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# 5. TURMOIL OF WAR

he early vision for railways was of a progressive, democratic force for the betterment of mankind. The reality was a new force for governments to tighten their grip over dissident forces, both domestic and foreign; for it was through railways that the power of industrial capital could be mobilised for concentrated effort.

This chapter covers the Pacific War in Papua New Guinea and assesses the role of railways in that conflict. The war brought the might of industrial capital to the former isolated colonial outposts and demonstrated its superior power over indigenous culture.

The war was a watershed in PNGs development process. And amid the destruction of war, railways played a significant role in building new infrastructure. Although the war experience was only of three and a half years duration, the authors have identified 26 railways constructed in PNG during this period, several of them being significant operations.

#### War Machines

As discussed in Chapter 2, railways were to play a central role in building the war capability of the Prussian, then the German army. Through the 20th century, railways continued to provide the essential sinews of war efforts, mobilising men, weapons and machines for the front. By the 1914-18 War, the use of railways to transport troops and supplies had become an intricate planning process to ensure that the vast quantities of food and ammunition required at the front was brought to its point of use. Both sides used mainline railways to bring troops, tanks, artillery and supplies to the front. From marshalling yards about 12 km behind the front line, 600 mm gauge light railways carried troops, ammunition and supplies to within 3 to 5 km of the front 1/2. Here the goods were stored in corps dumps and thence to divisional dumps. Light railways operated by petrol tractors or mules to carry supplies forward to brigade dumps and field artillery batteries. lines

Paradoxically, it was the Germans who lost the fundamentals of the supply equation in World War II, lured to destruction by their miscalculated belief in the superiority of their Panzer divisions and the perceived ability of *autobahns* to provide supply routes. The lesson was not lost on the Russians in the Eastern front, who used the Trans-Siberian railway to move the whole of their heavy industry away from the invading Germans<sup>2</sup>/. Strategically, the Russians were able to use their railways to bring their *Winter Army* from Manchuria to save Moscow in the winter of 1941, then to transport the ammunition for the 40,000 heavy guns with which they pounded the Germans.

The Pacific War brought a new imperial power to the shores of PNG. The Japanese had learnt their military strategies from the Japanese-Russian War of 1905. In this encounter, the emerging Asian power had humiliated a European nation. An important watershed in global power relations had been reached.

Military tendencies became a dominant force in Japan through the twenties. From 1931, Japan

<sup>1</sup> / Bullen, J, "Australian Railwaymen at War, 1916-1919", *ARHS Bulletin*, Vol. 46, No. 695, September 1995, p. 250.

<sup>&</sup>lt;sup>2</sup> / Faith, N, Locomotion: the railway revolution, London, BBC Books, 1993, p. 90

expanded its imperial power into Manchuria. The Japanese Army established a number of railway units covering field railways (*Yasen Tetsudo*), special railways (*Tokesetsu Tetsudo*) and railway transport (*Tetsudo Yuso*) in the major war theatres of Manchuria, Korea and Japan itself.

In the late 1920s Japan began to experiment with Special Naval Landing Forces (*Rikusentai*) which were first used against China. In planning for a Pacific War, ships and aircraft were the key to military thinking. But these machines of war needed bases and airstrips from which to operate and, therefore, the logistics to build these facilities were an important aspect of military planning.

As the Pacific War progressed, the Imperial Japanese Navy became heavily involved in the seizure and defence of Pacific Islands. For this role, a number of new naval organisations came into existence<sup>3</sup>/. Of particular interest to this analysis were the Pioneers (*Setueitai*) and the Navy civil engineering and construction units (*Kaigun Kenchiku Shitetsu Butai*). The Pioneers were responsible for the construction of airfields, fortifications and barracks. Units, of 800 or 1300 men, comprised 25-33 percent Japanese with the balance made up of Koreans or Formosans. The civil engineering and construction units were mostly engaged in labouring tasks for the construction of airfields, fortifications and barracks. They primarily comprised Koreans with Japanese overseers.

