

3. LIHIR

3.1 Lihir: Business Development

3.1.1 Background/Obligations

Prior to mining operations there were very few local business activities other than the sale of excess fish and garden produce (to fellow villagers) at local markets on Lihir Island. the 1980 census revealed that less than 10% of the island village population (122 persons) was engaged in any form of money earning activity – half of these were wage earners and the other half farmers, fishermen and ‘businessmen’. the latter refers principally to the owners of village trade stores. This situation changed dramatically with the initiation of large scale exploration and mine construction activities.

In Chapter 2 of the 1995 Integrated Benefits Package (IBP) LMC has “.....recognised the need to involve, wherever possible, Lihirian interests in commercial spin-offs from mine construction and operations.” A Business Development Program was prepared after discussions with LMALA.

Under the original Business Development Program, LMC intended to establish and staff a subsidiary - “Lihir Business Development Pty Ltd”, to provide managerial, accounting and secretarial assistance to Lihirian businesses at no cost for a period of ten years. This company was never established. the program also identified a list of construction contract activities that it was agreed were suitable for Lihirian companies alone or in joint ventureship. As a result a local landowner company (Lakaka Ltd) formed a number of joint ventures in retail trading, catering and stevedoring.

LMC made an interest free loan of K200,000 to assist with working capital and also entered into an agreement for the provision of managerial, accounting and secretarial assistance to Lakaka Limited, at no charge for a period of three years.

During and just after construction, most Local Business Development financial and other assistance was extended to Lakaka Ltd and its subsidiaries, and Lihir Holdings Ltd, also presenting as a representative landowner company. Lihir Holdings entered into a joint venture with Papindo to operate a supermarket and a hotel but for various reasons the arrangement ceased and the landowner company closed down, leaving Lakaka as the main representative Lihirian landowner company.

Negotiations are currently underway between the various signatories/beneficiaries in a review of the various components of the Integrated Benefits Package agreement.

3.1.2 Current Situation

The Lihir Management Company (LMC) has a Business Development Department under a manager with a total staff of 15, including 6 agriculture extension staff and 4 staff

dealing with the management and operation of the Tutorme Training Centre. Of the remaining staff there are two accountants and two business development officers.

Business Development has a total of 220 local landowner companies on its records, of whom at December 2001, 120 were operational and of these 102 whose activities were directly linked in some way with Lihir Gold Limited (LGL) operations. Business Development staff provide direct hands-on assistance (e.g. monthly accounts, monthly statutory returns, hold cheque books etc.) to 43 of these landowner companies as clients and some support (annual accounts/returns) to a further 20 companies.

A Local Business Development Advisory Committee (LBDAC) operates, in line with the IBP Business Development Program, to assist LMC with business development decisions and to oversee Local Business Development activities. the LBDAC has members from LMALA, Nimamar Development Authority, NIPG Commerce, Lakaka, and community representatives.

All landowner companies on Lihir have to be approved by the LBDAC as being properly incorporated, owned by Lihirian interests and statutorily compliant before they can be considered for any LGL related contracts. the December 2001 listing of 118 LBDAC approved local companies and joint ventures involving local companies included 67 who currently have direct contracts with LMC.

Apart from providing support and assistance to its client landowner companies, Business Development also administers an interest free loan scheme, a loan guarantee scheme, and the Tutorme women's sewing and training centre, which are detailed below. the sentiment expressed by the Business Development office is that in many cases, without their financial and managerial assistance, most of their clients would not survive commercially.

Landowner Company Loan Assistance

LGL has set aside K1 million to be extended as interest free loans to small Lihirian landowner companies, principally those who are involved in LMC contracts. Loans are not normally more than K5,000 although consideration is being given to raising this limit to K10,000. During 2001, 22 local businesses benefited from a total of approximately K371,000 of such interest free loans. Since its introduction 120 businesses have taken advantage of this scheme.

Landowner Company Loan Guarantees

In earlier years LMC guaranteed commercial loans to Lakaka and Lihir Holdings. Unfortunately, due to managerial problems (and in the latter case, demise) of these companies, both these guarantees were drawn down. Currently LMC has made a number of smaller loan guarantees for more modest local landowner company activities.

Tutorme Women's Training Centre

This is a non-profit centre that trains local women in sewing and business skills. Since the centre started in 2000 over 200 women have been trained in garment manufacture on domestic and industrial sewing and embroidery machines. Centre graduates go onto sewing activities for LMC, contractors, schools and local communities. For example, Tutorne graduates sewed 10,000 geological sample bags for the LGL Geology Department in just six weeks. LMC have supplied the Centre a large renovated warehouse, US\$50,000 worth of equipment, utility costs and salaries of 4 staff members.

Provincial Department of Commerce

The Province has two officers based in a small, under resourced office in the Government building at Londolovit. the officers service small-scale businessmen engaged in LMC vehicle and maintenance contracts. At present, the office apparently has 20-30 small client businessmen that they assist in general management and accounts.

