2. The Presence of the Mine

Papua New Guinea has a long and turbulent history of mining activities reaching back to the latter part of the 1800s, when hundreds of Australians and Europeans came in search of gold on Misima, Sudest and Woodlark islands and on the Waria, Gira and Mambare (Yodda) rivers (Demaitre 1936; Healy 1967; Newbury 1975; Nelson 1976; Gerritsen and Macintyre 1986). While the scale and the impacts of these activities might not be comparable to contemporary large-scale mining, in most cases Papua New Guineans have hardly benefited in the same ways as foreign miners from the resources being extracted from their land.

The development of the massive Panguna copper mine on Bougainville in 1972 foreshadowed the dawn of an independent PNG in 1975. The mining exploration boom of the mid-1980s fuelled high expectations for economic benefits that would reduce dependency upon foreign aid and help create a more diversified national economy. It was hoped that the Panguna mine and the Ok Tedi gold mine that opened in 1982 would be the stepping stones to a prosperous future. However, the path to national deliverance via large-scale mining has been far rockier than anyone anticipated in the early 1980s. The outbreak of civil unrest in Bougainville in 1988 and the forced closure of the Panguna mine in 1989 became a national crisis as well as a local tragedy (May and Spriggs 1990; Denoon 2000). Meanwhile, international debates about the environmental impacts of the Ok Tedi mine grew louder, and an Australian court hosted litigation against Broken Hill Propriety Limited (BHP) as the mine operator (Banks and Ballard 1997). In the shadow of this turmoil, the PNG Government was moving on the development of another three large-scale gold mining projects at Porgera, Misima and Lihir which it hoped would support the post-colonial economy. Despite an abundance of resources, it has still proven exceedingly difficult to convert this natural wealth into wider economic growth, service provision and political stability.

Papua New Guinea has now developed a terminal case of the ‘resource dependency syndrome’ (Filer 1997b), manifest through two mutually contradictory conceptions of the role of ‘resource rents’ in national economic development: these revenues are either regarded as a form of ‘economic surplus’ which props up the state apparatus, or as a source of compensation — typically paid in cash — that fills the pockets of the local landowning population within the vicinity of each mining project. The strength and the appeal of this second conception owes a good deal to the development of an ‘ideology of landownership’ (Filer 1997a), which in itself was fostered by the processes
of large-scale resource development. The exploration boom led many people to believe that their future share of development could be found in the various forms of compensation, services and infrastructure delivered by companies to the people who claim customary ownership over the resources being extracted. Modern citizens are thus ‘customary landowners’ entitled to receive royalties, rents and other benefits from the exploitation of their land. This image of entitlement is then confronted by national laws which posit state ownership of all subsurface resources.

Local and national reliance upon resource extraction is not unrewarding. In addition to the payment of taxes, royalties and compensation, mining companies also build local infrastructure and provide employment, services and business opportunities — the sort of development (or modernity) which the PNG Government has been unable to provide for most rural communities. Indeed, as we find in Lihir, mining projects conjure up fantasies and reconstruct myth-dreams in which the village is transformed into a city, and mining becomes the modern ‘road of cargo’. While there is a popular tendency to paint multinational mining companies as evil monoliths without regard for local communities or the natural environment, the reality is far more complex. Every project within PNG has been profoundly shaped by the dialectics of articulation between stakeholders with different agendas and levels of capacity to achieve their goals. The balance of power between companies and local communities might be uneven, but the relationship has never been unidirectional. As a result, the local impacts and responses, which are now well documented, are both varied and nuanced (Connell and Howitt 1991; Howitt et al. 1996; Ballard and Banks 2003; Filer and Macintyre 2006; Kirsch 2006).

At the Porgera gold mine in Enga Province, for example, relations between the company and the community are not only structured around competing expectations, but around the rapidly changing community dynamics that now threaten to destabilise both the project and the social viability of the Porgera Valley. The original inhabitants of the valley numbered around 2000 before large-scale mining began. It is now estimated that at least 40 000 immigrants reside within this area, and at least 1000 people from this group are regularly engaged in illegal small-scale mining activities within the official mining lease area (Callister 2008). The intractable problems generated by mass migration largely stem from the complex history of Porgeran social relations, networks and alliances. These are reflected in the cultural concept of *epo atene* — an Ipili verb construction meaning ‘come and stand’ (Golub 2005: 347), otherwise understood as a guest/host relationship — which makes it extremely difficult to exclude ‘outsiders’ or establish individual rights of ownership (Biersack 1999: 267). This concept implies that people can reside or garden in any area provided they have

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1 Essentially, guests may reside on land at the sufferance of the host who grants rights of usufruct and sojourn. Similarly, the institution of marriage within Porgera creates ‘roads’ and ‘bridges’ between descent
permission from the landowner, creating further implications for entitlements to compensation and expectations of things like relocation housing. The system is complicit in the influx of migrants who are eager to share in mine-related wealth and services, creating confusion about who are the rightful recipients of mining benefits, and anger amongst those who feel that they deserve exclusive — or at least priority — access to these benefits.²

Around the Misima gold mine in Milne Bay Province, which closed in 2005, local people now claim that they have very little to show for the sacrifices which they made. The strength of local customary exchange and feasting practices, and the enduring social ties between clan groups, meant that a significant amount of wealth was channelled back into these activities. While this brought certain socio-economic transformations and tensions, it also supported a broader level of social harmony (Callister 2000). At the same time, while Misimans have a long history of engaging with mining activities, and were aware that mine closure would eventuate, local landowners were unable to form cohesive allegiances to represent Misiman interests. Combined with a peculiar lack of company commitment to the social and economic consequences of mine closure, Misimans have been left with a divisive legacy as local leaders engage in expensive legal battles over the remaining trust accounts that were intended to provide for the future benefit of Misiman society.³

The lessons learnt from Bougainville and Ok Tedi, and the more general global shifts in extractive industry standards of best practice⁴, mean that mining companies are now expected to be ‘responsible neighbours’ and contribute to equitable social and economic development. In PNG, operations are totally contingent on the capacity to maintain a ‘social licence to operate’, and so companies and government agencies have realised that the cost of doing ‘business as usual’ is now quite substantial. The Development Forum process, which was devised by the national government during negotiations for the Porgera mine in 1989, and subsequently applied to all other major mining and petroleum projects, has gone some way to ensure greater local participation in the planning process and the distribution of benefits (Filer 2008). This might create more involvement but has certainly done little to address the issue of dependency.