Japanese engineers made extensive use of portable railways in their construction tasks. These included standardised prefabricated 2 ft gauge rail sections, 18 ft long and using light rails of 10 pounds per foot<sup>4</sup>/. Switch sections were prefabricated. Large quantities of 13 kg/m rail were also imported. Light V-hoppers or flat cars, 4 feet wide and 6 feet long were used, being either pushed by man-power, or pulled by small, gasoline-powered locomotives.

Between 1941 and 1943, the Kato Works Company Ltd, Shinagawa, Tokyo constructed a total of 729 2 ft (610 mm) gauge, 4-wheel locomotives for the Japanese Imperial Navy<sup>5</sup>/. Comprising 3-ton, 4-ton and 5-ton units, it was the largest standardised group of 2 ft gauge locomotives ever built. Records suggest that most were fitted with 6-cylinder in-line petrol engines. However, other Japanese war-time prime movers also had diesel-powered models and locomotives found in PNG include diesels.

Australia also had experience in the use of railways in war. The Australian Imperial Force had gained extensive experience of war-time railway operations during the First World War. Six railway units, each comprising some 260 men, were formed by volunteers from the state railway systems to serve in France and Belgium operating standard gauge and light railways to serve the Allied war machine<sup>6</sup>/. The 15th Australian Light Rail Operating Company, for example, operated 137 locomotives and 112 petrol tractors and hauled 25,000 to 45,000 tons of goods per week.

At the outbreak of the Pacific War, Australia found its railway system, hindered by break of gauge and lack of investment through the 1930s, ill equipped to support the war effort. The Australian Army established its own Directorate of Railway Transportation and, in August 1941,

<sup>&</sup>lt;sup>3</sup> / Handbook on Japanese Military Forces, US War Department Technical Manual, 15 September 1944, p. 76-80.

<sup>&</sup>lt;sup>4</sup> / Handbook of Japanese Military Forces. United States War Department Technical Manual 15th September 1944 TM - E.30-480 p. 330-331.

<sup>&</sup>lt;sup>5</sup> / Information provided by Charles Small, Honolulu.

<sup>&</sup>lt;sup>6</sup> / Bullen, J, op. cit., pp. 243-256.

it drew up War Railway Timetables for Strategic Concentration <sup>7</sup>/. They covered movements on three general routes across continental Australia. In the Northern Territory, the toy railway operated by dilapidated locomotives and rolling stock under the grand title of North Australian Railway was taken over by the military. Traffic increased from several hundred tons a week to 24,000 tons as the nation rushed to defend its north.

Railway workshops made a major contribution to the war effort, building armoured vehicles and ammunition and commencing Australia's first national locomotive-building project, the ill-fated Australian Standard Garratt.

For construction purposes, the Australian Army used light 2 ft (610 mm) gauge railways. The Army obtained forty-five small 4-wheel petrol-mechanical locomotives built by the Melbourne engineering firm of Malcolm Moore between 1941 and 1944. Several of these saw service in New Guinea.

#### Destruction

On 23 January 1942, Japanese forces landed at Rabaul and quickly extended their occupation to other islands and most of the New Guinea mainland. By August, 1942, the Japanese Empire stretched from Burma in the west across the Pacific to Alaska's Aleutian Islands.

In February 1942, Japanese bombing brought destruction to the railway and associated facilities at Lae (p. --). Many of the existing plantation railway lines were dismantled by the Japanese and the rails moved elsewhere for more pressing tasks. On landing at Tinputz, Bougainville, on 1 January, 1943, a Japanese reconnaissance party dismantled the sawmill, plant and railway and loaded it on vessels for shipment to construction sites<sup>8</sup>/.

More widespread destruction occurred as Allied forces turned the tide on the Japanese advance. In July 1942, Australian troops halted the Japanese advance at Milne Bay and on 7 August Allied forces counter-attacked on Guadalcanal in the Solomon Islands. The Japanese, who had concentrated their forces at Buna for the Papua campaign, were caught by surprise<sup>9</sup>/. After heavy fighting, the Americans gained control of the airfield at Henderson, from where they launched attacks on Japanese forces in the New Guinea Islands.

