

8. A PNG ECONOMIC HISTORY THROUGH RAILWAYS

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he search for economic development has been a constant theme in Papua New Guinea history. This chapter draws on the framework of railway history developed earlier to analyse Papua New Guinea's economic development experience. It is a history of missed opportunities and "what ifs", particularly in terms of external intrusions. The framework also provides a useful base for understanding the economic problems which have come to dominate PNG's post-Independence experience.

Modernisation

Foreign capitalists, administrators and missionaries came to Papua New Guinea with confidence that their institutions and belief systems were superior to the societies they encountered at the new frontier. These intruders saw their civilisation was "modern" and superior to those of the indigenous people. They assumed their task was to improve the lot of the colonised subjects by introducing them to the advanced work habits and social mores of their developed economies.

In the 1960s, the crude approach of the colonialists was refined into a more respectable modernisation theory to explain the concepts of progress and change. Western social thinkers came to see the bridge across "the great dichotomy" between traditional and modern society in terms of the "grand process of modernisation". Sociologists such as Talcott Parsons and David McClelland sought to contrast the features of traditional and modern society. Economic thinking was influenced by Walt Rostow who characterised development as a number of stages linking a state of tradition with mature economies^{1/}. To Rostow, the introduction of railways was the single most powerful initiator of the *takeoffs* which allowed advanced industrial societies to enhance the living standards of their people.

Counterviews were put forward by Marxist scholars who saw the exploitation of traditional societies by colonial powers as the cause of their underdevelopment and continuing dependence. They in turn influenced nationalists in the colonies who saw railways as symbols of foreign exploitation. It was claimed that railways built under colonial rule inevitably served the interests of the metropolitan power, and only rarely did these coincide with local interests. Such was the theory, but reality turned out to be different. Once countries such as India, China and Korea threw off colonial shackles, they invested heavily in developing their railway networks as the basis for modernisation. Dependency theory, it seems, no longer offers an acceptable understanding of historical trends.

Modernisation theory has made a strong comeback, albeit with significant revision to account for the rapidly emerging industrial economies of Asia. In Japan, for instance, it is often argued that the traditional feudal system has rapidly transformed into a modern industrial economy without involving the process of "individualism" of the people through breaking out of the cohesive traditional culture. Nevertheless, there has been a dramatic change in their orientation to railway time and the work discipline of modern industry.

^{1/} Rostow, WW, *The process of economic growth*, Cambridge, 1960.

But PNG did not gain the infrastructure and social development of the industrial world and its efforts to cope with the modern world has led to frustration among her people. The following sections draw out the key elements from the preceding chapters which provide a fresh understanding of how PNG's past has shaped this response.

The German Era

Under German colonial rule, New Guinea was subjected to powerful external forces prepared to invest in the necessary infrastructure for a modern economy. The *Neuguinea Kompagnie* spent lavishly on plantations, but the hostile tropical environment, disease and inappropriate crops brought initial failure.

Railways were a vehicle for plantation development and a domestic sawmilling industry. While the level of investment in transport infrastructure was high compared with early Australian contributions, it was modest against the grandeur of German efforts in Africa. Although some 27 railways have been identified from the German era, they were light industrial lines serving specific enterprises.

The private sector proved inadequate to the task of colonial administration and the state stepped in to take over administration of the colony 1899. Significant investment between 1906 and 1914 established the basis for a modern transport infrastructure, based on light railways, linking hinterlands with major ports. The outbreak of war in 1914 dashed the achievement of this vision, leaving only a number of embryonic "little railways" which had little impact on the landscape or the local culture.

In the event, German intrusion was restricted to a few enclaves, primarily on islands rather than the mainland. Only a small proportion of the population felt the upheaval of German imperial power. For those who left the village, a term working on a plantation or logging enterprise exposed villagers to a model for a larger-scale industrial society with strict discipline and time-keeping.

