

Lesotho Highlands Development Authority
Annual Report 1993/4

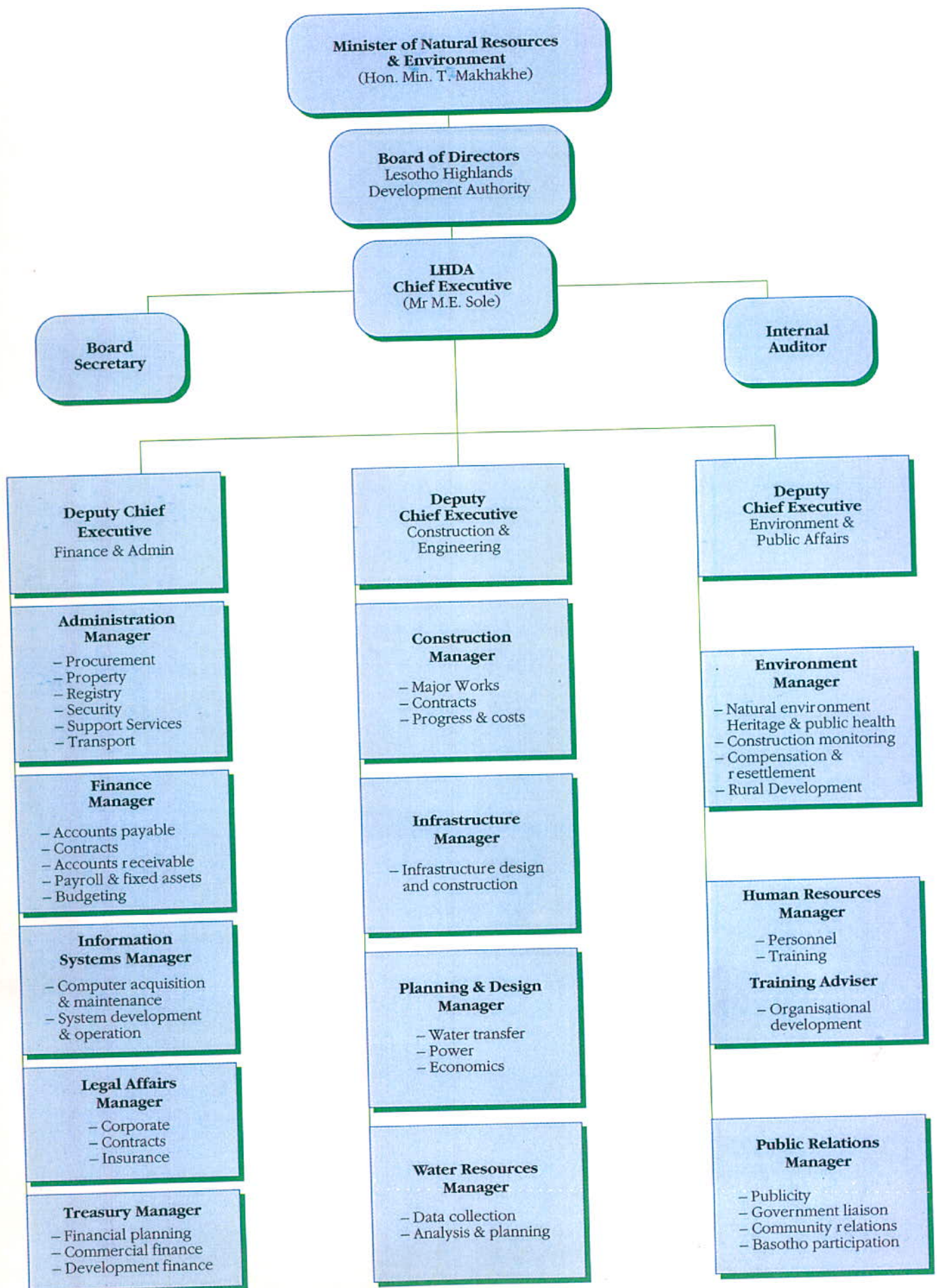
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LHDA Organisation Structure



CHAIRMAN'S STATEMENT



Z. Tsotsi, Chairman

It is a significant honour for me to be appointed to the Chairmanship of the Lesotho Highlands Development Authority, and a great pleasure to make this Statement for the Annual Report for the year 1993/1994.