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2 For further studies on the Porgera gold mine see: Filer 1999; Imbun 2000; Jacka 2001; Jackson and Banks 2002.

3 For further studies on the Misima gold mine see: Jackson 2000; MML 2000.

4 These standards are vast and varied, and include for example, international multi-sector principles like the United Nations Global Compact (UN 2000), and industry-led instruments like the Sustainable Development Framework of the International Council for Mining and Metals (ICMM 2003). International agencies are also influential in setting global benchmarks, such as the International Finance Corporation’s Environmental and Social Standards (IFC 2006).
Furthermore, as we shall now see from the history of the Lihir mine, while the Development Forum enabled Lihirian leaders to develop a much broader definition of compensation in order to address immediate and future needs, it has not necessarily made it any easier to reconcile the competing interests and agendas between the different stakeholders, let alone to implement or achieve the multitude of their plans and visions.

Developing the Lode: An Overview

The Lihir gold mine is situated in the Kapit-Ladolam area of Aniolam Island, the largest island within the Lihir group. Unlike many other mining districts in PNG, Lihir does not have a history of alluvial gold mining. Gold traces were initially discovered during a geological survey of PNG conducted by the Bureau of Mineral Resources between 1969 and 1974. The results fuelled great expectations for substantial gold reserves on Aniolam. The report identified hydrothermal alteration and thermal activity on Aniolam, suggesting the possibility of an environment favourable to epithermal gold mineralisation. In 1982, prompted by these promising projections, Kennecott Explorations Australia and its joint venture partner Niugini Mining Limited employed geologists Peter Macnab and Ken Rehder to conduct sampling work on the islands which identified the potential for more extensive exploration. Rock chips taken off the sacred Ailaya rock in Luise Harbour yielded samples which averaged 1.7 grams of gold per tonne. Based on these results, Kennecott lodged an application for an Exploration Licence which was granted in 1982. Drilling commenced in the coastal area in late 1983, and continued into the adjacent Lienetz area through 1984. By the end of that year, the presence of a large gold resource had been confirmed.

Between 1985 and 1987, areas of anomalous soils in upper Ladolam Creek were sampled for gold, revealing the huge potential of the deposit. Drilling intersected gold values averaging 6 grams per tonne at intervals down to 197 metres below the surface. When the hole was deepened, a further 42 metres of gold mineralisation, averaging 3.92 grams per tonne, was intersected between 230 metres and 272 metres. This prospect was named the Minifie area and became the focus of diamond drilling throughout 1987. Further exploration defined several other adjacent and partly overlapping ore deposits, referred to as the Camp and Kapit areas. Kennecott engineers completed the first full feasibility study in 1988, but this failed to prove the economic viability of the project. In 1988, Rio Tinto Zinc (now Rio Tinto) acquired Kennecott from BP Minerals America and took over as the joint venture partner with Niugini Mining Limited.

A ‘two mine scenario’ was originally envisioned, whereby development of the Lihir project would be accompanied by the development of another mining operation on Simberi Island in the neighbouring island group of Tabar. While
this would have posed significant logistical challenges, the more concerning scenario would have been the discovery of another orebody within Lihir, outside of the original licence area. While the Simberi operation eventually commenced in 2004 under the auspices of Allied Gold Limited, Lihirians have shown strong resistance towards further mining developments on their own islands.

The Lihir Joint Venture conducted almost nine years of test drilling, as well as detailed metallurgical test work, along with geotechnical, geothermal, groundwater, environmental and engineering studies. During this time, the Joint Venture devised strategies for mining in a geothermal area and removal of waste through deep sea tailings disposal. Following the submission of a final feasibility study to the PNG Government in 1992, and extensive community consultation, including detailed social and economic impact and baseline studies, between 1986 and 1994, the Joint Venture was issued with a Special Mining Lease (SML) on 17 March 1995. The lease is valid for the term of the company’s Mining Development Contract — a period of 40 years.

In June 1995, Lihir Gold Limited (LGL) was incorporated in PNG for the purpose of acquiring formal ownership of the project from the Lihir Joint Venture. Four months later, on 9 October 1995, the initial public offering of shares was made. Lihirians secured 20 per cent of the overall 2 per cent royalty rate, and a 15 per cent equity stake through Mineral Resources Lihir Pty Ltd. Construction began in 1995, and by 1997 the processing plant at the Putput site was complete and the mine celebrated its first gold pour on 25 May 1997 at exactly 1.20 pm. Between 1997 and 2008, the annual gold production increased from 232,697 ounces to over 700,000 ounces. The project was initially operated by the Lihir Management Company (LMC), a wholly owned subsidiary of Rio Tinto, but the management agreement was terminated in October 2005 when Rio Tinto sold their 14.46 per cent share in LGL for A$399 million, in a decision to relinquish minority positions in other listed companies. Lihir Gold Limited itself became the operator, and by 2009, LGL was operating mines in PNG, Australia and the Ivory Coast in West Africa, and was producing a total of more than one million ounces of gold each year.

The Place for a Gold Mine

The Lihir island group lies to the east of mainland New Ireland, between the islands groups of Tabar to the northwest and Tanga to the southeast (see Map 2-1). The Lihir group consists of six islands (see Map 2-2): the main volcanic island of Aniolam, or ‘big place’ and, in order of distance, the low coralline islets of Sinambiet and Mando, and the three larger raised coral platform islands of Malie, Masahet and Mahur, collectively known as Ihot, or ‘stone place’, denoting the relative dearth of resources on these islands compared to Aniolam.
When the prospect of mining in Lihir emerged in the early 1980s, there was a mixture of fear, ambivalence and enthusiasm. The historical experience of isolation and limited engagement with outside institutions meant that the arrival of the company was considered a major event. Although the initial fervour of expectation soon spread across all of Lihir, somewhat assisted by the belief among the members of the Nimamar Association that the arrival of the company was the fulfilment of past prophesies, it was initially the village communities of Putput, Kapit and Londolovit that were regularly engaged with exploration teams and involved in early negotiations. This was partly due to the location of the exploration camp at Ladolam on the shores of Luise Harbour (Plate 2-1), and partly to constraints on travel to and from other parts of the island group.