Under the plantation system, the management function was reserved for white *Mastas*, with New Guineans in an unskilled labouring role. For railway operations their task was to hand-push the trucks or haul logs on bogie trucks. Where locomotives or animal power were employed, the roles of drivers, handlers and mechanics were filled by Europeans or Asians. A number of missionaries, however, deliberately set out to introduce their followers to the technical skills and work discipline of modern industrial enterprise. In these situations, locals were to be found driving the animal-drawn railway trucks.

From the outset, the response of the colonised incorporated fundamental contradictions which remain today. The foreigners - missionaries, recruiters, planters and administrators - brought with them objects, ideas and ways of behaving that were, for the villagers, literally from another world^{2/}. The indigenous people resented their marginal role in the new order, but were eager for the trade goods of the intruders and impressed with their ways. They hoped to gain access to the superior technology and wealth of the intruders without acknowledging the necessary cultural changes necessary to produce this wealth themselves.

The plantation system provoked deep resentment among those who had their land alienated or were subjected to the indignity of an unequal relationship. On the Gazelle

^{2/} Burrige, K, *Mambu*, London, 1960, p. 124-6. Describes the impact of German SVD missionaries and recruiters on the villagers of Manam Island.

Peninsula and around Madang, this resentment was later to become an important stimulant for nationalist movements.

The plantation system also left an important legacy which was to have significant impacts on the social structure of PNG society. Indentured labourers for plantations were inevitably young men who left the village in search of new economic opportunities. Women remained behind to maintain the family and subsistence production. In villages where out-migration was high, the economy stagnated and malnutrition emerged as a problem as women were unable to produce enough food without a male contribution to agriculture. These communities became dependant on remittances from the external economy.

Australian Intrusion

Australian involvement in Papua and New Guinea was primarily a reaction to the fear of European powers. The Australian colonies (and the new Federation after 1901) were too preoccupied with their own development priorities and few resources were allocated for colonial adventures to the north.

Papua and, later, the Mandated Territory were largely left to themselves to develop infrastructure and social services. There were hopes mining and plantation development would provide the basis for a prosperous economy. But the investment which did take place was ill-suited to the situation and ended in ignoble failure. The reality was that Australian capital in the colony was weak and poorly prepared to cope with the challenge of a tropical frontier.

As in German New Guinea, foreign intrusion was restricted to the coastal fringes. No public railway was to open up the interior or discipline Papuans to the rule of the timetable, nor were there large industrial enterprises created where Papuans built up the skills to operate and manage the most basic of capitalist ventures.

There were significant contrasts between Australian colonial intrusion and the German intervention to the north, reflecting the differing cultures of the metropolitan powers. At an individual level, Australian agents of colonialism brought the values of a new and vibrant settler society which was itself throwing off the yokes of the class structures of Europe. Traders, planters and miners adapted the way they worked to meet the ways of the islanders. They employed local people, advanced money to help them pay government taxes, purchased local produce and, in many instances, entered into relationships with local women. Although the power derived from industrial society continued to set Australians apart from local villagers, there was a strong inter-dependence between the pioneers and the Papuan communities with whom they interacted.

When they came together collectively, however, the settlers brought Australian values about the role of the state in providing infrastructure in support of their endeavours. They were successful in persuading the state to build public railways to Sapphire Creek and on Woodlark Island. After the war, companies who built railways in Misima and at Bootless Bay immediately turned to the government for assistance when faced with financial problems.

The arrival of larger companies also altered the relationship between colonial immigrant and villager. Company operations were directed by engineers who came to reshape the land and its resources to achieve efficient operations. Mine sites and large company plantations became expatriate enclaves where individuals remained aloof from the village and looked back to Australia for supplies, news, entertainment and home visits. The relationship with Papuans was that of a powerful employer whose overseers, many of

whom were inexperienced in Papuan conditions, directed indentured labour.