Lakaka Limited

This is by far the largest Lihirian landowner company in terms of shareholding, turnover and employment. Lakaka Earthmoving was established in 1989 to take advantage of business activities resulting from exploration and road building activities on the Island. the company activities expanded enormously in value and scope during the construction of the mine, which ended in mid 1997.

Lakaka received managerial assistance, initially from Kennecott Mining and subsequently from LMC, until 1996 when they appointed their own full time manager and financial management staff. At this stage the only LMC input was the provision of the company secretary, a business development officer. the company has a subscribed share capital of K2,676,807 held by 2,752 individuals, clan companies & local government shareholders, all Lihirian, as follows:

Table 7: Lakaka Holdings Limited Shareholders

Type/clan ownership	Number of Shares	% of total
Individuals	1,620,557	60.5
Lamatik Investments	218,750	8.2
Nikama Investments	93,750	3.5
Nissal Investments	175,000	6.5
Tengawom Investments	75,000	2.8
Tinetalgo Investments	75,000	2.8
Unawos Investments	218,750	8.2
Nimamar Development Authority[11]	200,000	8.2
TOTAL	2,676,807	100.0

The company has a board of directors of 8, representing the six clan groups, the Nimamar LLG plus the chairman of LMALA. Distribution of share ownership between the main island clan groups is as follows:

Table 8: Lakaka Holdings Limited Clan Shareholding Distribution

Clan Group	No. of Shares	% of total
Lamatlik	423,544	15.8
Nayal	462,774	17.3
Nissal	244,938	9.2
Tengawom	217,952	8.1
Tinetalgo	353,650	13.2
Unawos	756,055	28.2
General	217,894	8.1
TOTAL	2,676,807	100.0

Using high income levels and profits generated from lucrative mine construction related contracts, Lakaka rapidly expanded from its original core activity (heavy plant hire) to stevedoring, balsa plantation, Ela Motors agency, hardware retail, building development, camp catering and a supermarket.

Unfortunately, apparently due to a combination of stock theft, bad debts, increasing interest rates and a drop in the value of the Kina, Lakaka Limited made a net loss of K2.7 million in 1998 (1997 profit K93,890), and for the Lakaka Group a net loss of K3.25 million. This resulted in the Company being put into receivership at the end of 1999.

In early 2001 a K5 million loan from Mineral Resources Lihir (MRL), backed in turn by a loan from LMC, was extended to the Company to take it out of receivership, and reduce its bank debt. the loan was tied to a rescheduling of creditors over 4 years and an undertaking not to significantly expand until debts were repaid. As part of this arrangement LMC undertook to provide a certain volume of contract work to Lakaka.

Current activities of the current main operating arms of the various subsidiaries and divisions of Lakaka are as follows:

a) *Lakaka Civil & Construction*: wet hire of plant and equipment to LGL, at present 18 items of plant used in mine operation and road maintenance. Currently negotiating the acquisition of another 11 items of plant from LMC. Has a large workshop, administration office, training facilities and light vehicles. Has 140 employees, of whom 48% are Lihirian.

b) *Lakaka Hardware*: operation of retail hardware outlet.

c) *Ataniom Best Buy Limited*: retail supermarket, 50:50 joint venture with Steamships.

- d) *Aniokaka Limited*: stevedoring, 50:50 joint venture with Pagini Strang.
- e) *Lihir Auto Services Limited*: Ela Motors 50:50 joint venture.
- f) *Lihir Properties Limited*: management of commercial properties
- g) *Niolam Security Limited*: provision of security services/personnel (all LGL security is managed through Loss Control section). Previously 50:50 joint venture with Securimax Islands.
- h) *Niolam Catering Services Limited*: camp catering services, 50:50 joint venture with two clan landowner companies.
- i) *Zenex Limited* : contract drilling, 50:50 joint venture with Radial Drilling of Australia.

The last available Lakaka annual report is for the 1998 financial year and no dividends have been paid since the mid-1990s. With current scheduled creditor repayments it is unlikely that Lakaka will be in a position to pay dividends until 2005.

Discussions with one of the principal Lakaka directors revealed that, despite past difficulties, there was confidence that the company would survive financially and directors were happy with current arrangements. It is apparently the intention that after debts have been repaid and a dividend paid to shareholders, long-term investment opportunities probably elsewhere in PNG would be pursued by the company.

Contract Values: Major Landowner Company Contracts

In 2001 the value of all LMC contracts awarded to Lihirian companies and joint ventures totaled approximately K55 million. Some of these are outlined in Table 9.

- 1) *Kuridala Limited*: This company represents the six main Lihirian clans and owns 6 large 785 dump trucks. These were purchased in 1997 for US\$1.6 (K2.3) million each with 8.775% lease finance over 6 years from the National Banque de Paris. Deposit funds were provided by landowners and a grant from LMC. the trucks are dry hired by LMC for transport of mine and waste material, at US\$130,000 per month, most of which is used in monthly lease repayments. Outstanding lease balance in March 2002 was approximately US\$4 million. the company is currently investigating options for refinancing the residual that will be owed on the plant at the end of the lease period. Annual LMC contract value of approximately K6.2 million.
- 2) *Niolam Catering Services Limited*: This company provides camp catering services to the LMC staff. NCS also manages two camp canteens for another landowner company. Annual LMC contract value approximately K12 million.