In the years preceding exploration, Lihirians were mainly settled in scattered coastal hamlets formed around local matrilineal descent groups. Most people relied on a form of shifting cultivation, combined with the partial domestication of a substantial pig population, and minimal amounts of fishing and hunting. Limited engagement with the cash economy through copra and cocoa plantations, small-scale business ventures, or full-time and part-time employment with the government or the mission, meant that the average per capita income across Lihir prior to 1983 was probably around K65 a year (Filer and Jackson 1986: 57).\footnote{By the latter part of the 1980s the average per capita income was estimated at K100 per year (Filer and Jackson 1989: 90). The unequal distribution of income across Lihir was already noticeable in the early 1980s. Towards the end of the 1980s this inequality was further entrenched as more Lihirians came to rely upon the mining company for access to cash incomes.}
Map 2-2: The Lihir group of islands.
The Catholic mission station at Palie, on the southwest side of Aniolam, was the main service centre for the islands. It boasted a hospital, a primary school and a vocational school, while the mission boat, the MV Robert, provided access to the outside world. A vehicle track cut during the colonial period ran from Putput down to the southern tip of Aniolam and back up the western side of the island to Wurtol village, passing the wharf at the Palie mission station on the way. This ensured that villagers along the southeastern coast of the island had some involvement in early exploration activities. The northern villages of Aniolam were more isolated, both from each other and the outside world. Although Kunaie village was linked to the Potzlaka Patrol Post by a track that passed through the Londolovit Plantation, which was later designated as the site for the mining town, villages on the northwestern coast were completely cut off. Only a small number of dinghies and motorised canoes serviced Malie, Masahet and Mahur, which meant that their inhabitants were similarly isolated. By 1985, the people of Aniolam voiced a clear desire for the company to construct a ring road around the island that would connect all of their villages together. At that point, the only flights that made their way to and from the islands were those of the helicopter chartered by the mining company for its own purposes. The airstrip near Kunaie village was no longer in use, and it would be some years before the company thought it was necessary to build a new one to service its own operations.

Photograph courtesy of the LGL archives.
Before the start of mining exploration, the population of the Lihir island group was thought to have increased from 3625 in 1925 to 5505 in 1980 (Filer and Jackson 1986: 32). There was a slight decline during the inter-war period, though not at the rate experienced in some of parts of New Ireland, such as the neighbouring island of Tabar. In the early 1980s, there were approximately 500 Lihirians absent from the islands. In the area that was to become the mining lease zone, there were an estimated 800 residents. When divided into three broad zones — North and South Aniolam and Ihot — the bulk of the population was found in South Aniolam, in a broad arc from Putput to Sianus. Kunaie and Londolovit were significant settlements in North Aniolam, with around 321 and 242 residents respectively, while the smaller islands supported a population of 1670. With the commencement of mining activities, many absentees returned to Lihir to seek new opportunities. By 1995, the Lihirian population had increased to 9892, and in 2007 it had reached 13,844 people. The non-Lihirian population has similarly expanded from fewer than 200 people in the late 1980s to an estimated 4000 people in 2008, in addition to approximately 2000 non-Lihirian employees residing in the camp and company housing. This sharp population increase is largely due to the return of expatriate Lihirians and to declining mortality rates as a result of improved access to health services. As we shall see in Chapter 5, over the life of the mine there have been significant demographic and settlement shifts associated with changes to the economy and service provision, and a growing non-Lihirian population.

Local Formations and Resolutions

By the time that exploration got underway in Lihir, mining companies operating in PNG were expected to commission detailed studies of the customary land rights relevant to their prospecting area. Negotiations for preliminary prospecting work had commenced on the basis of limited knowledge of Lihirian social structure and customary forms of land ownership. As early decisions and compensation payments were made, disputes soon emerged between the different landowning clans. Company and government representatives found themselves talking with individual clan leaders who either offered conflicting stories, or at least puzzling variations on the same story. The information offered in the original sociological baseline study prepared by a former District Officer (Smalley 1985) proved quite inadequate. By 1985, Lihirians had established a land demarcation committee. However this group was not equipped to deal with the rising number of disputes emerging from the new monetary value of the land, the inherently flexible nature of Lihirian land rights, and the tensions between different generations.
In 1985 Colin Filer and Richard Jackson were asked by the Lihir Liaison Committee to conduct a social and economic impact study for the proposed mine, partly to address the shortcomings of the original baseline study. This report (Filer and Jackson 1986) was later fully revised and expanded (Filer and Jackson 1989). They found that Lihirians were already concerned about the future distribution of royalty and compensation payments and the potential for greater social division. Lihirians were familiar with the notion of compensation, and no one seemed to quarrel with the idea that it is due to the individuals and lineages who claim rightful ownership of the resources for which it is paid. However, royalties were something of a mystery. Some people thought that they might be equivalent to compensation for the use and abuse of agricultural land, while others regarded them as payment for the desecration of the land, the equivalent of a natural resource which should be free for all, as compensation for previous exploitation by the government, or even as the form in which volumes of cargo would eventually be delivered to members of the Nimamar Association (Filer and Jackson 1986: 99).

This confusion was exacerbated by the problem of distribution. The three prevailing ideas were that royalties could either go: (1) to members of the lineages that own the resources in the prospect area; (2) to all members of the clans to which these landowning lineages belong; or (3) to the entire Lihirian population, with each individual receiving an equal amount (Filer and Jackson 1986: 101). The difference between the first two options was obscured by the notion that ‘clans own land’ — an idea which the company had also come to believe, but which only partly captures the reality of traditional land tenure. At that stage, it was already evident that compensation payments were not being distributed throughout the entire clan. While it seemed logical that core landowners would prefer one of the first two options, there was widespread support for the third option, which was thought to be the least divisive, but was also based on some rather wild ideas about the amounts to be received. The reason for noting these early views is largely to demonstrate the changes that have since occurred. While Lihirian leaders eventually accepted the second option, believing that the nominated clan leaders would distribute their new found wealth equally throughout their respective clans, this has proven not to be the case, and the unequal distribution of royalties remains the biggest point of contention across the islands. Moreover, most Lihirians who do not belong to ‘landowning clans’ would still argue for a more equal distribution, but it is unlikely that any landowner would now contemplate an equal share for all.