Aerial bombing was heavy at many locations where railways were operating. Early in 1942 the Japanese bombed the Bootless Bay railway near Port Moresby, although the line had not been operational for over a decade<sup>10</sup>/. The infrastructure at Alexishafen and Marienberg were among the sites levelled by heavy Allied bombing. When Allied planes bombed Lae, Australians were informed by their controlled media that "the railway marshalling yards at Lae had been bombed, a claim which was greeted with mirth by those with local knowledge of New Guinea<sup>11</sup>/.

Coastal villagers suffered dislocation and damage from the heavy bombing. There was widespread, but unknown loss of life; much destruction of gardens, villages, livestock, crops,

<sup>&</sup>lt;sup>7</sup>/ Harvey, JY, "War railway timetables", *ARHS Bulletin* No. 685, November, 1994, p. 291.

<sup>&</sup>lt;sup>8</sup> / AD Fauer (ed), Coastwatching in the Solomon Islands: the Bougainville reports, December 1941-July 1943, New York, Praeger, 1992, p. 90.

<sup>&</sup>lt;sup>9</sup> / Ballard, RD, *The lost ships of Guadalcanal*, London, Weidenfeld, 1993.

<sup>&</sup>lt;sup>10</sup> / HE Prosser, ex-141 General Transport Company, letter to AD Lockyer, 22 May 1947.

<sup>&</sup>lt;sup>11</sup> / Willis, Dr Ian, letter, 9 September, 1978.

tress, canoes and various resources; and much deep-seated social dislodgment<sup>12</sup>/. The war experience jolted villagers from their settled patterns of existence and subjected them to a degree of anxiety previously unknown.

## Japanese Construction

The occupation brought a period of hectic construction of airstrips and exploitation of timber stands by the Imperial Navy. With the loss of Guadalcanal in September, 1942, the Japanese fortified their positions on Bougainville and New Britain with construction of a number of airstrips.

Official records obtained by Charles Small indicate that 93 of the standard Kato military locomotives were dispatched to "Big Harbour" (Rabaul). These comprised five 5-ton, 25 4-ton and 63 3-ton locomotives 13/. It is not known how many of these units arrived at Rabaul. At least seven locomotives were used on the Buin Naval railway, the builders numbers of which differ from those listed for "Big Harbour" 14/.

#### **Buin Railway**

At Buin on the south of Bougainville Island the Japanese military constructed PNG's most extensive railway system. Its total length was in excess of 30 km.

The railway was initially established for the construction of a fighter airstrip at Kara, near the present town of Buin, in November, 1942. Heavy fortifications were built up in this area. At Kangu Hill, overlooking the landing on Buin Beach, heavy naval guns and a radar station was established. Soldiers planted extensive gardens for food supplies and there were plans for Japanese settlers in the area to the north of Kangu Hill, which became known as *Little Tokyo*.

Japanese Navy Units constructed a 2 ft gauge light railway from Buin Port (Kangu Hill) to Kara airstrip, a distance of 15 km. The line was initially built with light 6 kg/m rails for hand-pushed trucks. As the tide of the war turned in 1943, Buin became an important holding base. The railway from Kangu Hill to Nakaro was upgraded with 12 kg rail for locomotive operation. A sawmill was established at Nakaro, together with workshops for vehicle maintenance.

Several branch lines were also constructed. The formation of one line, branching from the main line 3 km from Buin Port and running south, was followed by the author for over a kilometre to the Little Siwi River. There are reports that this extended a further 5 km through swampland to Moila Point, possibly because this was a more favourable landing area. It is also reported that there was a branch line, running from the branch of Buin road at Nakaro, west toward the Siwai area for about 12 km, although this has not been confirmed <sup>15</sup>/.

The line initially carried basalt from Kangu Hill for the Kara airstrip, but later stone came from a quarry at Malabita Hill, some 3.5 km east of Nakaro, so a branch to the quarry is also a distinct possibility. Supply trains were mainly operated between Buin Port and Nakaro, although some trains continued to Kara over the light track. Munition trains ran from dump sites at Kangu, Nakaro or Moila Point as required.

<sup>&</sup>lt;sup>12</sup> / Stanner, WEH, *The South Seas in transition*, Sydney, 1953, p. 87.

<sup>&</sup>lt;sup>13</sup> / Records provided to RF McKillop by Charles Small, Honolulu, 9/1987. Builders Nos. were 21805/12, 22093/112, 22160/9, 22171/5, 22181/5, 22196/200, 22257/66, 22364/8, 22377/81 and 22402/21 of 1941 to 1943.