Table 9: Principal Lihir Island Business Enterprises – Business Development Data Summary

Landowner Company	Ownership	Activity Area	Approx. 2001 Turnover	% of business from LMC	Main assets	Comment
Lihir Electrical Limited	Luise Electrical (2 clans) 50/50 with Huon Electrical	Electrical installation & maintenance	K1 million	90%	Light vehicles, workshop, handtools	
Nayal Investments Limited	One Lihirian clan	Office & w'shop, hospital janitorial	K650,000	95%	Vehicles & tools	
Islands Sportz Limited	3 Lihirian families	Sports clothing & other goods retail, sewing & stationery supply	K836,000	N/A – retail store	Stock & display cabinets, vehicle	
Lihir Civil & Construction Ltd	Unawos clan representatives	Civil construction & maintenance	K100-150,000	90%	Heavy plant, dump trucks	Currently has work contracts in Simberi & New Hanover
Lihir Maintenance Services Limited	Lihirian family company	Rubbish collection grass cutting etc.	K600,000	100%	2xMazda 3500, light vehicles, hand tools	
Lakemalam Limited	Lihirian family company	Building construction & maintenance	K500,000	80%	2xCanter, 3 Toyota utes, back hoe, temp office	
Morro Limited	Lihirian family company	Minor civil works contracts	K100,000	99%	2 back hoes, 2 d/trucks, 3 utes, hand tools, temp office	
Rapasep Enterprises Ltd	2 Lihirian families	Industrial safety gear & clothing, labour hire	K250,000 ++	90%	Vehicles, stock	Was Niolam Transport before
Lihir Papindo	Papindo Trading	Retail supermarket	K7.2 million	N/A	Shop, vehicles, stock	Previously jv's with

Lihir Hotel	Papindo Trading	Hotel operation	K1.8 million	N/A	Hotel & fittings, bus	now defunct Lihir Holdings
Apu- Donte Quarry Limited	100% four Londolovit landowner clans	Quarry operation-charge packing road base ag' gate	K500,000 – K1 million	unknown	Loaders, bobcat, crusher, batch plant,excavator	Have in the past sold aggregate to mainland New Ireland
Kuridala Limited	6 main Lihirian clans	Lease of 6 large 785 dump trucks	K6.2 million	100%	6 dump trucks	Financed from Nat Banque de Paris in US\$
Rainbird Limited	??	Sawmilling, bldg pre-fabrication	?	?	?	
Nica Limited	?	Building & maintenance	?	?	?	
Niolam Catering Services Limited	50% Lakaka, 50% 2 Lihirian clans	Mine camp catering	K12 million	100%	Vehicles, handtools	Also manage 2 canteens for another group
Zenex Limited	50% Lakaka, 50% Radial Drilling (Aust)	Minesite drilling	K7 million	100%	5 drilling rigs, light vehicles, workshop eqmt	LMC contract is for 2 operational rigs at any time
Lihir Auto Services Ltd	50% Lakaka, 50% Ela Motors	Toyota agency, parts & service	K7 million	N/A	Building, stock, workshop & tools	
Lakaka Hardware	100% Lakaka	Retail hardware	K1.2 million	80%	Building, stock & vehicle	Only operational since October 2001, previously Lihir Hardware
Lakaka Civil & Construction	100% Lakaka	Heavy plant hire, civil construction	Not available	97%	29 pieces of heavy equipment	All hired to LMC for mining &

		& maintenance				road maintenance
Ataniom Best Buy	50% Lakaka, 50% Steamships	Retail supermarket	K6 million	N/A	Building, stock & vehicles	
Aniokaka Limited	50% Lakaka, 50% Pagini Strang	Stevedoring & fleet maintenance	K4.2 million	100%	Forklifts, cranes, trucks & w'shop equipment	

3) Lihir Electrical Limited: electrical maintenance work for LMC, a 50:50 joint venture with Huon Electrical. Annual LMC contract value K640,000.

4) Lihir Maintenance Company Limited: company owned by Kapit area landowners. Carries out garbage collection (K250,000 pa) and other general camp maintenance work including grass cutting. Annual LMC contract value K500,000.

5) Nayal Investments Limited: carries out office janitorial work. Annual LMC contract value K500,000.

6) Town/Residential area maintenance – this includes carpentry, plumbing, painting maintenance required for residential and office areas and the hospital. Carried by a number of smaller local landowner companies. Annual LMC contract value K900,000.