The Lesotho Highlands Water Project is the most dramatic economic, commercial, technological and social development in the history of Lesotho.

The sheer magnitude of the Project is impressive even by international standards. It has presented – and continues to present – formidable challenges in the fields of planning, engineering design, construction and financing. Its implications to the environment and to the social fabric of Lesotho have had to be minutely studied and a major information dissemination and public awareness campaign has had to be mounted. I am happy to report that these challenges have continued to be met in the year under review.

In a project of this scope it will always prove necessary to modify plans, objectives and schedules on the basis of actual progress. An organisation such as the Lesotho Highlands Development Authority, embarked on a project of this massive scale, must have sufficient built-in flexibility to recognise the development of unforeseen circumstances and

be able to react to them with the necessary speed and decisiveness. During the year, there were at least two occasions when urgent re-planning was required, and options evaluated and decided upon to ensure adherence to the overall project schedule. It is extremely gratifying to be able to report that the LHWP team did indeed demonstrate that it has the necessary flexibility to change plans when necessary, and the professionalism to do so with the minimum of dislocation.

We are most fortunate to have assembled a multinational team – comprising LHDA employees, international consultants, contractors and sub-contractors, and world-wide financial institutions – which exhibits the motivation and goodwill to keep the project on track and to maintain the essential project momentum.

I am most pleased to advise that progress on Phase 1A and on the planning for Phase 1B of the project is satisfactory, with completion of Phase 1A envisaged for 1997. Phase 1A comprises dams, transfer tunnels, hydropower station, considerable infrastructure developments, and environmental and rural development activities.

Successful development of the Lesotho Highlands Water Project will impact beneficially on the life-style and quality of life for all Lesotho's inhabitants, and the progress towards this aim is already having a cohesive effect on the population that transcends day-to-day political or parochial interests.

It is appropriate at this juncture to express sincere appreciation to all those individuals and groups who are turning this great project into a reality; the more than 300 LHDA staff, the consultants and contractors, the international governments and financing authorities – and the man/woman in the street.



CHIEF EXECUTIVE'S REPORT

The year under review, ending March 1994, was the twelfth year since planning was begun on the Lesotho Highlands Water Project, and the third full year since construction work started. On a project of such massive scale, each successive year sees the scope broadening, the momentum gathering and the complexities multiplying.

Each year also brings its breakthroughs and triumphs and, inevitably, its share of set-backs and disappointments. I am most pleased to once again find myself in a position where I can comment on a year in which the credit side has considerably outweighed the debit side.

Broadly speaking, the project may be viewed as three major separate but interdependent parts of a whole. The engineering and construction part is that area in which we may observe finite physical developments and measure progress on a day-to-day basis; the funding and financial part is what makes construction possible; and without due recognition of, and conscientious attention to, the environmental and social aspects, the entire project would be an exercise in futility.

The year saw the virtual completion of surface excavation for the Katse Dam, following on the diversion of the river through twin tunnels. Progress on concreting of the arch dam itself was satisfactorily steady, as was progress on the tailwater dam, the Mohale and Mashai outlets, and the Mohale Outlet access road.

Tunneling is by its very nature notoriously difficult to forecast in terms of metres per day or per week, because progress depends on variables such as the rock conditions which are only apparent when they are encountered. It is therefore not surprising that by the end of the review year we were behind schedule with some tunnels and ahead with others. The Tunnel Boring Machine (TBM) excavation at the Katse Intake had progressed some 7 000 metres out of a total requirement of 11 300, and was six months behind schedule. Construction of the associated Intake Tower was seven and one half months behind schedule, and tunnelling of the Pelaneng Adit, having bored 1 179 metres of a required 1 390 metres, was just over seven and one half months behind. None of those delays was likely to jeopardise the overall schedule, due to the fact that adequate contingency float time was built in.

These delays were more than compensated for by the unexpectedly rapid progress in the other tunnelling operations. The Hlotse to Pelaneng section broke through on 21st January 1994, having completed the 11 395 metres some fourteen months ahead of schedule. This early completion date enabled the TBM to continue

driving south, on the stretch originally assigned to the Katse Intake TBM driving north, and by the end of the period had completed one third of the remaining 4 455 metre drive to the Pelaneng Adit junction. Also ahead of schedule, by approximately three months, was three quarters of the 17 000 metre drive from 'Muela Adit to Hlotse.