<sup>&</sup>lt;sup>14</sup> / Numbers included 22086 of 1942 and 3130.

<sup>&</sup>lt;sup>15</sup> / Interviews with local villagers, 1981. The formation was still discernible in 1987.

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Secrecy was an important element of the operation. Local villagers were kept away from the installation and all operations were strictly carried out by Japanese personnel. The narrow footprint of the railway assisted its camouflage under the forest trees. Only small sections of line were spotted by the Allied forces from the air. Unlike other locations, the Buin railway was not bombed and locomotives showed no signs of war damage.

At least seven locomotives were used on the line. In the 1960s, four Kato Works locomotives and two smaller units of unknown parentage were found dumped in the bush near Nakaro, while a seventh locomotive in good order was held at the PWD store in Buin<sup>16</sup>/. The Kato locomotives were fitted with 6-cylinder engines, were 3 metres in length and weighed 4-5 tons. Kungkha, a PWD mechanic at Buin, used the locomotive from the PWD store on the line well into the 1950s. When this unit was no longer operable, he poled trucks along the track to supply Turiboiru Mission.

At Buin port, a haulage line was established from the Block House near the beach at the port up Kangu Hill to gun emplacements. A Yanmar diesel Type H20 drove a winch which was located about three-quarters of the way up the hill. The line was 2 ft gauge with 10 kg/m rail.

The railway from Buin to Kara was still in place and serviceable in 1947<sup>17</sup>/. In 1948, Parer Brother gained the salvage rights for the Buin area. The railway was used to transport scrap metal to Nakaro, where it was transhipped to motor lorries for transport to Lamuai. Here it was melted down into blocks of aluminium, brass, bronze and copper. The locomotives were stripped and the rails lifted for scrap or for use by plantations in building structures.

Post-war, Buin port was threatened by encroachment by the sea. The town was relocated inland. The former Japanese fighter airstrip at Buin was reopened for light planes by the Mission Aviation Fellowship. It was upgraded for DC3 aircraft in 1958<sup>18</sup>/. In 1972, a road from Buin to Arawa via Panguna was opened. The old port site at Kangu fell into disuse.

## Other Bougainville Railways

Extensive dumps of railway equipment have been found in the area of Bonis plantation on the south side of Buka Passage. Here the Japanese commenced construction of a 3,300 ft x 200 ft airstrip but were unable to complete it due to Allied bombing.

In the area between Bonis and Tarlena village, 7 km to the south, the Japanese had extensive bivouac and supply areas in 1944. At Chabai, 3 km further east, a start was made on another airstrip. There were construction railways at all three sites and some reports suggest they were interconnected. By this time, the Japanese forces on Bougainville had been cut off from their supply routes, and there are reports that rails were pulled up from Kunua and Soraken plantations for the project. However, rails remaining during field inspections were the heavier 12 kg/m standard imported from Japan. Steel bridge connecting plates were used as sleepers.

Villagers state the line was initially constructed to carry planes from a workshop at Chabai to Bonis and to supply a munitions dump<sup>19</sup>/. Railways were also used in the construction of the

<sup>&</sup>lt;sup>16</sup> / Interview, Clement Koiri, PWD power operator, Buin, 1981. The dump is suggested as the location where locomotives were handed over to the Allies at war's end.

<sup>&</sup>lt;sup>17</sup> / Reference Patrol No 3 of 1947, 15th March 1947, R. R. Cole A/Assistant District Officer. p 4

<sup>&</sup>lt;sup>18</sup> / Rabaul Times, 16 May, 1958, p. 4.

<sup>&</sup>lt;sup>19</sup> / Report by Timothy Torova, Saposa Island, 1983.

airstrips. Up to six Kato Works locomotives are reported to have been used on the Chabai line. The locomotives are remembered as being much heavier and more powerful than the small Listers then used on plantations in the area. At Bonis, trucks were hand-pushed during airstrip construction.