In the early period of exploration, there was no unifying organisation representing the interests of Lihirian landowners. Lihir was largely divided between

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6 The Lihir Liaison Committee comprised representatives from the New Ireland Provincial Government, the Department of Minerals and Energy, and the Kennecott-Nuigini Mining Joint Venture.
government supporters and the followers of the Nimamar Association, which was staunchly anti-government. At one level, Lihirians were united through their Christian faith, but again divided between Catholics and Protestants. Filer and Jackson recommended that Lihirians should form a ‘council of elders’ that contained representatives from each of the major clans in Lihir and the villages most affected by exploration activities, as well as representatives from the Nimamar Association, relevant government agencies, and the mining company. This group was not intended to replace the land demarcation committee; rather they would primarily deal with the land disputes arising in the villages of Putput, Kapit, Londolovit, and possibly Kunaie. In these early years, Lihirians were soon realising a distinction between ‘landowners’ and ‘non-landowners’: people with a connection to land within the prospecting area that would later become the Special Mining Lease zone, and those who are part of the unrecognised and undifferentiated hoard of collective custodians.

This council of elders never eventuated, but in 1989 Lihirians formed the Lihir Mining Area Landowners Association (LMALA). A young man called Mark Soipang, who was spokesman for the Tinetalgo clan which claimed significant portions of the prospecting area, was elected as its Chairman. Soipang and the LMALA assumed a leading role in future negotiations over the mining project, and in the following chapters, we shall see how both have maintained considerable influence across the political landscape.

As the Lihir Joint Venture prepared its final feasibility study, negotiations got under way for the relocation of Putput and Kapit villages. In March 1991, LMALA executives insisted that they should receive sitting fees and presented a list of eight demands to the company. When the company refused to agree to the demands, the LMALA imposed a ‘stop work’. The history of negotiations has followed a similar pattern combined with a sense of mutual suspicion. Soipang has frequently stated his mistrust of Whites and has employed a diffuse range of negotiation tactics, which may well be the result of some rather strident advice he received back in 1988 from Francis Ona and his band of rebellious Bougainvillian landowners during a visit to the Panguna mine (Filer 1988).

In an attempt to address the mounting land disputes, a genealogical database for the proposed mining lease area was established, and local leaders discussed the need to codify the rules of traditional land tenure. In 1992, the mining company engaged Luke Kabariu, a Lihirian, to work with a combined committee including landowners, village leaders, village magistrates and government and company representatives, to produce the ‘Lihir Land Rules’ (Lo Blong Graon Long Lihir). This document never really reduced future disputes over the inheritance and ownership of land in Lihir, but rather highlighted the limitations of a simplified list of ‘rules’ divorced from the various ways in which these are enacted over the course of history. This work was carried out in tandem with the development
of a Village Population System (VPS) database by John Burton, assisted by Kennecott liaison staff Martin Zanayes and Nick Ayen, which was in turn based on a survey of Lihirian men's houses by Colin Filer (Filer 1992a). The VPS database has been regularly updated over the life of the mine, and has proven to be an invaluable asset for monitoring social and demographic changes.

The Lihir Destiny

On 1 November 1993, Lihirian leaders and provincial and national government representatives met at the Port Moresby Travelodge for a series of tripartite discussions known as the Lihir Development Forum. This forum provided an opportunity to secure joint endorsement for the project, and to produce a set of agreements between these stakeholders that outlined the costs, benefits, rights and obligations arising from the project (Filer 1995). Negotiations mainly revolved around the distribution of equity in the project, as Lihirians were pushing for an unprecedented 20 per cent stake. At this stage, there were already serious concerns about the political conflicts unfolding on Bougainville. New Ireland provincial leaders were determined to avoid a similar situation, and insisted that Lihirians should maintain a meaningful role in the management of the operation. Soipang presented the Lihirian perspective on this matter in a position paper which captured the ambiguous and strained relationship between Lihirians, the State and the project:

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The developers are foreigners and the State is only a concept. It is us, the landowners, who represent real life and people (Soipang in Filer 1995: 68).

While the State may be an ideological fiction, and the developers are certainly outsiders, Lihirians have still spent a great deal of energy working out how to extract benefits from them whilst reducing the extent of their influence. The protracted length of the Development Forum seems to have also arisen from the degree to which Lihirians felt alienated from the State — demonstrating the extent to which they have come to believe in it. By the end of 1994, this difficulty was exacerbated by the fact that Lihir was located within the electorate of the new Prime Minister, Sir Julius Chan, who would ultimately sign off on the mining agreement, but who had lost face with some Lihirians through his membership in the previous national government elected in 1992.

In Lihir itself, negotiations continued throughout 1994 on the issues of relocation, development of the plant site and town area, and the contents of the community benefits package. A road was surveyed and cut from Kunaie to Sale, eventually reaching Kosmaiun. Lihirian landowners visited the Misima gold mine in February 1994 to speak with local landowners and gain a better
understanding of the transformations that Lihir would be likely to undergo. On 16 August, it was agreed that a Londolovit Plantation Development Planning Committee would be formed so that the traditional owners would have future input into the planning of the town and the use of their land. On the following day, the mining company handed the LMALA a draft Integrated Benefits Package (IBP) for review.

On 27 February 1995, the Development Forum was officially reconvened at the Malanggan Lodge in Kavieng, and most of the outstanding issues were resolved within two days. The provincial government representatives agreed that 20 per cent of the royalties would be paid directly to the landowners in cash, while another 30 per cent would be transferred to the Nimamar Development Authority (formerly the Nimamar Community Government), along with at least 30 per cent of the Special Support Grant to be used on community projects throughout Lihir.\footnote{The Special Support Grant is a transfer of money from the consolidated revenue of the national government to the provincial government hosting a major resource project. The grant has normally been equivalent to one per cent of the annual value of production from the project (see Filer 2008: 124, 1997b: 249).} The only issues not resolved in this meeting were the longstanding debates about equity and the distribution of a national government grant of K500,000 in start-up capital for new Lihirian companies. On 8 March, the National Executive Council (Cabinet) authorised the Governor-General to execute the Mining Development Contract between the national government and the mining company, and authorised the Prime Minister to execute the forum agreements with the provincial government and local community representatives. Three days later, Lihirian leaders refused to sign a separate IBP agreement with the company because they were still demanding a 20 per cent equity stake in the project.