7) Vehicle hire – there are a number contracts awarded for the supply of vehicles wet hired by LMC, mostly from local individuals or smaller family/clan landowner companies, as follows:

- 25 seater buses: 10 K660,000 per annum
- 3.5 tonne trucks: 8 K530,000 per annum
- Banana Boats: 12 K576,000 per annum

Other Landowner Company Enterprises

a) Rainbird Sawmill – production of sawn timber and pre-fabricated building components (eg for Community Affairs Social Development projects)

b) Apu-Dontex Quarries Limited – owned by 4 Llundolovit clans, producing road base, cement aggregates and blast charging packing material. Own some heavy plant, crusher and batch plant. Turnover K500,000- 1 million per year. In the past Apu-Dontex have 'exported' road base aggregate to mainland New Ireland.

c) Tor-Rau Workshop – light vehicle workshop

d) Camp canteens (2) – owned by a local landowner company but operated by Niolam Catering Services. Have paid annual dividends of approximately K62,000.

e) Lihir Tyre Centre – 50:50 joint venture with Bridgestone

There are also a number of smaller village scale trade stores, PMV trucks and small poultry projects (see agriculture section) in the various villages around the Island. At Lakakot a small guest house is operated on a defunct plantation.

In many of the villages individuals and small landowner companies have been involved in the construction of pre-fabricated houses and other buildings from the LMC funded and organised Village Development Scheme. This construction has been carried out on a labour only lump sum basis but still has resulted in the acquisition of some skills by local builders.

Agriculture

Prior to the mine exploration and development Lihirians exported both copra and cocoa. There were a number of cocoa fermentaries around the Island, particularly in the PutPut area.

In 1984 there were 142 registered smallholder copra growers who sold 230 tonnes of copra (value approximately K75,000). In the same year just over 21 tonnes of cocoa dry beans were sold (K37,500). However, in the ensuing years this cash cropping almost died out completely with people's interest being directed towards mining related activities. At one stage, there was also some production of birds eye chillies, which appears to have ceased altogether.

Only in the last couple of years has there been a resurgence of interest in certain agriculture projects. LMC and DPI extension staff are still wary of the depth of certain landowner interest since in their opinion some percentage of people are motivated more by the need to 'keep up with the neighbours'.

LMC Extension: As part of the Business Development section there are 4 agricultural extension staff, who are involved primarily with poultry and vanilla projects. The staff also assist in stock feed and day old chicken purchases, particularly for those farmers in receipt of Business Development interest free loan assistance.

DPI Extension: This division of the New Ireland Provincial Government also has 4 staff based on Lihir who work with farmers with an interest in poultry, piggeries (3 or 4) and vanilla. They also assist farmers with stock feed and day old chicken purchases. In 2001 DPI distributed more than 5,000 hybrid coconuts to villagers around the Island. Only one cocoa fermentary is operating at present.

Most current villager interest appears to be in poultry and vanilla projects, the latter in the early stages of planting suitable shade trees (10 projects). There are at least 12 poultry projects around the Island, and more than 3,200 meat birds were sold in 2001 at K15-20 per bird.

There is very little growing of vegetables except for domestic consumption. In the past one commercial grower (Hundal Farm) used to supply NCS but no longer operates, apparently due to management problems. There is no harvesting of commercial shell or beche-de-mer and very limited local fishing – in fact almost all fish at the main island market comes from villagers from Tabar Island.

Lihir Growers Association: the most positive agricultural initiative is the recent formation of the Lihir Growers Association, with a Constitution based on that of the PNG Growers Association. the aim of the association is to involve Lihirians in the promotion of sustainable agriculture, livestock and fisheries, now and in the future after the mine closure. Association committee members and executives have been elected.

The intention is for the Association, which has received an establishment grant from Nimamar LLG (K100,000), is that farmers become paid up members and in return receive marketing and other assistance from the Association, LMC and DPI. It is projected that the Association will provide a marketing service to growers (e.g. for vanilla), extension assistance, a source of materials/tools/seed/fertilizer/feed as appropriate, as well as possible establishment and operation of an abattoir on Lihir.

The Association represents an excellent vehicle through which to initiate any future awareness and promotion of agricultural activities on Lihir.

3.1.3 Future Situation

As expected, almost all present local enterprise relates in some way to the operations of the mine, since prior to exploration and mining, per capita incomes (based principally on small-scale copra production) were extremely low (K100 per annum). There will have to be a change of emphasis for local enterprises in the future, for which preparations have to start now.

Future sustainability in terms of local business will have to rely upon:

- Income from non-Lihir based investments (elsewhere in PNG or overseas).
- Income from business activities elsewhere in PNG.
- Technical/management skills and assets (debt free) acquired during the mining period.
- Maintenance of existing infrastructure – service and trade industries, including, for example, maintenance of thermal power generation facilities.
- Agriculture or secondary processing/value adding of agricultural products.
- Marine industries (fishing, commercial shells), the servicing of these and possible secondary processing/value adding of marine produce.
- New medium-scale industrial enterprises if these can be identified.

Thus, efforts have to be made now to develop and provide training appropriate to new agriculture/marine industry initiatives, as well as to instill a culture of saving and investment in existing business operations so that reserves and income earning investments can be built up.

LMC/LGL

LGL has a business development section staffed with experienced personnel who are familiar with local business operations on Lihir, who have the trust of, and good working relationships with, existing entrepreneurs and business managers. This is an asset that should be utilised to steer the emphasis of management training and support towards sustainable business and agricultural development activities.