Tram tracks were also laid into gardens established at Tarlena and Chabai to grow food for the Japanese troops<sup>20</sup>/. These lines were used by villagers after the war who pushed hopper trucks from the fields to transport their own garden produce. The Catholic Father at Chabai had a small trike built to haul the trucks. The length of the line used post-war was some 2 km from the wharf to the garden then extended to the junction of the Chabai-Tabut and Porton-Tabut roads.

Following the war, most of the railway equipment was swept up by scrap metal dealers. A number of field visits were made to these areas between 1973 and 1983. There were many railway relics, mainly light, prefabricate rail sections and wheels, at Bonis Plantation in 1973. By 1979 the rails had been used for posts, construction in buildings, fences and power lines. Only four sets of wheels remained by 1982.

At Tarlena, the remains of a 2 ft gauge line from a wharf to the bivouac area were visited in 1980. Three V-type hopper wagons and one hopper were located, one of which was removed for restoration. At Chabai, three hopper wagons were noted in the sea at the wharf, while eight war-damaged hopper wagons or frames were located at various locations along the railway route. Three hopper wagons were transferred to Buoi plantation for use of a short line there in 1984, while a frame from Chabai, the hopper from Tarlena and wheels from Bonis were used to reconstruct a Japanese wagon at Buin in 1985.

Further north, the narrow sea passage between Buka and Bougainville islands was of strategic importance and the Japanese built up a large base there in 1942. Airstrips were built on either side of the passage on Buka Island and on Bonis Plantation. Two thousand men were reported unloading large quantities of supplies and equipment from ships<sup>21</sup>/. Large fuel and explosive dumps were built up and a number of heavy coastal defence guns were brought in. Light railways were constructed at both sides of the Buka airstrip and at least one locomotive was used to operate the lines.

The Buka railway ran past the post-war government office to the airstrip, then proceeded to Novah Road<sup>22</sup>/. A branch line on the north-west side of the airport carried materials up Kubu hill where there was a Japanese encampment and, later, a shrine<sup>23</sup>/. The memorial was used to cremate the bodies of soldiers so that their ashes could be sent to Japan. Reports indicate that trucks were hand-pushed, although a locomotive was still present on Buka in 1956.

Relic equipment found by the author in 1982 included wheels, rails and a dump truck frame, although the latter appeared to be of German rather than Japanese origin.

### Rabaul and New Ireland

Rabaul was the main Japanese base from January 1942 and the area remained under their

<sup>&</sup>lt;sup>20</sup> / Interviews with Leo Hannett, who grew up at Chabai to the age of 12,1981 and 1995.

<sup>&</sup>lt;sup>21</sup> / Jack Reed - Coastwatcher - Manuscript November 1942.

<sup>&</sup>lt;sup>22</sup> / Interview Old Michael of Ieta Village

<sup>&</sup>lt;sup>23</sup> / Interview John Hakena, Kubu

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control until the surrender in September 1945. The Japanese built numerous tramlines for the construction of airstrips and the exploitation of timber stands around Rabaul.

In the Rabaul Barge Tunnels broad gauge tramlines of between 500 and 1000 metres in length were laid into the tunnels constructed into the hills around Rabaul Harbour so that the barges could be stored well protected from enemy bombing. Some barge tunnels were 30 metres above water level and well in from the shore. Prisoners-of-war, including many Indians brought to Rabaul, worked on the wharves and the many tunnels dug into the mountain side.

At Tobera, Vunakanau and Lakunai on the Gazelle Peninsula, the Japanese used tramlines to transport the crushed coral to construct their airstrips. At Tobera, two tramlines and a string of hopper trucks are clearly visible in a US Airforce photo of the airstrip of January, 1944.

Some of the older Tolai population can still remember having to work on the construction of these airstrips. A Kato Works locomotive from Tobera was used on a Gazelle plantation after the War and is now on display at the Kokopo War Museum. To the west, the Japanese are believed to have used railways for airstrip construction at Jacquinot Bay, Gasmata and Arawe.

On New Ireland, the Japanese constructed a railway from Katu Plantation southward to serve a sawmill. The sawmill, powered by Isuzu diesel engines, was protected by AA-guns<sup>24</sup>/. Rails from the line were salvaged by plantations around 1950 for use in copra driers and other construction work. A number of rail trucks were still there in the 1950s.