**The Integrated Benefits Package Agreement**

On Thursday 16 March 1995, a delegation of nine Lihirian representatives flew to Port Moresby to meet with the Prime Minister and Mining and Petroleum Minister John Giheno and other government officers, in an attempt to finalise outstanding issues surrounding the IBP agreement, including the issue of project equity. The group included Mark Soipang and Ferdinand Samare, who was the Chairman of the Nimamar Development Authority, the national government’s Lihir Liaison Officer Gabriel Tukas, and Ray Weber from the Lihir Management Company. Late into the night, Lihirian leaders finally accepted the government’s offer of a 15 per cent equity share on the basis of the Prime Minister’s promise that the overall royalty rate would be increased from 1.25 per cent to 2 per cent of the total value of output, and that the company would be able to claim the ring road as a tax deductible expense, which would save the Nimamar
The Lihir Destiny

Development Authority a considerable amount of money. These promises were confirmed in a letter from the Prime Minister and were attached as an appendix to the Memorandum of Agreement between the national government and the LMALA.

At 10 am on the following morning, the group attended the signing of the Special Mining Lease at Government House. This momentous occasion was attended by New Ireland Premier Samson Gila, and Provincial Minister for Mines Pedi Anis, and officials from Nuigini Mining Ltd. Speaking in front of the media and overseas bankers, Soipang said that Lihirians were 100 per cent behind the signing of the SML, but the signing of the IBP agreement must be carried out in front of Lihirian clan leaders back in Lihir.

Following the signing of the SML, arrangements were made in Lihir for the commencement of the Putput-Ladolam relocation. House blocks were pegged, and trees and resources counted. On Tuesday 4 April, a large feast was held at Putput to commemorate the move from the old hamlets to the new location along the coast. Soipang captured the gravity of the moment in his speeches during the event:

Today we meet at this big occasion to remember the great change that will be part of the life of the relocatees. This great sacrifice of vacating the ancestral traditional land and going through the process of relocation to new land was a major decision for the relocatees. The decision to relocate was not an easy hurdle. The decision they made was not merely for their good alone. Rightfully, it was for the benefit of the Lihir project, Lihirians, New Ireland Province, PNG and the world. …

We on Lihir, New Ireland and PNG have much link to the land and therefore to leave your land and especially when you are forced to leave and relocate to a new land is a great inconvenience. …

Relocation has opened the door for the mining company to operate. …

This village will no longer be the same as it is today. The hausboi at Maron, Kabanga, Latawis Lamabarai and the Putput cemetery will be preserved. The physical nature of this land will change to allow the construction of a wharf, plant and houses. After the present state of the land has been changed, we will not return it to its natural state. … We will not forget this day because we will continue to remember that we were the last group to gather at this feast before the natural state of the land was changed (quoted in the Lihir Gold Times 5(2), 1995).

The final ceremonial signing of the IBP agreement was set to take place in Lihir on 20 April. At the last minute, the affair was delayed because Lihirian leaders
had not been able to acquire the desired 400 pigs for the event, and also because they were still unsatisfied with the content of the agreement. On 26 April, the event finally proceeded. It poured down throughout the day and reportedly a young girl drowned in a rip-tide while adults were preoccupied with the proceedings. Filer (1995: 69) suggested that all of this might be regarded as a ‘bad omen’ or a sign of worsening things to come. Many Lihirians might now find themselves in agreement, but at the same time I would still be hard pressed to find people who want to completely turn back the clock.

The broad sense in which Lihirian leaders approached the issue of compensation — particularly by comparison to those of other landowning communities — was largely explained by the Development Forum process and the belief that they could make the compensation package work for Lihirians. During the ceremonial signing of the agreement, Soipang outlined the ways in which members of the local political elite were approaching this issue:

There have been times set to sign the heads of agreement but we have long deferred the signing until we finally decided to sign today. We have to delay the signing because we would like to freely make the decision to commit life, land and our environment to the project. … the negotiation process took many years until a final agreement was reached. The landowners made a lot of compromises and for that reason we are ready to sign the agreement today. …

In the negotiations the landowners had four objectives to achieve:

1. We strive to maintain that during the operation and development of the Lihir Gold Project, development must be a true development in the life and welfare of the people in every village of Lihir. This means that the development of the mineral resources must go hand in hand with development of the human resources.

2. We would like to see a balanced development that will extend to all areas of Lihir in order to maximise the gap between privileged and non-privileged Lihirians.

3. We would like to see a sustainable development in which Lihirians will care for and maintain.

4. We would like to maintain that at all times there must be stability, peace and harmony within the Lihir group.

We aim to see that these four objectives must bear fruit for the development of the Lihir Gold Project in the Lihir group.

The strategy we will follow to achieve these objectives is:
1. The structure of the Nimamar Development Authority is based on the Lihir Clan System.

2. There is already in place the Lihir Society Reform Initiative and Programme.

3. The Village Development Scheme is included in the Compensation Agreement.

The principle of the Integrated Benefits Package in the compensation agreement clearly outlined that, in destruction, payment goes direct to the immediate landowners. Development is development for all areas and the people on Lihir. Security is an investment to cater for development and Rehabilitation is a process of reclaiming land to make it once again suitable for people to live on.

The landowners, having the knowledge that all their land within all mining leases will be destructed and hence will lose many benefits for the good of the Lihir Gold Project, Province and Country and the World. This is a great sacrifice the landowners will endure and therefore are prepared to take it because it is for the good and benefit of all the people.

Finally, the end of the hard negotiations is over and so we are now ready to sign all the agreements to allow for the development of the Lihir Gold Project in order to allow for developments in all areas and within the people of Lihir; to create development in the province, country and the world (quoted in the *Lihir Gold Times* 5(2), 1995).