Whilst in the medium term Tutorme can expand its activities to manufacture all LMC industrial and safety clothing, and will doubtless raise skill levels, its viability as an independent enterprise after mine closure is questionable. All materials have to be imported, the local market will be limited, and the cost of transporting end products may be prohibitive unless, for example, sufficient clothing and /or uniform contracts can be located close by within New Ireland Province.

Lakaka

In the short to medium term, Lakaka aim to take over the operation of all the equipment involved in the open pit mining, and to manage the mining operations (similar to Thiess-Roche contract mining activities for LMC in the early years of mine operation).

With proper and prudent management after outstanding creditors are paid off, any short/medium term increase in Lakaka activity and turnover should result in increased profit that could assist in building up income earning assets elsewhere in PNG. With a fleet of heavy equipment Lakaka should be in a good position to tender for major civil construction work throughout the New Guinea Islands region.

3.1.4 Recommendations

If it is accepted that future business development sustainability will arise out of the above dot-pointed activities, then the various stakeholders (LGL, LMALA, Nimamar LLG, NIPG and National Government) should where necessary and/or appropriate, work on the following initiatives:

- An awareness/education program – counselling, *tok save* booklets, radio programs – on the advantages of small businesses saving, building up assets and thinking about investments.
- LGL local contracts to include clauses stating that a certain amount/percentage of gross income that arises from the particular contract activity be set aside in a separate bank account for asset replacement/reserves or investment.
- Increased effort in promoting the planting of woodlots, spices or tree crops that will, after maturity, offer income-earning opportunities for community members.
- Increased effort into identifying appropriate and sustainable marine based activities and possible associated value added processing – e.g. fishing, commercial shell, clams, beche-de-mer etc. Where viable, encourage village clan companies to invest in assets for application in these marine harvesting and processing activities.

- Where individuals or groups are entitled to large regular payments (e.g. compensation), institute procedures so that an option is for this payment to be made as a real estate investment (outright purchase or geared with an appropriate loan).
- Re-institute a counseling/support role for business development staff with the Lakaka group of companies to ensure that, as one of the larger local landowner companies with a large asset base, it manages its business in a manner that promotes diversification rather than just on the payment of dividends. (e.g. make this a condition of increasing its role in ‘contract mining’).
- If LMC is intending to establish a geothermal power plant, ensure local involvement in its operation and maintenance, investigate possibilities for secondary industries based on relatively cheap power (even if other raw materials are not locally available).
- Prepare a long-term business plan for Lakaka that will maximize use of assets on Lihir and elsewhere in PNG, in other business activities and investments.
- All stakeholders to support the initiatives of the Lihir Growers Association in involving Lihirian villagers in long term sustainable agricultural activities.

3.2 Lihir: Training

3.2.1 Background/Obligations

LGL training policy, in line with IBP commitments and the Training & Localisation Program noted in the Mining Development Contract (MDC), is that suitably qualified Lihirians are given first preference, followed by people from New Ireland Province followed by other Papua New Guineans and non-nationals, respectively.

Chapter 3 of the IBP stated an LMC commitment to..’work with the Training, Employment and Localisation Committee established by LMALA,’ and....’making quarterly reports available to the national government, provincial government and LMALA.’

3.2.2 Current Situation

Within LMC, overall training is managed by the HR department whilst the Technical Training Section supervises apprenticeship and traineeship schemes. In July 2001, LMC carried out a job evaluation exercise on all company positions to assess the specific skills required to carry out each particular job. Then a performance appraisal was carried out of all position occupants to assess the training needs of each individual employee.

This exercise was carried out in conjunction with a salary review since training and skill capability is a determinant of LMC employee salary levels. the first salary review will take place in July 2002. Also in line with the company Training & Localisation Plan, all non-national positions in LMC have the training of national employees as one of the defined objectives of the position.

Training needs identified under the above job evaluation are being addressed by the company principally through in-house and on-the-job training modules. Some of these

are formal modules, such as those under apprenticeship programs, whilst others are competency based modules such as metal fabrication, diesel fitter, auto-electrical, mechanical fitter and instrument maintenance.

Certain operational areas within LMC have organised specific job-related training such as Environment Section – diver training, fish autopsy, laboratory management, hydrography and fishery resource investigations. Community Affairs staff received training in social research techniques, database management and sports administration.

Apprenticeships

Vacant apprenticeship positions are first offered to Lihirians, then other Papua New Guineans. These have a condition that there is no guarantee of employment at the end of the apprenticeship period, although during 2001, 6 of 10 graduating trades apprentices were employed by LMC. In 2001, LGL employed 36 apprentices (12 in their 1st year, 4 in their 2nd year, 10 in their 3rd year and 10 in their 4th year).

Scholarships

Once again, in line with agreements, preference for these is Lihirian, New Ireland then other national candidates. LMC also prefers to provide scholarships to those students in mining related disciplines at technical colleges and tertiary institutions. In 2001, 47 students benefited from this program. Additionally 4 LGL employee dependents were selected for sponsored tertiary studies under the Employee Dependent Scholarship Program.