At Delivery Tunnel South, a 14 000 metre stretch, excavation was completed 20 months ahead of schedule, on 23 August 1993. Encouraging progress was then made with the concrete lining of the Hololo-'Muela and Ngoajane-Hololo tunnels, with the steel lining of the Hololo and Ngoajane under-river crossings, and with the concrete works at 'Muela Intake.

In total, the consultancy contracts in respect of supervision of the main construction contracts were expected to finish at least seven months ahead of schedule, resulting in significant staff cost savings despite revisions to the construction contractors' work schedules and considerable additional work necessary for extensive further studies on the nature of the basalt through which the Transfer Tunnel was being driven.

The other major construction component of Phase I is the 'Muela Hydropower Project. A number of tender documents were prepared and tenders awarded for the 'Muela Dam, Infrastructure and Operations Building, and construction began at the end of the period being reported upon. Delays of a procedural nature hindered the award of tenders for the underground power facilities and the transmission line and substation bays, and these delays were sufficiently serious to consider options for the construction of a flow bypass so that the Treaty requirements for the delivery of water would be met.

The year 1993-1994 has also been a year of consolidation and cooperation in areas which, although not directly part of the LHWP construction phase, are nevertheless essential to its success. I refer here to two major ancillary functions – the provision of communications and electrical power. In the case of the former, certain teething problems with the repeater stations were cleared up, and consulting engineers British Teleconsult were able to sign off on their responsibilities. With regard to the electrical power, monitoring continued of the facilities for the Hololo and Katse system, along with Lesotho Electricity Corporations' maintenance activities.



M.E. Sole, Chief Executive

The LHDA/LEC Interface Study Report was completed and a Power Agreement signed in November 1993.

Turning to finance and funding, progress in this area is as essential, if less sensational, as in the construction area, and progress has been equally notable. One of the most gratifying aspects of the whole project has been the international cooperation between governments and funding institutions to enable the scheme to get off the planning board and to maintain its essential momentum. It is not just a matter of negotiated financial agreements and guarantees, there is a wealth of goodwill invested as well.

The only major funding setbacks have arisen out of certain procedural misunderstandings. In one instance this caused an awkward delay in the awarding of the tender for the provision of underground power facilities for the hydropower station, and in another case financial negotiations proved to be more protracted than had been anticipated, and caused delays to the awarding of the tender for the transmission line and substation bays.

In all other instances, the financial arrangements have been concluded as planned and with the minimum of delay. The magnitude of the project is reflected in the mixture of nationalities involved in funding – in addition to financial institutions in Lesotho and South Africa, and their respective Governments, funding arrangements have been concluded with UK, Sweden, France, Luxembourg, Italy, Germany, the EU and the World Bank. The total amount of M1 842 million, which represents outstanding capital expenditure at the end of March 1994, has all been secured from these sources.

The direct objective of the Project is the provision of necessary water to the industrial heartland of Southern Africa, and in so doing comparative wealth will accrue to Lesotho, and a betterment in the quality of life to all its inhabitants. This effect will accumulate over a period of many decades. The short and long-term impact on the social fabric and on the natural environment is one of LHDA's major on-going concerns, and a significant part of the Project's financial and human resources is dedicated to ensuring that any negative effects are minimised and are more than counter-balanced by the benefits.

The year under review saw this priority maintained and emphasised. Activities ranged from arrangements for replacement housing along the transmission line corridor to planning with the University of Natal and the National University of Lesotho for comprehensive studies on erosion and sedimentation; from development and initial implementation of the Rural Development Plan, with its infrastructural components of feeder-roads, construction communities and village water

and sanitation provisions to the signing of an agreement with the Ministry of Agriculture on land use planning with respect to people, livestock, forestry and horticulture; from an education programme embracing literacy, business and home skills training to compensation fodder, grain and beans disbursements to over 1 500 households; from archaeological and palaeontological considerations to a public awareness campaign on conservation, pollution, safety and health.

These efforts have begun to bear fruit in the year under review, and, as our Chairman comments in his Report, we are conscious of signs of the beginning of a public spirit of awareness and involvement throughout Lesotho.

Human resources quite naturally continue to form the most important of all the resources brought to bear on the project. At 31st March 1994 the total LHDA staff complement stood at 312, 90% of whom were Basotho. The impact of the project on the employment statistics is immensely greater than that when one takes into consideration the expansion of employment by contractors, sub-contractors and suppliers.