Local leaders were clearly searching for the right formula to maintain social stability and generate positive social changes. The earlier visions of a new society were now distilled in a model of ‘balanced’ development to be funded through the IBP and supported by something called the Society Reform Program that was supposed to protect Lihirian custom. This was the genesis of the later Lihir Destiny Plan that imagined the revolution in Lihir as key to the broader transformation of the country.

The IBP agreement was divided into four chapters: Destruction, Development, Security, and Rehabilitation. It contained a set of separate agreements between the LMALA, the Nimamar Development Authority (which became the Nimamar Rural Local-Level Government in 1997), the Lihir Management Company and the Government of PNG. This package outlined the specific range of agreements and memoranda that cover different aspects of mine-related development, including compensation, housing relocation, infrastructure commitments by the local and national governments and the mining company, and commitments relating to environmental monitoring. Special Mining Lease block executives were entitled
to a 20 per cent share of royalties in addition to compensation for damages and destruction to resources, and Lihirians gained a 15 per cent equity share in the project through shares purchased on their behalf by Mineral Resources Lihir Ltd. In addition to compensation distributed throughout the ‘affected’ area and the general construction of infrastructure throughout the islands, the IBP also contained provisions for a Village Development Scheme (VDS). Funding was made available through this scheme to provide Lihirians with assistance for housing improvement and basic community infrastructure such as reticulated water and electricity, and sanitation services — the trappings of a modern village existence. Importantly, there was also provision for the agreement to be reviewed every five years. Although the IBP was the result of nearly a decade of stakeholder negotiations, and became ‘the new benchmark within Papua New Guinea for such arrangements’ (Banks 1998: 62; see also Filer et al. 2000: 53–8, 71–6), it is still arguable that the only genuinely integrating factor was the blue binding holding these separate agreements together.

While the Development Forum provided local leaders with a seat at the negotiation table, and has assisted greater self-determination, we must recognise that the forum process — and the industry of which it is a part — is still structurally geared towards dependency. It is effectively an opportunity for landowners to present a wish list to the government and the company, who are then held responsible for delivering these dreams through a series of agreements. In return, landowners just have to promise to be well-behaved and not disturb operations. The pages of government and company commitments outlined in the IBP are set against the single Lihirian commitment to ‘cooperate’. Granted that there is some moral justification for this imbalance in the fact that landowners make substantial sacrifices, and that the benefits which accrue to the company far outweigh anything received by the community, this arrangement still fails to address the difficult task of converting resource rents into long-term development. It may even render the Lihirian desire for sustainable or ‘balanced’ development completely futile, especially since there are no real repercussions when men behave badly. It is for these reasons that the new directions proposed in the revised IBP, the Lihir Destiny Plan which I consider in more detail in Chapter 6, appear all the more remarkable. The determination to achieve ‘balanced’ development from mining, through an emphasis on individual responsibility and *bisnis*, not only entails plans for the post-mining era (something which is often absent at other projects), but also marks a significant departure from previous approaches to mining and community development.
Relocation and Construction

Throughout 1996 and 1997, there were a number of significant developments that provided new services and connectivity, and also permanently altered the landscape and existing lifeways. On 21 January 1996, the old Ladolam exploration camp was decommissioned and workers were shifted to the Putput construction site and a new construction camp on the Londolovit plateau. Around 20 government houses and 70 company houses were constructed, as well as a large abode for the Chairman of the LMALA, new accommodation for the majority of the workforce who would operate on a fly-in-fly-out basis, a hotel, a sporting club, and an international primary school. A modern hospital was built to service both employees and the wider community, and in the local townsite work commenced on a new police station, market place, a shopping district with banking and postal facilities, as well as offices for the provincial government, the LMALA and the LMC Community Liaison Department. The area leased from customary owners — which excludes Londolovit township, portions of Luise Harbour, and other areas previously alienated such as church blocks or government land — amounts to approximately 2700 hectares, roughly 15 per cent of the surface area of Aniolam that remains under customary title (Filer and Mandie-Filer 1998: 3). The ring road was finally completed and opened by Prime Minister Sir Julius Chan on 25 May 1996. It stretched over 74 kilometres, connecting the mine, the township, the mission station, and some 20 coastal villages. A new airstrip was also constructed at Kunaie and opened with a feast on 17 April 1996. On the following day, 16 landowners (including one woman) flew to Port Moresby and back on a Dash 7, marking the commencement of commercial flights.

Under the terms of the Putput/Ladolam and Kapit Relocation Agreements in the IBP, some 215 people were listed as residents to be relocated to make way for the mine. Prototype relocation houses were initially built to give people an idea of the style of housing on offer. These designs were more environmentally suitable, but they lacked the familiarity of the high-set weatherboard houses commonly used for government employees. So the original designs were abandoned for a more recognisable and acceptable style. At the time, these houses represented current ideas about what it meant to be a modern, wealthy homeowner. These houses were seen as the preserve of middle class businessmen, bureaucrats and administrators, and signified access to a world of relative luxury and wealth previously denied to Lihirians.

In accordance with the relocation agreements, the LMC agreed to provide two types of relocation house for those residents of the affected areas who had established their identity as customary landowners. Type A houses were three-bedroom high-set ‘deluxe’ model homes (see Plate 2-2). These houses were given
to family heads with land in the pit area. The company built these houses at no cost to the resident and provided K200 per annum for maintenance, plus a one-off K2000 furniture allowance. Type B were low-set two-bedroom homes with similar appearance but fewer features. Occupants were to receive a smaller furniture allowance of K1000 and a maintenance allowance of K200 per annum. The choice between the two largely depended upon the actual or anticipated size of the household to be relocated. Members of existing households (mostly adolescent children of older landowners) were also to be provided with a kit of materials to construct a small Type B house, either three years or five years after the agreements had been signed (Filer et al. 2000: 72). In addition, one grave was relocated and seven new men’s houses were also constructed by the company to replace those lost in the relocation.


Photograph courtesy of the LGL archives.

