those located around Rabaul include:-

Rabaul Barge Tunnels where large tramlines of between 500 and 1000 metres in length were laid into the tunnels constructed around Rabaul Harbour so that the barges could be stored well protected from enemy bombing.

At Tobera, Vunakanau, Keravat and Lakunai the Japanese used tramlines to transport the corinous (crushed coral) to construct their airstrips. The Japanese army did not have bulldozers at that time and instead depended on human labour to build these airstrips. Some of the older Tolai population can still remember having to work on the construction of these airstrips<sup>27</sup>.

Between 1941 and 1943, the Kato Works Company Ltd, Shinagawa, Tokyo, constructed a total of 729 2ft gauge 4-wheel petrol mechanical locomotives for the Japanese Imperial Navy. Official records indicate that 93 of these locomotives were dispatched to "Big Harbour" (Rabaul), comprising 5 5-ton, 25 4-ton and 63 3-ton locomotives<sup>28</sup>. It is not known how many of these locomotives actually arrived in New Guinea but each airstrip had several to pull the loaded trucks of corinous.

One of these Kato Locomotives is preserved at the Kokopo War Museum.

### **Peace and Reconstruction**

After the second world war was over the waste of war provided rich pickings for scrap metal merchants (marmots) and rapid fortunes were made collecting material to feed the furnaces of post-War reconstruction. The remains of these railways were collected by eager metal merchants or were used by other enterprising people for copra driers, bridges, fence posts and numerous other construction tasks. Some were used for short tramlines from copra sheds to wharves. Some wheels are still seen being used by weight lifters as dumbbells.

At Vunapope in 1963 the Catholic Mission built a 70cm gauge tramway from the wharf to the timber and ship building yards using equipment from its former logging railway at Ulamona<sup>29</sup>. It was in use until the mid 1980s when some of the materials from the tramline were sent to Milne Bay where they were to be used on a wharf at Alotau<sup>30</sup>. The wharf was removed in 1994 and a new wharf built 100m further east.

### **Today**

The remnants of these tramlines can still be found today in some locations. The easiest to notice is the line embedded into the concrete at Vunapope wharf and timber yard. Evidence is still visible in the cement at the old wharf site at Coconut Products Mill at Toboi and also at the old Copra Marketing Board shed at Kabakaul. The author has also been advised that at Mioko, Ulu Plantation and Rakaura their are still tramlines in existence.

### **Comment**

Rabaul town was planned very carefully by the Germans. In their plans they made allowances for people, motor vehicles and tramlines. Roads were wide with shady avenues for people to be able to walk in the shade away from the hot sun. Tramlines were built along side the roads.

The German also had plans to build light railway lines all the way around the coast of the Gazelle Peninsular. The tunnel built under tunnel hill was part of this plan and was made in expectation that it would be used by a railway rather than a road.

Rabaul had the only regular passenger carrying public railway in New Guinea operating from 1923 until 1937 (it was used from 1923 to 1928 to carry materials to build the hospital at Rapindik and then from 1928 to 1937 to carry pasengers as well as cargo).

As our transport engineers look at Public Transport for PNG perhaps they could reconsider the early plans of the original planners of Rabaul and plan for a truly PUBLIC, public transport system for

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our country.

### Research

The author is pleased to receive any comments or further information on these or any other small railways and tramways in PNG.

### List of Tramlines in the Rabaul Area.

Own/Operator,	Location,	Prov	Date of op.	Gauge,	Use & Comment
Deutsche Handle und Plantagengesellschaft	Mioko Island		ENB ? - ?		? Wharf to store, copra and general cargo - Man powered
Neu Guinea Kompagni	Herbertshohe		ENB 1892 - ? ?		Wharf to store general cargo- Man powered
Queen Emma*	Ralum		ENB ? - ?		? Wharf to store - Man powered
Neu Guinea Kompagni	Raniolo Pltn		ENB 1898 - ? ?		Funicular (Cable) Railway
Queen Emma* later Copra Marketing Board	Kabakaul Pltn		ENB ? - ?		2ft Wharf to store and copra weighbridge - Man powered
Norddeutscher Lloyd Neu Guinea Kompagni Hernsheim & Coy	Rabaul	ENB	1905 - 1942	?	Rabaul Tramway network wharves to stores and Administration offices Interconnected 3km general cargo Man powered
Hernsheim & Coy	Matapit	ENB	? - ?	?	Wharf to store - Man powered
Methodist Mission	Ulu Pltn	ENB	? - ?	?	Wharf to Store
Administration	Rabaul	ENB	1923-1937	2ft6ins	Rabaul to Rapindik 2km carry passengers and cargo to hospital diesel locomotive
Administration	Malaguna	ENB	1930 - 1942	?	Wharf to coal and oil store - Man powered
Coconut Products Ltd	Toboi		ENB 1930 - ?	2ft	Copra store to wharf - Man powered
?	Neinduk Pltn		ENB ? - ?		? Copra Plantation tramway
?	Namburg Pltn		ENB ? - ?		? Copra plantation Tramway
?	Kinegunan		ENB ? - ?		? Wharf to store
New Britain Timber & Merchantile Co Ltd	Wide Bay		ENB ? - 1931	?	Sawmill: Timber/logging 0.5 miles
Japanese Navy	Bitalova	ENB	1942-1945	?	Barge tunnel haulage way
Japanese Army	Lakunai	ENB	1942	2ft	Airstrip construction
Japanese Army	Vunakanau	ENB	1943	2ft	Airstrip construction diesel locomotive
Japanese Army	Tobera	ENB	1943	2ft	Airstrip construction
Japanese Army	Kerevat	ENB	1943	2ft	Airstrip construction
Sacred Heart Mission	Vunapope		ENB 1963-1984	70cm	Wharf to timber yard and bulk mission store

Downer/Kien JV for PNG Elcom	Warangoi Hydro ENB Station	1981-1983	?	construction of 7Km tunnel Battery Locomotives
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