Employee Development Program

LGL sponsors eligible Lihirian and other eligible employees (at least two years employment) to attend various studies in-house, by correspondence or at training institutions within PNG and overseas. During 2001, 8 national LGL employees attended sponsored overseas courses.

Graduate Development Program

Graduates are employed every year from the various university campuses to join this program. During 2001, LGL also hosted 27 students from tertiary institutions who worked in various operational sections during their holiday as part of their work experience training.

Secretarial Training Scheme

This is provided for Lihirian women with Grade 10 or above, to provide them with the skills necessary for employment with LMC or its contractors. In 2002, 28 out of 34 of the intake for secretarial training were Lihirian.

Tutorme Women's Training Centre

Started in 2000, this centre is administered by the LGL business development department. It has provided extensive training to Lihirian women in sewing and business skills. Since its inception, Tutorme has trained over 200 women in garment manufacture.

After providing various levels of basic training, most training is provided on-the-job through the completion of contract work obtained by the Centre, for example, geological sample bags and camp curtains for LMC, uniforms for NCS, and embroidery for LMC uniforms. At present, contract income covers the cost of materials and wages for the women workers.

Incorporated as a not for profit association, Tutorme plans to take on an increasing amount of contract work as women's skills improve, so that eventually they will manufacture all industrial clothing for LMC and its contractors at a price that will cover all normal commercial overhead costs.

Professional Development Centre

This provides a wide range of specialist business and general skills, including competency based training in secretarial, computing, management, leadership and business disciplines. The Centre is accredited by the PNG National Training Council as a training provider (first PNG mining institution to be so accredited) in human development and training courses. Accreditation given to certain courses (15) and training officers. Although the Centre has this accreditation, to date it has concentrated on training of company personnel with only limited training for any non-LMC or contractor personnel.

LMC expect all staff to undertake 6-10 days of professional development training every year, and clearly, certain positions such as trainees, spend much more time undergoing training.

Business Development/Agriculture

There is a limited amount of training provided by LMC staff working in these two areas.

Education Support

In addition to direct training, LGL provides assistance under the Lihir Education Assistance Program through grants to elementary/community schools, payment of school fees, and provision of subsidies to primary and high schools. A breakdown of expenditure for 2001 is presented in Table 10.

Table 10: LMC Education Support

Beneficiaries (Detail)	Amount (K)
Pre/Elementary schools (25)	12,500
Primary schools (7)	3,500

Primary Top-Up (3)	11,000
Secondary schools (10)	34,000
Tertiary institutions (43 students)	189,000
Technical schools (10 students)	66,000
TOTAL	316,000

This lower level education support is provided with the intention that the overall education qualifications of Lihirians will be raised to a level at which they are able to take advantage of LMC apprenticeship schemes and other positions within the company.

Local Companies

Table 11 outlines the results of a brief survey of the main local landowner and other companies operating on Lihir Island. It can be seen that although some companies have apprentices, most rely on on-the-job training to upgrade the skills of their employees. As expected, many smaller companies cannot afford the cost of training for employees or do not in fact require much training for their employees, given the nature of their activities.

Lakaka Civil & Construction Limited

This landowner company has its own small training unit that looks after the training for its apprentices and other staff.

At the beginning of 2002 the company had 4 apprentices undergoing training, 5 staff undergoing vocational/competency training, 2 staff being trained to carry out trade competency assessment and 4 in CODE training. A large proportion of staff undergoing training are heavy equipment fitters (in line with the main activity of the company). However, due to intended future diversification, consideration is also being given to further training of staff in years to come in carpentry, plumbing and electrical trades disciplines.

Table 11: Principal Lihir Island Business Enterprises – Training Data Summary

Landowner Company	Ownership	Activity Area	Training Details & Comment
Lihir Electrical Limited	Luise Electrical (2 clans) 50/50 with Huon Electrical	Electrical installation & maintenance	2 Lihirian apprentices (1x refrig mech, 1x electrician). On the job training to raise Lihirians from labour to TA positions
Nayal Investments Limited	One Lihirian clan	Office & workshop janitorial	Have a combined safety/training officer, all on the job training
Islands Sportz	3 Lihirian families	Sports clothing &	No training, although