Mine or plantation employment was not attractive to local villagers. They found the production of food for sale at local markets or alluvial mining more rewarding pursuits. The majority of labourers who came to the mining fields at Woodlark and Misima came from outside locations, notably the D'Entrecasteaux Islands, Milne Bay and the south coasts, and from the Northern Division^{3/}. Indentured labourers generally came out of a spirit of adventure, for the wages were meagre. Underground miners at Misima worked a 44 hour week for 10s a month and keep.

By the mid-1920s the vision of economic prosperity for Papua had faded with the experience of failure for a long list of mining and plantation ventures. The administration, under Lieutenant-Governor Hubert Murray, adopted a protectionist stance. Papuans were protected from ruthless land buyers, from the work exploitation of the indentured labour system and from private expeditions into the inland. In so doing, they inhibited private investment and forces of change which might encourage entrepreneurship among the Papuans. The economy stagnated and with it, the prospects of further railway development faded.

The weakness of Australian capital became more apparent when they extended their control to German New Guinea in 1914. German properties, including the embryonic railway infrastructure, were expropriated. The process stifled investment and rebuilding after the War. Gradually the large Australian trading firms gained control of many properties and planting was expanded.

Plantation railways became a cost-effective and appropriate technology in the New Guinea islands. They were more efficient in their use of space than roads, they could be more easily maintained under tropical conditions and New Guinea labourers were comfortable operating and repairing the equipment. On the island of Bougainville in particular, railways became a part of the plantation way of life.

On the other hand, when the opportunity arose for the government to invest in a railway to link the hinterland at Bulolo with a port, the administration quickly skirted the issue and pleaded lack of funds. Responsibility for solving the transport problem was passed back to the mining company, who decided to by-pass the railway option and selected the *new age* solution of air transport. Thus, although PNG was the *end of the line* for railway transport, it became the birth-place of modern air cargo transport.

It was a decision with significant long-term implications for New Guinea. The BGD solution avoided investment in infrastructure which would facilitate general development along its route. Instead, they flew over the villages and agricultural lands, leaving them untouched by outside influences. While the operation of transporting and erecting huge alluvial dredges in the interior was an impressive technological achievement, it was an enclave operation which transferred little in the way of managerial and technical skills to New Guineans. Thousands of labourers, mainly from the Sepik districts, came to work in the goldfields where they were brought in touch with the power and capability of modern industrial society. But they only participated in that process at the margin as unskilled labourers.

The basic technical skills and discipline which a substantial railway operation would have brought to New Guinea were not to be. Instead, a small elite of foreign engineers, pilots and managers achieved the transport task with new machines that demanded high level

^{3/} Nelson, H, *Black, White and Gold*, Canberra, ANU Press, p.

skills beyond the education base and experience of New Guineans. Not for the last time, miners extracted the wealth of New Guinea in an enclave which had minimal impact on the culture and wider economy.

Apart from the expropriation of land in selected coastal and island locations, the impact of colonial intrusion on the majority of Papua New Guineans was minor. While a proportion of young men tasted something of an external world beyond the village, the vast majority of people maintained their traditional culture and life style.

The War Years

The Pacific War brought a dramatic demonstration of foreign power and technology. Military might rained destruction on the land and it pushed back the jungle to build bases and airstrips. Railways played an important role in this construction and the supply of munitions and stores to army units. Many kilometres of line were built in a short period. For a brief moment in history, the power of industrial discipline and technology was demonstrated before Papua New Guineans.

PNG's war-time railway era lasted less than three years and was primarily a Japanese effort. The social and economic impact of these railways was hindered on two grounds: the Japanese builders were defeated and their military purpose meant they were created in isolation from the local people. They were the ultimate in enclave activities: built and operated on foreign soil with no reference to local values or involvement. New Guineans only played a minor labouring role in their construction or operation. As artefacts of the vanquished, the Japanese railways were dismantled after the conflict for scrap metal and building materials.

The Pacific conflict was selective in its impact on Papua New Guineans. Coastal villagers had seen their former colonial masters forced to flee in the face of an Asian power, and their labour and cooperation had become a necessary prerequisite for the eventual allied victory. Many suffered dislocation and damage from the heavy bombing. But for the large populations of the inland, the war was an external conflict of little consequence to their isolated world.