At Panapai, 8 km from Kavieng, the Japanese used a 610 mm gauge railway to clear a coconut plantation and to construct an airstrip on the site<sup>25</sup>/. Railway trucks transported coconut logs to the shore for dumping in the sea. A railway was also used for airstrip construction at Huris, 90 km south of Namatanai. A number of Japanese rails are still to be found in this area.

### **New Guinea Mainland Railways**

Although the Japanese occupied a vast area of the New Guinea mainland and constructed many airstrips, few details of construction railways have been located. A light railway had been constructed on the south side of Lae airstrip by mid-1943<sup>26</sup>/. To the north, there was also airstrip construction activity at Alexishafen where the SVD mission had an extensive pre-war light railway system (p. --).

Boram airstrip, which now serves as the airport for Wewak, was constructed by the Japanese using a light railway operated by a locomotive and hopper wagons<sup>27</sup>/. On Kairiru Island, just off the Sepik coast, a narrow gauge railway was constructed along the coast from a semaphore base at the former mission station to emplacements for large guns at the eastern end of the island. There are reports that line was lifted from St Anna plantation for this railway. A post-war report indicates that two branch lines were built up creek valleys to haul logs down to a sawmill established by the Japanese<sup>28</sup>/.

<sup>&</sup>lt;sup>24</sup> / Lusack, W, verbal report, 1992.

 $<sup>^{25}</sup>$  / Oliver Kanavi, sword-bearer for Japanese colonel who was OIC for the airstrip, interview September 1995.

<sup>&</sup>lt;sup>26</sup> / *Impact*, Vol 1, No 5, August 1943, p. 4.

<sup>&</sup>lt;sup>27</sup> / US Air Force Photo B 25456 A.C.

<sup>&</sup>lt;sup>28</sup> / report from Brother Pat Howley, headmaster, St Xaviers High School, Kairiru.

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Other Japanese airstrip construction railways are believed to have operated at Mopoi, Finshhafen, Dagua, But and Tadji.

# Allied Railways

In contrast to the Japanese, the Allied war machine had access to heavy construction equipment to build airstrips and bases. Nevertheless, large quantities of rails and railway equipment was brought into New Guinea to aid the war effort. This was used for the transport of munitions and supplies around the bases.

As part of the Bulldog to Bulolo road construction in 1943, the Australians built a 7 mile (11.2 km) section of 3 ft 6 in (1067 mm) gauge railway to bypass the heavily silted Tivari branch of the Lakekamu River<sup>29</sup>/. By mid-1943, barges were no longer able to reach Bulldog and cargo had to be unloaded at the junction of the Tiveri and Lakekamu Rivers, thus delaying the important road construction task. The road, once completed, was only used for 16 days when the fall of Lae rendered the Bulldog trail no longer necessary.

For the Bougainville campaign, the Australian Army built a cable haulage to haul supplies up the escarpment at Barges Hill on the Numa Numa trail. The construction was commenced on 23 May, 1945 and completed by 9 June<sup>30</sup>/. The track was 490 mm gauge and 760 metres in length<sup>31</sup>/. The vertical climb was 290 metres, the average grade was 1 in 2, and the maximum 1 in 1. Three sets of trestles were required to maintain the grade over the gullies. and two Ford V8 driven, double drum power winches, were used for hauling the trucks. The tramway was intended to lift 10 tons per day, but a maximum of 25 tons per day was achieved.

The operation had a short life with the Japanese surrender in September. Australian railway enthusiast John Buckland came across the line in late 1945 and reported:

After the Japs had surrendered finally about ten days after the cease-fire, we had plenty of time to explore parts of the island formerly out of bounds and this included the Numa Numa Trail across the central part of the island to the East Coast. There was a very steep cable haulage ... worked by the Army, on which some mates and I rode up and down quite illegally and took some photos.<sup>32</sup>/

Over Easter 1986, the author organised a patrol across Bougainville island from Torokina to Wakunai to inspect the remains of the Barges Hill incline railway. Most of the rail was still in place, but the steep climb took an hour's hard hiking. Only the bottom section of the rails and bridge across a small stream had gone. Two trestle bridges were noted on the line.