Limited		other goods retail, sewing & stationery supply	village women used to sew garments (1 ex Tutorme)
Lihir Civil & Construction Ltd	Unawos clan representatives	Civil construction & maintenance	Have 2 trainee operators, have approached LMC for training
Lihir Maintenance Services Limited	Lihirian family company	Rubbish collection grass cutting etc.	No training carried out except basic on the job safety procedures
Lakemalam Limited	Lihirian family company	Building construction & maintenance	Staff TA's get on the job training, water treatment operatives have attended WaterBoard training & LMC safety courses
Morro Limited	Lihirian family company	Minor civil works contracts	No training carried out
Rapasep Enterprises Ltd	2 Lihirian families	Industrial safety gear & clothing, labour hire	No training carried out
Lihir Papindo	Papindo Trading	Retail supermarket	No training carried out
Lihir Hotel	Papindo Trading	Hotel operation	No training carried out
Niolam Catering Services Limited	50% Lakaka, 50% 2 Lihirian clans	Mine camp catering	Spend K260,000 pa on training. Have a fly in expat trainer, carry out competency based training with an Australian college. Have 4 Lihirian apprentice chefs, supervisory staff trained as assessors.
Zenex Limited	50% Lakaka, 50% Radial Drilling (Aust)	Minesite drilling	Have a safety/training officer. On the job training. Recently 3 drillers attended Brisbane TAFE
Lihir Auto Services Ltd	50% Lakaka, 50% Ela Motors	Toyota agency, parts & service	3 Lihirian apprentices sent for training & work attachment to Ela Motors training section in Pom & other branches.
Lakaka Civil & Construction	100% Lakaka	Heavy plant hire, civil construction & maintenance	Have 4 apprentices, 4 CODE students & 5 vocational training, 2 staff trained in trade testing (almost all HEF). Plus on

			the job training
Lakaka Hardware	100% Lakaka	Retail hardware	No training carried out
Ataniom Best Buy	50% Lakaka, 50% Steamships	Retail supermarket	On the job training. Office staff trained at STC training at Lae/Kokopo.
Aniokaka Limited	50% Lakaka, 50% Pagini Strang	Stevedoring & fleet maintenance	2 apprentices, lot of on the job training to raise Lihirians from general labour to TA's

Niolam Catering Services Limited

NCS has been extremely active in the area of training. In past years up to K400,000 has been spent annually. In 2001 this dropped to K260,000. NCS has a large number of Lihirian staff; most of whom had little previous education and all have been trained in some way. the company currently has 4 apprentice chefs and has one fully qualified Lihirian chef who qualified from an apprenticeship.

In order to ensure that their training was in line with international best practice, and because of alleged poor performance/standards of training institutions in PNG, NCS now use a competency based modular training system. This is based on Australian standards since the NATTB has not endorsed competency based standards for the catering industry in PNG. In conjunction with an Australian TAFE college and a fly-in trainer, NCS staff have received direct training in various catering modules (e.g. knife sharpening, sauce making, food preparation, hygiene, etc.) as well as supervisory staff being trained to assess their fellow NCS employees in the necessary competencies.

Palie Vocational Centre

Operated by the Catholic Church, the centre has at various times received assistance from LMC, NDA and the New Ireland Provincial Government.

3.2.3 Future Situation

The future appears bright for young Lihirians, who demonstrate a desire to attend school. Those that complete high school would be qualified to attend some further training under the auspices of LMC.

An increased availability of practical competency based training to contractor employees and others, even at relatively low skill levels, will provide the community with a skilled workforce, able to maintain infrastructure or contribute to small-scale agriculture, marine or other activities.

3.2.4 Recommendations

- That the LGL Professional Development Centre gradually expand its curriculum to

include subjects that are appropriate to assist the sustainability of Lihirian enterprises – such as small business management planning, investment planning.

- That Palie Vocational Centre be supported by LMC, Nimamar LLG and New Ireland Provincial Government to continue to provide basic trade skills and agricultural related training for Lihirians of all educational levels.
- That LMC consider expanding the use and application of competency based training in all its operational areas, and if possible, offer this training and associated assessment procedures to their contractors' technical staff.
- That LMC support any initiatives taken by the Lihir Growers Association, possibly in association with DPI, to provide practical training related to sustainable agricultural cash cropping activities.
- That LMC continue and possibly expand its support for agricultural and small business training, as part of any awareness exercises addressing the need to establish long-term sustainable business and agriculture enterprises on Lihir.

3.2 Lihir: Employment

3.2.1 Background/Obligations

The 1980 census revealed that less than 10% of the island village population (122 persons) was engaged in any form of money earning activity. Half of those were wage earners and the other half farmers, fishermen and 'businessmen'. In terms of full-time employment, the 50 or so wage earners were public servants (administration, teachers and health workers) whilst the remainder were employees of Londolovit Plantation and the Palie Catholic Mission. Most of these employees were Lihirian.

The advent of exploration, mine construction and subsequent mine operation, has provided a large increase in employment opportunities for Lihirians (and other New Irelanders with links to the Lihirian community). In 1996 the total number of direct LMC employees and contractors was 222, which has since tripled to the present number.

LGL hiring policy, in line with IBP commitments and the Training & Localisation Program noted in the 1985 Mining Development Contract (MDC), is that for employment and training suitably qualified Lihirians are given first preference, followed by people from New Ireland Province, followed by other Papua New Guineans, then non-nationals, respectively. This commitment is also in line with the LMC Community & Environment Policy that states that there will be an overall net benefit to the community in the long term as a result of company operations in the area.