Those Papua New Guineans who served in the armed forces found a sense of comradeship. For the first time, they were accepted as equals serving against a common adversary. American troops were favourites due to their generosity in sharing their products (eg, tobacco, sweets and jeep rides) with the locals^{4/}. Villagers were also drawn outside their local world and for the first time they saw other parts of their country and worked alongside the people from these areas. However, they and their foreign comrades were at the base of the vast hierarchical war machine power structures in which decisions were made by others far removed from the field.

The war provided a dramatic demonstration of the wealth of industrial societies. Ships, aircraft, vehicles, railway equipment, guns, supplies and food arrived on Papua New Guinea's wharves and beaches in vast quantities and without any logical explanation. It was as if the heavens had opened with an outpouring of industrial wealth had suddenly been directed to PNG. The lesson was that consumer goods would arrive without the need to invest labour and capital in their production.

Decolonisation

The post-war era saw dramatic changes in the PNG economy and the participation of

^{4/} Stanner, WEH, *The South Seas in transition*, Sydney, 1953, p. 26.

ordinary Papua New Guineans in development activities. As inland villages were subjected to colonial control external forces began to penetrate into the remotest Highland valleys. Now the majority of ordinary villagers had the opportunity to participate in the development process as small-scale farmers, travellers and social service recipients.

Papua New Guineans made diverging responses to these external forces. On the one hand, the power and wealth of the intruders generated a sense of inadequacy and dissatisfaction with traditional institutions; on the other, many villagers coveted the material goods of the modern world. Some groups sought refuge in spiritual cults to redress perceived inequalities; others enthusiastically adopted new enterprises to earn cash in order to participate in the modern economy. It was in the Highlands areas, where interaction with external economies and cultures was a recent phenomenon, that the response to opportunities to participate in the cash economy was most dramatic. Such was the response in the 1960s, that some observers argued that Highlanders were predisposed to entrepreneurship and had the capacity to leap from the world of traditional exchange to one where business is conducted on a cash basis^{5/}.

As traditional boundaries were eroded, more Papua New Guineans travelled outside their village and participated in trade. However, the post-war transport system was dominated by the private motor vehicle and the aeroplane. Railways were given little credence by policy-makers and the few railways which were constructed during the period had limited social impact.

On a small number of coconut and cocoa plantations, light railways maintained their cost-effective and environmentally sensitive function which had emerged during the 1920s. Plantation railways were much easier to maintain than roads, required less space, were well adapted to local technical skills and resources, had less environmental impacts and were more robust than tractor-hauled road trailers as rail trucks could still be hand-pushed if the locomotive was unserviceable. However, expatriate managers, coming from an anti-railway culture, failed to appreciate these advantages. Maintenance was neglected and the railway systems deteriorated to a point where rehabilitation was no longer seen as viable.

When oil palm, which required transport of large volumes of fruit to central mills, was introduced to PNG, the role of railed transport was restricted to the processing plant. Both here and in the emerging mining industry, road transport was seen as the "modern" solution.

Because of this reliance on private road transport, Papua New Guineans missed the opportunity to gain the discipline and managerial experience of operating a modern, large-scale, industrial institution. Instead, they were sidelined as peripheral *businessmen* operating imported vehicles for small-scale trucking and transport services in a highly competitive environment. They were dependant on the capacity of a central "government" to provide the basic road infrastructure on which they could operate.

Despite the rapid development of village-based cash cropping in the Highlands, Papua New Guineans found themselves ill equipped to cope with the pace of change imposed by outside forces. Efforts to extend individual efforts to enterprises through cooperatives or business groups inevitably failed, while landowners resented the use of their resources to generate wealth for outside mine and plantation owners. On Bougainville landowners did not accept the government's regulations which precluded them from ownership of minerals found under the surface of their land. Dissatisfaction over the inability of local groups or

^{5/} Finney, BR, *Big-men and business: entrepreneurship and economic growth in the New Guinea Highlands*, Honolulu, East-West Centre, 1973.

institutions to play a meaningful role in modern industrial activities was to lead to future conflict.