The company managers recognised the need for a women’s section in their Community Liaison Department, and before construction started, they appointed a consultant (Susanne Bonnell) who assisted Lihirian families in their domestic transition and was instrumental in the initial moves to set up a women’s association. In 1995, when Martha Macintyre was engaged by the company to set up an annual social impact monitoring program, she worked closely with Lihirian women to establish the Peitorme Women’s Association (Macintyre 2003). While this has provided women with a voice in a predominantly male political environment, the organisation has been consistently hampered by sectarian politics, which has muted their involvement in the development process.
From the outset, the relocation program divided Lihirians, and in many ways set up a new hierarchy based upon individual distance to permanent environmental destruction. Residents of Putput 1 village were relocated to nearby land around the corner, which meant that they could retain a semblance of village unity. This new village was known as ‘Relocation’, and later called the new Putput 1. The unrelocated part of the old Putput 1 village was reclassified as part of the existing Putput 2 village. Reticulated water and electricity were initially delivered to Putput 1 (or Relocation), and new modern men’s houses were constructed from permanent materials. This was later extended to Putput 2. Most other Lihirians have subsequently conflated the two village areas and simply refer to ‘Putput’, which is generally considered a kind of ‘landowner suburb’. While Putput residents are noticeably better off compared to most other Lihirians, and Putput is now a decidedly ‘urban village’, there is a high degree of internal stratification and conflict within this core landowning area.

Kapit residents were relocated shortly after Putput. However, because they did not have land nearby which was not intended for mining purposes, they were not relocated as a single residential community. Instead, they were scattered around Lihir to places where they had clan connections. Some shifted to the neighbouring village of Londolovit, while most moved away from the growing centre of economic development to villages on the western side of Aniolam, such as Talies, Wurtol and Kosmauin. In 2007, some Kapit people were still refusing to be relocated due to a lack of suitable land, reluctance to depart from sacred sites, and political struggles over compensation. Kapit and its famous hot springs have since become a caustic stench on the mine’s political landscape.

The Ailaya

It should come as no surprise, perhaps, that the original rock chips sampled from the sacred Ailaya rock pinnacle, rising out of the central caldera in the Luise Harbour (Plates 2-3 and 2-4), have precipitated the profound transformation of the Lihirian lifeworld. Properly understood, the Ailaya rock is a portal to the land of the dead for all Lihirians from across the group of islands. The spirits of deceased Lihirians enter this land of the dead, known as Rondende, through a central marine passage at the base of the Ailaya, assisted by the spirits of relatives already resident there. In Lihirian conception, the distribution of the islands reflects a particular cosmogonic event — an original eruption of the central caldera on the main island of Aniolam, throwing out the islands of Malie and Ailaia. In 2009, the Lihir Cultural Heritage Committee decided upon the spelling Ailaya. The ‘y’ is intended to symbolise the Y-shaped entrance to Lihirian men’s houses, where clan members are often buried (see Chapter 3). In the words of Peter Toelinkanut, ‘the Ailaya is the gateway for all Lihirians’.

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8 There have been various spellings of Ailaya reflecting different local dialects, such as Ilaia, Alaia, and Ailaia. In 2009, the Lihir Cultural Heritage Committee decided upon the spelling Ailaya. The ‘y’ is intended to symbolise the Y-shaped entrance to Lihirian men’s houses, where clan members are often buried (see Chapter 3). In the words of Peter Toelinkanut, ‘the Ailaya is the gateway for all Lihirians’.
Sinambiet. Formerly there was a smaller rock pinnacle adjacent to the Ailaya, alternatively called Tuen kanut or Ai tuan tamberan, which can be translated as ‘ghosts bones’. Spirit beings, or *tandal*, which comprise the wider sacred geography of Lihir (see Chapter 4), are held to have emerged originally from the Ailaya site complex, before fanning out across the Lihir group and taking up residence at their respective sites across the islands. To the extent that there is an explicit Lihirian eschatology, it is couched in terms of an ultimate, centripetal return of the *tandal* to the Ailaya, in a reversal of the original centrifugal event.


Photograph courtesy of the LGL archives.
Plate 2-4: Drill rig and helicopter on the sacred Ailaya rock in Luise Harbour, circa 1983.

Photograph courtesy of the LGL archives.
During the initial mortuary rites that honour deceased male leaders, and in some cases senior women, the deceased are decorated with red clay and shell valuables and seated within the confines of their men’s houses in preparation for burial. Clan members gather in the men’s houses and mournful rangen songs are sung throughout the night. The ultimate purposes of this ritual are to farewell the deceased and assist them in their journey to the afterlife. On Aniolam it is understood that the soul of the deceased walks across the island or along the coast to the Ailaya, resting upon the Tuen kanut before reaching its final destination, Rondende, before sunrise. On the outer islands of Malie, Masahet and Mahur, the spirit of the deceased must first journey across the sea to reach Aniolam where the Ailaya is located. This journey is symbolised by seating the deceased in a special canoe called a konkonla, placed within their men’s house (Bainton et al. forthcoming a).

On a regional Pacific scale, the Ailaya is an exceptional site. Many communities in the Pacific have held notions of lands of the dead, but for the most part these are abstract spaces, usually entered via the sea, or located in valleys or on distant peaks. Throughout New Ireland, similar places are located out to sea, on the horizon, or on another island (Bell 1937: 330; Clay 1986: 50; Kramer-Bannow 2008: 195). The physical presence at Lihir of a portal to the underworld is exceptional, and no doubt reflects the unique form of the Ailaya and its setting within an active volcanic landscape. More unusual still is the inward-focused cosmography of Lihir, in which the Ailaya serves both as the geographical pivot and the point of temporal initiation and closure.

The Ailaya now sits in the middle of the SML area (Plate 2-5) and acts as a cap to a rather large lode which the company has long sought to mine. While the Ailaya has thus far been preserved through an agreement between landowners and the company, it has suffered numerous disfiguring events, including the cutting of benches into its crest to facilitate early test-drilling and the development of the first coastal road along its sea front. Cut off from the sea by a widening corridor of rubble and overburden supporting a series of vehicle access roads and pipelines, the Ailaya is now a forlorn remnant of its former shape, a silent island in a churning sea of mining activity.

By virtue of its position within the SML, the cosmological significance of the Ailaya has since been overshadowed by its political significance. Although the shared relationship to the Ailaya once entailed obligations of reverence rather than rights to specific uses (Macintyre and Foale 2007: 53), the prospect of royalty payments from the mine, which was already thought likely to destroy the site, quickly generated complex arguments among Lihirians over the ownership of the Ailaya. Throughout the life of the project, independent risk analysis and
social impact studies have consistently recommended that the Ailaya should not be destroyed or damaged, and local leaders have maintained the importance of the Ailaya to Lihirian social harmony.