3.2.2 Current Situation

The mining operation is the largest employer on Lihir Island, both in terms of direct employees and employees of contractors associated with mine operations. At the end of financial year 2001, employment associated with the Lihir mining operations was as follows:

Lihirians 371

Other PNG 514

Expatriate 96

Total LMC Employees 981

Contractor Employees 1,013

Total mine related direct employment 1,994

Most company senior and middle management (64 employees) are residential on Lihir whilst the majority of the national workforce have a fly in-fly out roster (546 employees), whilst Lihirian employees live in their home villages and work a five or six day week. LMC maintains a web site on which details of any job vacancies are posted. the break-up of the direct LMC employees between operational areas is as follows:

Management	4	Commercial	78
Human Resources	25	Corporate and Towns	41
Community & Environment	39	Business Dev. & Moresby Office	22
Mine Operations	228	Mine Maintenance	141
Mine Technical	37	Plant Operations	165
Plant Maintenance	201		

According to the LMC manpower report for the month of December 2001, total hours worked was as follows:

Contractors 250,863 hours

LMC 337,740 hours

TOTAL 588,603 hours

Table 12: Principal Lihir Island Business Enterprises – Employment Data Summary

Landowner Company	Ownership	Activity Area	No. of employees	No. of Lihirian employees	Comment
Lihir Electrical Limited	Luise Electrical (2 clans) 50/50 with Huon Electrical	Electrical installation & maintenance	29	8	Stated shortage of suitably skilled Lihirians
Nayal Investments	One Lihirian clan	Office & workshop	54	24	

Limited		janitorial			
Islands Sportz Limited	3 Lihirian families	Sports clothing & other goods retail, sewing & stationery supply	13	6	
Lihir Civil & Construction Ltd	Unawos clan representatives	Civil construction & maintenance	60	15	
Lihir Maintenance Services Limited	Lihirian family company	Rubbish collection grass cutting etc.	44	5	Most employees resident on Lihir but from all over PNG
Lakemalam Limited	Lihirian family company	Building construction & maintenance	41	14	Most non-Lihirians from N. Ireland or outer islands
Morro Limited	Lihirian family company	Minor civil works contracts	20	9	When work is available take on larger no. of Lihirian casuals. 3 tyre fitters hired to LMC
Rapasep Enterprises Ltd	2 Lihirian families	Industrial safety gear & clothing, labour hire	3 21-27	2 21-27	In the store Hired to Century Drilling/LMC
Lihir Papindo	Papindo Trading	Retail supermarket	33	2	All staff residential on Lihir
Lihir Hotel	Papindo Trading	Hotel operation	16	2	
Niolam Catering Services Limited	50% Lakaka, 50% 2 Lihirian clans	Mine camp catering	238	167	1 qualified Lihirian chef
Zenex Limited	50% Lakaka, 50% Radial Drilling (Aust)	Minesite drilling	53	34	
Lihir Auto Services Ltd	50% Lakaka, 50% Ela Motors	Toyota agency, parts & service	28	5	
Lakaka Civil & Construction	100% Lakaka	Heavy plant hire, civil construction & maintenance	140	67	70: Ops, 60:w'shop, 10 : admin. Includes 9 women.
Lakaka	100% Lakaka	Retail	5	4	

Hardware		hardware			
Ataniom Best Buy	50% Lakaka, 50% Steamships	Retail supermarket	45	23	All staff residential on Lihir
Aniokaka Limited	50% Lakaka, 50% Pagini Strang	Stevedoring & fleet maintenance	57	16	1 Lihirian stevedore foreman

LGL Contractors

Table 12 details the break-up of employee numbers of LGL contractors as at December 2001, totaling 1,175.

Other non-LGL Contractor Employment

As can be seen in Table 12, there are varying numbers of Lihirians employed in local businesses, totaling 424 in the main landowner and other businesses surveyed. Since most enterprises rely on LMC for most of their work, this number is included in the above-noted 1,175 mine contractor employees.

In interviews with the principals of most of these enterprises, almost all of whom were Lihirian, the often low number of Lihirians was explained almost identically. The businesses had all experienced that Lihirian employees were less reliable, had erratic attendance due to customary obligations and thus, in order to maintain contract deadlines, a certain level of non-Lihirians had to be employed, despite the universally expressed desire to employ Lihirians wherever possible.

Lakaka Civil & Construction follow a practice whereby they advise all vacancies to LMALA to ascertain if there are any local Lihirian candidates, and if not, will then advertise and recruit from outside the Island.

3.2.3 Future Situation

Employment levels of LMC and associated mine contractors can be expected to remain about the same in the near future whilst mining operations continue (which is expected for at least another 10 years, after which lower grade stockpiles will be processed). There is no reason for employment numbers to rise significantly.

As with other mines, once mining declines and low grade stockpiles are worked direct, LMC employee and contractor employee numbers will drop significantly and would plateau at a lower level until mining and processing of any sort ceases. Apart from jobs associated with the maintenance of infrastructure on the Island, there at present seems to be few local opportunities that could absorb the trained personnel who would be available once mine activities decline and cease.

In the longer term the only area that could provide sustainable employment on the Island is associated with infrastructure maintenance, small-scale agriculture and possibly marine harvesting and processing.