Independence

The optimism that Independence would generate new economic opportunities for Papua New Guineans was short lived. The post-Independence era has been characterised by increased reliance on enclave resource projects and a decline in the economic opportunities for the majority of the population. Papua New Guineans play only a peripheral role in large-scale resource development projects. National economic policies worked against labour-intensive industries, particularly agriculture, and rural areas have experienced economic stagnation with deteriorating infrastructure and services. The frustrations generated by economic decline have led to extensive criminal activity which, in turn, has increased commercial costs and reduced the competitiveness of PNG industries.

The only new railways to be constructed in PNG since Independence have been short-term construction lines used by foreign engineering firms to build mining and hydro-electric infrastructure or short industrial lines serving oil palm mills. As such, they symbolise the domination of mining operations in the Papua New Guinea economy.

Elsewhere, road construction to link rural communities with urban markets and services continues to gain a high political profile. In practice, investments in roads has often had limited development impact. For the ADB-funded Hiritano Highway Project located in Central Province, the incentives for food crop production were strong, but the expected levels of economic activity and transport demand did not eventuate^{6/}. Sealing of the Magi Highway (also in the Papuan region) similarly failed to generate the anticipated economic response^{7/}. In practice the majority of target populations chose to use the road for transfer of easily-produced traditional crops and for the satisfaction of social and community needs through family connections in urban areas. In these cases, target income thresholds appear to dominate the preparedness of rural households to expand production.

Traditional culture, particularly the land tenure system, has demonstrated a remarkable resilience to change. Rural communities continue to meet their subsistence food needs and there has been some adaptation to incorporate small-scale cash cropping. But the social mores and obligations required to maintain cultural integrity severely constrain economic productivity. Rural communities have failed to generate the necessary surplus to meet the needs of rapid population growth and the rising aspirations of youth. Economic development within the village culture has reached a plateau and stagnation has set in. Invariably, the gap between aspirations and productivity has generated a drive to gain a share of the wealth produced by others.

Stagnation in rural areas has resulted in migration to towns and cities in search of economic opportunities. An increasing proportion of Papua New Guineans are now urban dwellers. They rely on public transport to get around low density towns and cities, but the public transport user is very much a second-class citizen who is afforded low priority by the car-orientated urban planners. His or her ability to survive in the high-cost urban economy

^{6/} Asian Development Bank, *Hiritano Highway Op. Cit.* Incentives for included improved access, lower real cost of transport, frequent vehicle services, growth in Port Moresby population and the high food prices of 1978-83.

^{7/} University of PNG, *Post-Investment Evaluation Study: IBRD Road Project*. UPNG Progress Report, September 1990.

depends on the unwitting generosity of rural villagers who are willing to subsidise urban commuters for the dubious prestige of operating a PMV. Competition between operators results in a low-cost and flexible service for consumers, but at high cost in terms of congestion and environmental impacts. Unfortunately, PNG has yet to demonstrate a capability to build up and manage the cost-efficient institutions necessary to operate such a system.

Conclusions

In chapter 1 the central role of railways in building the institutional base necessary for a modern economy was discussed. Through railways, Western economies were able to overcome the problems faced by traditional institutions in achieving secure, low-cost market transactions^{8/}. With the railway age, new institutions developed to build and maintain the networks, schedule services and regulate contracts on a national scale. . These institutions facilitated measurement (quality control) and enforcement of contracts, thereby safeguarding property rights and providing certainty in transactions.

But such institutional development was not to be at the “end of the line” in Papua New Guinea. Without significant railways, local communities were not enmeshed in the time consciousness and discipline of modern industrial organisations. The public were not educated by railway timetables, workers did not build up the technical skills and work ethics of a modern industrial enterprise and, above all, the managerial skills to achieve the efficient operation of a railway system were not developed. Without these skills and institutional base, traditional groups lacked the productivity to compete with the specialist commercial institutions of the foreign intruders^{9/}. As a result, the indigenous people only played a peripheral role in building and managing the institutions of a modern economy.