On the 1 October 1984, Soipang lodged the first compensation claim on behalf of the Tinetalgo clan for damages to the Ailaya site (Kabariu n.d.). No figures were mentioned and there are no records that indicate whether any payment was made. On 28 August 1985, Soipang announced that the Tinetalgo clan would perform a customary feast as compensation for the destruction of the area where the *tandal* known as Kokotz resided. This was the first time that the Tinetalgo clan had staged a feast for the *tandal*, which some considered to be a tactic for the Tinetalgo clan to gain sole rights to the sacred area.

The politics of ownership intensified when construction started on the ring road. The only feasible route through this section of the island was around the base of the Ailaya, meaning that part of the sea frontage of the rock would have to be removed. During a community meeting held on 22 March 1989, with people from Putput, Kapit, Londolovit and Wurtol, the majority of people agreed that the road could commence. Soon afterwards, a younger group representing the Tinetalgo clan, led by Soipang, disputed the decision and demanded compensation. The Mining Warden was called in, and he recommended that a
compensatory feast should be held and that Kennecott should provide the pigs and food. This was rejected by the Tinetalgo clan, whose members argued that this would effectively grant Kennecott part ownership over the Ailaya.

As outlined in the IBP, the LMC paid K50 000 compensation for damages to the Ailaya which was received by the Tinetalgo clan. The clan ‘distributed’ this money by hosting a large feast at Sianus from 26 to 27 June 1996, which was supposed to mollify the Kokotz *tandal*. The LGL Board of Directors attended, but many Lihirians boycotted the event. Even if this feast did not confirm ownership, it did provide the Tinetalgo clan with the right to claim any future compensation payments for damages to the area. Few Lihirians accept that the Ailaya can be owned by any one group or individual. Consequently, most Lihirians have removed themselves from debates about the Ailaya to demonstrate their dissatisfaction, which has only further alienated the Tinetalgo clan from the wider Lihirian community.

In the IBP, the LMC also agreed to the establishment of a committee to review the options for restoration of the Ailaya. This committee would consist of representatives of the Tinetalgo clan, the wider Lihir population, and the LMC. The original group was called the Ailaya Restoration Committee, although the members later changed its name to the Ailaya Preservation Committee, firstly because they thought that the rock was now beyond restoration, and secondly to suit the struggles and disputes over the boundary of the Ailaya area. Internal politics, possibly related to the high representation of Tinetalgo clan members, has precluded any meaningful action and the committee is now defunct.

Despite its remarkable cultural significance and the commitments made in the IBP, company managers have consistently entertained the possibility of mining the Ailaya, euphemistically referred to as ‘coastal mining’. Soipang has always vocally defended the Ailaya, though perhaps more recently for political reasons as a bargaining chip with the company. Company managers are now sceptical about the contemporary relevance of the Ailaya, further convincing themselves that the economic benefits to be gained by Lihirians (and LGL) from mining the area far outweigh any spiritual significance it might have. Managers have seized upon the realisation that some Lihirians would certainly agree with this argument, especially younger or disgruntled community members. However, this argument fails to recognise that for older Lihirians the total destruction of the Ailaya is perhaps an unfathomable event with cataclysmic repercussions. Moreover, future generations who do not feel so sanguine about the loss of this sacred site may well consider its destruction as outright sacrilege and grounds for legal action.
Islands in the Global Stream

Mining has brought unprecedented material, cultural and political change to Lihir. While many people have been disappointed or frustrated by what they perceive as insufficient or inadequate change, the reality of this transformation is fully known in comparison with other parts of PNG where people are still ‘waiting for company’ (Dwyer and Minnegal 1998). Managers like to imagine that the impacts extend to the limits of the SML zone, and that Lihirians should be grateful for any benefits that flow beyond this boundary. However, the size of the mine is not proportional to its presence. It is this focus on the physical nature of the mine that seems to keep managers from recognising that the mine actually sits within the middle of the Lihirian community and completely occupies their lives.

Lihirians now have access to a variety of media sources and telecommunications, and there is a daily flow of Lihirians and non-Lihirians on and off the island who act as important conduits for information about the outside world. The national papers are delivered daily, TV services exist in villages close to the mining area, and in 2007, Lihirians entered the digital age as mobile phone technology reached the Londolovit town site. In short, mining has already brought a lot of the material, cultural and temporal features of ‘modernity’. Lihirians might not be equally informed participants in the global economic system, but compared to their neighbours and to pre-mining days, Lihirians have become decidedly more connected and exposed to the lifestyles and cultural visions of others very different from themselves.

While the incorporation of new forms of agricultural production occurred gradually through the colonial years, and entailed the extension of primary subsistence activities, mining has introduced industrialisation instantly and on a grand scale. In a matter of years, Lihirians have been confronted with a range of significant changes to their lives, including the dramatic transformation of the landscape; the introduction of industrial wage labour relations; the massive influx of foreign workers, as well as the marked shift towards modern technologies and techniques. Economic dependency on the mine is not only evident in the demand for compensation, but also in the extent to which local businesses rely upon the presence of the mining company, and the ways in which the ceremonial economy relies upon the incorporation of mining benefits and wages, which has sustained kastom through this revolutionary period. Quite simply, mining has pervaded all aspects of the Lihirian lifeworld, and their engagement with capitalism has occurred on a wholly different scale to most other Melanesians.
Although Lihirians have been criticised by government officials, other Papua New Guineans, and even some of their own leaders, for being ‘wasteful’ or failing to capitalise on their moment, this is not solely due to the structure of mining agreements or because Lihirians are ‘maladapted to modernity’, but rather because particular historical circumstances, and the scale and speed with which industrialisation has been introduced, have resulted in spatio-temporal disjuncture. Lihirians have been thrust into the modern world, but they have distinctly shaped their trajectory. In the following chapters, we shall look at the ways in which Lihirians have historically responded to change and conceptualised the source of that change, and at the received cultural orientations that have influenced their engagement with new political and economic systems and shaped the outcomes of this remarkable experience.