In Milne Bay, the US Navy established a large naval base at Gamodoudou (also referred to as Wangawaga), across the bay from Alatou, while the Australians built a base at Ladava on the shorefront of Giligili Plantation. The Americans constructed a 610 or 762 mm gauge tramway for the movement of naval supplies. The rail lines were overgrown after the war and were only discovered when the Ulabo Timber Company cleared the area for use as their logging yard<sup>33</sup>/. US-rolled rails laid to 762 mm gauge were noted at Giligili Plantation post-war. The Allies also built airstrips at Vivigani on Goodenough Island, on Kiriwina Island and at Gurney which now serves as the airport for Alatou.

<sup>&</sup>lt;sup>29</sup> / N Robinson, *Villagers at war*, p. 58

<sup>&</sup>lt;sup>30</sup> / Report of the 23rd Brigade - Brigadier Potts

<sup>&</sup>lt;sup>31</sup> / M Pearson, field observations, 1986.

<sup>&</sup>lt;sup>32</sup> / Buckland, JL, letter, 29 May 1987.

<sup>&</sup>lt;sup>33</sup> / Observations and report from A Bovelt, --

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The Allied build up of troops and supplies for the New Guinea campaign was focused on Port Moresby. Airstrips were constructed at Wards, Jacksons Kila, Durano, Schwimmer and Berry. Extensive stores and munitions bases were constructed around the present city area, notably at Barune (site of the present University), Wards, Wallaby, Waigani (adjacent to the Waigani Swamp), Bomana and Schwimmer, while new wharves were built at Port Moresby and on the north of Tatana Island. Large quantities of rails were imported for the movement of ammunitions and supplies around these bases. There are also reports of rail operations at Rouna Quarry. It is believed that Malcolm Moore petrol locomotives were used on these lines. A photograph depicting the unloading of American P-41 fighter planes from a ship at a Papuan port depicts three railway tracks on the jetty<sup>34</sup>/. This may be the wharf constructed by the Americans at Tatana Island in Fairfax Harbour. The gauge appears to be 3 ft (914 mm) or wider.

As the Allied forces drove the Japanese from the New Guinea mainland, they established a large number of airstrips and bases in the Morobe area. The Australian Army had bases at Lae and Finschhafen, the US airforce established bases at Lae, Nadzab and Gusap in the Markham Valley, while there were some 700,000 US Marines in the Finschhafen area at one stage<sup>35</sup>/. Several of the Malcolm Moore petrol mechanical locomotives built for the Australian Army were brought to New Guinea during the war. Few details of their use have survived. In December 1947, tenders were called for the purchase of Malcolm Moore locomotive No. 1005 and a Fordson 2 ft gauge locomotive at Lae<sup>36</sup>/. It is thought that these units were used on light railways for the movement of munitions at Lae.

### Post-war Exploitation

The brief moment of railway operations during the war faded as the technology of war gave way to the slumber of colonial outposts once more. However, the waste of war provided a field day for scrap metal merchants and rapid fortunes were made collecting material to feed the furnaces of post-War reconstruction in Japan. The remains of railways were swept up by eager metal collectors or were used by all and sundry for copra driers, bridges, fence posts and numerous other construction tasks. Some were used to build short plantation lines from copra sheds to wharves.

War-time railways, locomotive and rolling stock were quickly consumed by scrap metal dealers and scavengers. Other railways with heritage value to Papua or New Guinea were not spared. Outside Port Moresby, the Bootless Bay railway and its locomotives were a prize booty. They were sent to Japan as scrap metal in the early 1950s<sup>37</sup>/.

<sup>34</sup> / Coutts, M, *Taim bifor: a selection of old photographs from Papua New Guinea*, Port Moresby, SP Magazines, 1990, p. 59.

Nihal, H, "The Second World War in Morobe District, *Journal of Morobe Historical Society*, 1:1, May 1972, p. 7.

<sup>&</sup>lt;sup>36</sup> / Papua-New Guinea Gazette, 3 December, 1947, p. 214.

<sup>&</sup>lt;sup>37</sup> / Peter Fox, personal communication on shipping, Goroka, 1968; Saunders, V, letter to M Pearson, --