In their reliance on road transport and small-scale, water-based trading, Papua New Guineans were restricted to individualistic enterprises operated at the family level. While an entrepreneurial spirit is apparent in the informal sector, particularly among Highland societies, socio-cultural factors appear to have inhibited the organisation of commercial activity on a scale larger than the extended family unit. The institutional base to build, operate and maintain the large-scale infrastructure and services necessary for a modern economy was not developed. Factionalism, mistrust of outside managers and an emphasis on distribution have hindered the performance of local enterprises. In many cases costly foreign managers were retained to ensure the necessary independence and trust for sustainable operations, thereby contributing to the high-cost status of PNG industries.

In this situation of unequal relationships between clan groups and modern institutions, Papua New Guineans have become *rent-seekers* prepared to sell their resource heritage for short-term gain rather than seeking to produce surplus on a sustainable basis. Initially, this process involved resource owners seeking royalties, equity and compensation in mining and forestry projects. Competing leaders have emerged with claims to represent traditional landowners in negotiations with outside interests. The task of establishing linkages with government agencies and foreign investors tended to favour a new generation of younger, educated people over those who hold leadership through their knowledge of traditional law. Increasingly, “leaders” have served to broker deals and compensation claims between resource-owners and foreign mining and logging interests. The process has been extended to industry where special deals have been negotiated to

^{8/} North, DC, “Institutions”, *Journal of Economic Perspectives*. Vol. 5:1, 1991, p. 101.

^{9/} *Ibid.*, p. 99.

establish protected enterprises, often with monopoly status¹⁰. In the case of food processing industries, this protection has resulted in high domestic prices with economic transfers from poor consumers to richer people. The involvement of politicians in setting up these deals has enabled them to control the allocation of many rents and has led to widespread claims of corruption. The outcome has been an economy based on a resource dependency syndrome in which resource-owners and politicians seek to maximise their take of wealth produced by others. .

As property rights and contractual agreements are not subject to coded and time-bound agreements, all developments are dependent on opportunistic political negotiation. This political process seeks to extract benefits in the name of the “resource-owners” and the state. It results in high transaction costs and uncertainty. In these circumstances, commercial risk is high and investment is confined to highly profitable activities, usually of an exploitative and short-term nature.

Successful rent-takers in PNG comprise a small segment of the population. Landowners blessed with rich mineral deposits and the political elite have done well; people from resource-poor areas, women and the urban poor have missed out. As a consequence of poor wealth distribution, PNG now faces a serious law and order situation which impacts on most economic activity and generates unpredictability. The problem has reduced output and competitiveness by destroying or damaging productive capital, raising private security costs, preempting activities for lack of possible insurance cover or fear of attack, and providing PNG with a reputation as a high security-risk nation. In rural areas, lawlessness has contributed to the breakdown in delivery of basic services and caused a contraction in goods markets. The most severe effects of a deteriorating lawlessness are felt by lower income groups, who are least able to protect themselves.

Railway Heritage

Railways in Papua New Guinea are seen as a foreign intrusion of little significance to Melanesian history. Accordingly, retention and conservation of the artefacts of railway heritage has received low priority.

Remnants of the heritage of the *Neuguinea Kompagnie's* tobacco growing ventures at Stephansort remain in the forest. Railway bridges and formation remain intact today, together with the ruins of stables, a sawmill and the headstones of the cemetery, an enduring monument to the colonial men, women and children who became the victims of patriotic fervour ¹¹.

In Australia, one of the locomotives believed to have operated on German New Guinea plantations is retained as an operating heritage item. The Krauss locomotive *MORETON* (p. -) was restored to working order in 1989, although it now has hydraulic drive from a diesel engine in the tender. The locomotive now operates a tourist railway at the Yandina Ginger Factory on the Queensland Sunshine Coast..