Upgrading of the human resource factor is achieved through experience and training. Experience goes hand in glove with on-the-job training, and more formal training has been addressed by an extensive programme of skills, management and specialised subject training.

As Phase 1A of the Project settles on its pre-planned course, with completion forecast for 1997, concurrent planning for Phase 1B is in hand. Aspects addressed this year have included design reviews by the LHDA Panel of Experts and substantial completion of a Phase 1B Main Works Planning Study.

Encouraging progress was made with plans for the site and type of dam on the Senquanyane River, for the necessary access roads, and for an advanced Mohale infrastructure.

The initial funding plan for Phase 1B has been prepared, and a decision made on the recruitment of a financial consultant to advise on foreign funding requirements.

All in all, the year 1993-94 has been a year of exciting development and progress, touched with only a very few disappointments. I should be failing grievously in my duty were I not to credit this achievement to the many human elements involved – my LHDA Board of Directors, the members of the Joint Permanent Technical Commissioning, our international colleagues who have made funding possible, and above all our work force and workers on our contractors' and subcontractors' teams who have laboured under arduous and often hazardous conditions to push one of the world's greatest engineering and construction projects forward. I thank you all for enabling me to present such a positive report.



1 CONSTRUCTION

MAJOR WATER TRANSFER CONTRACTS

CONTRACT LHDA 123

TECHNICAL CHARACTERISTICS

ESTIMATED FINAL COST

VALUE OF WORK COMPLETE

FINANCIAL PERCENT COMPLETE

CONTRACT COMPLETION DATE

CONTRACTOR

SIGNIFICANT ACHIEVEMENTS

– KATSE DAM AND APPURTENANT WORKS

- Concrete Arch Dam, 180 metres high, crest length 710 metres, concrete volume 2 300 000 cubic metres.

- M1 257 709 663

- M415 471 363

- 33.03%

- 31 January 1997

- Highlands Water Venture

- Since the Contractor mobilised in early 1991, the following has been achieved:

TEMPORARY WORKS

All temporary works have been completed.

PERMANENT WORKS

Since the Contractor mobilised in early 1991, the river has been diverted through twin tunnels, the arch dam excavation has been virtually completed and concreting of the arch dam has progressed to over 20% completion with concrete placement approaching 90 000m³ per month. The tailwater dam is almost complete, the Mohale Outlet access road is under construction and work is continuing on the Mohale and Mashai outlets.

- During the period 1 April 1993 to 31 March 1994 the following have been achieved:

Arch Dam

- Virtual completion of surface excavation and overcoming adverse rock conditions.
- Construction of preformed joint to upstream face.
- Construction and lining of galleries.
- Placing of 20% of concrete, representing some 40% of that needed for initial impounding.
- Commencement of reinforcement of the autobrecciated rock under the left and right abutments.



Tailwater Dam

- Continuation of construction to advanced stage as required by the programme.

Mobale and Mashai Outlets

- Excavation of shafts and tunnels (slipping and lining of shafts in progress).

Mobale Outlet Access Road

- Excavation, construction of culverts, sub-base placement (all in progress).

CONTRACT LHDA 124/5 – TRANSFER TUNNEL

TECHNICAL CHARACTERISTICS	– 45 km long, 4.95 metre diameter tunnel to be excavated by three tunnel boring machines (TBMs) through primarily basalt rock with a maximum rock cover of 1200 metres.
ESTIMATED FINAL COST	– M873 406 561
VALUE OF WORK COMPLETE	– M507 818 652
FINANCIAL PERCENT COMPLETE	– 58.14%
CONTRACT COMPLETION DATE	– 30 September 1996
CONTRACTOR	– Lesotho Highlands Project Contractors
SIGNIFICANT ACHIEVEMENTS	– Since the Contractor mobilised in early 1991, the following has been achieved:

TEMPORARY WORKS

All temporary works at all sites have been completed.

PERMANENT WORKS

At Katse Intake, the TBM excavation has progressed 7 017 metres out of a total length of 11 362 metres to Pelaneng and is currently 6 months behind schedule. The Intake Tower is under construction and is currently 7.5 months behind schedule. Both of these activities are not likely to delay completion because of the float built into the schedule.

At Pelaneng, excavation of the Adit has progressed 1 179 metres out of a total length of 1 390 metres and is currently 7.8 months behind schedule.