The role of railways in Papuan economic development was ultimately minor and is largely forgotten. The efforts of colonial masters to establish industrial enterprises and discipline is

¹⁰ / Gibson, J, *Food consumption and policy in Papua New Guinea*, Port Moresby, INA Discussion Paper No. 65, 1995, p. 80.

¹¹ / Douglas, J, “Taim bilong ol Jeman”, *Paradise* (magazine of Air Niuginia), No, 30, July 1981.

of minor interest to the national elite. Nevertheless, as they promenaded on Port Moresby's Ela Beach on a Sunday afternoon, some local residents may ponder the origins of the straight road lined by majestic casuarina trees which provides the main transport artery between the old town area and the city's spreading suburbs. Possibly someone will remind them that this was the location of preliminary construction work for Papua's first public railway line.

On the promenade, a local Rotary club has plinthed a steam engine in homage to the pioneer steam era. The engine was unearthed during construction work for new apartments above Ela Beach in 1986^{12/}. Although it is speculated that it was one of the traction engines used for hauling copper ore from the Laloki Mine in 1918, the only authentic information on its origins is that it was originally owned by the Toowong Town Council in Brisbane in 1911. Symbolically for the status of railway and steam heritage in PNG, the unit has been mounted upside down.

More significant icons of railway and industrial heritage can be explored around the sites of the Bootless Bay-Dubuna railway and mining activities. To day, Tahira is a popular marina and ferry terminal to a resort on Loloata Island. The road into Tahira from the Magi Highway follows the old railway formation. Beside the road a large slag heap from the smelting operations poses the challenge to travellers to explore the past of the area. Those who do so will enter a fascinating field of industrial archaeology treasures. On the hills where Papua's largest industrial enterprise and the thriving township of Tahira once stood, the foundations of the smelters and the railway spur line formation can be easily traced. A number of steel remnants - former smoke stacks, building frames, the odd section of railway line - lay rusting away. With the assistance of photographs of the enterprise in its heyday, one can imagine the scene seventy years ago and share the dreams of its founders.

Returning to the Highway, the road has been constructed over the railway formation for about 1.5 km, except for a section of mangrove swamp. Here the railway formation can be easily traced to the north of the road as it winds around the obstruction. Soon a turnoff to the Mount Diamond High School is located. This road is largely located on the old railway formation, including a significant cutting. At Wai Wai Junction, the formation is about 20 metres to the west of the road. Here the foundations of the ore bins and the towers for the aerial ropeway remain in situ. The area is still clear due to impacted soil and the remnants of railway sleepers and even coal for railway use can be readily identified.

Continuing on to the school, a collection of artefacts from the railway and aerial ropeway, including one of the towers and the ropeway winding machinery, have been brought together adjacent to the entrance. Careful observation will pick up the former railway formation continuing northwards from near the entrance for another kilometre or so to the Dubuna mine. Unfortunately, nothing remains of the locomotives and rolling stock. They were swept up in the post-war scrap metal bonanza and sent to Japan (page -).

To day there are few relics left of the turmoil generated by the Pacific War 50 years ago. Two Japanese locomotives have been collected for restoration. In the 1980s, Michael Pearson and students from Buin High School reclaimed and partly restored a Kato Works locomotive (22086/1942) from the Buin railway and rolling stock reconstructed from equipment salvaged from North Bougainville and Kieta. In 1988, the equipment was transferred to Toniva, where the Kieta Lions and ex-servicemen's clubs planned their operation as a tourist railway venture.

^{12/} *Post Courier*, 6 November, 1986, p. 1 and 12 November 1986, p. 3.

The Bougainville Crisis which began in 1989 has brought all restoration plans to a halt. Those involved in the restoration left the Island in fear of their lives. From 1990 to the time of writing the area was under insurgency control and the fate of the locomotive and rolling stock is unknown. Another Kato Works locomotive is exhibited at the Kokopo War Museum, located on the old Ralum Plantation.