Excavation of the TBM drive from Hlotse to Pelaneng was completed on 21 January 1994 after driving 11 395 metres from Hlotse. This drive was completed some 14 months ahead of the late date in the Contract programme. This TBM continued driving south excavating the

CONSTRUCTION (CONTINUED)

CONTRACT LHDA 124/5 – TRANSFER TUNNEL (Continued)

Pelaneng north drive originally intended to be excavated by the Katse Intake TBM driving north. By the end of the period this Hlotse TBM had completed 1 550 metres of the 4 455 metres remaining to Pelaneng Adit junction.

Excavation of the TBM drive from 'Muela Adit to Hlotse has progressed 12 604 metres out of the total length of 16 987 metres which represents 74.2% completion. This drive is currently 3 months ahead of schedule.

CONTRACT LHDA 126 – DELIVERY TUNNEL SOUTH

TECHNICAL CHARACTERISTICS

- 14 km long tunnel with 5.10 metre diameter section (excavated using one TBM) and two steel lined inverted syphons under rivers at 3.4 metres diameter (excavated by drill and blast method).

ESTIMATED FINAL COST

- M351 136 481

VALUE OF WORK COMPLETE

- M239 045 543

FINANCIAL PERCENT COMPLETE

- 68.1 %

CONTRACT COMPLETION DATE

- 31 December 1996

CONTRACTOR

- Lesotho Highlands Project Contractors

SIGNIFICANT ACHIEVEMENTS

- Since the Contractor mobilised in early 1991, the following has been achieved:

TEMPORARY WORKS

All temporary works at all sites have been completed.

PERMANENT WORKS

All excavation work under this contract was completed on 23 August 1993 with the holing through of the third and last TBM drive from Ngoajane to Vent Shaft 5 near the Lesotho border. This work was completed some 20 months ahead of schedule. Concrete lining of the first TBM drive from Hololo to 'Muela involving 320 metres of lining and the second TBM drive from Ngoajane to Hololo involving 540 metres of lining have both been completed. Work is currently in progress on cleaning and repairing the tunnel formwork for concrete lining the third and last TBM drive from Ngoajane to Vent Shaft 5.



At Hololo under-river crossing a total of 98 metres of steel lining out of 415 metres have been installed and welded and 81 metres have been backfilled with concrete.

At Ngoajane under-river crossing a total of 213 metres out of 365 metres of steel lining have been installed and welded and 195 metres have been backfilled with concrete.

Concrete works at 'Muela Intake are in various stages of completion with 1 524 m³ of concrete placed to date. This work is expected to be complete by April 1995. Overall the contract is expected to be completed some 13 months early.

SUPERVISION OF MAIN CONSTRUCTION CONTRACTS

CONTRACT LHDA 45 – KATSE DAM AND TRANSFER TUNNEL

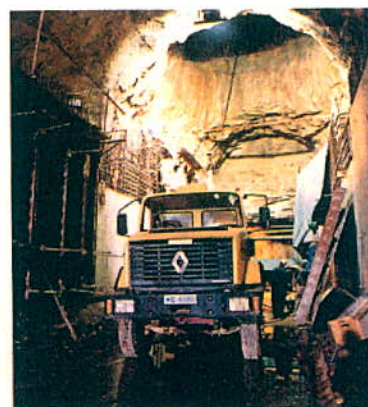
The Consultant submitted a second revised staff planning schedule to conform with the requirements of the construction contractors' work schedules and a modified version was agreed to just before the end of the period. Design work continues in accordance with the programme although considerable additional work has been carried out on studies into the degradability of the basalt in the Transfer Tunnel with a view to establishing parameters for determining lining requirements. The issue of construction drawings has continued in accordance with the programme for both tunnel and dam.

CONTRACT LHDA 46 – DELIVERY TUNNEL SOUTH

The Consultant submitted a second revised staff planning schedule to conform with the requirements of the construction contractors' work schedules in late 1993 and a modified version of this plan has been agreed and is currently being implemented. Design work continues in accordance with the programme.

The issue of construction drawings has continued in accordance with the programme.

All of the Consultants' activities are ahead of schedule and completion is currently forecast to be complete at least 7 months ahead of schedule resulting in a significant saving on staff costs.



Tunnel Boring.

2 STUDIES AND ENGINEERING DESIGNS

The year 1993/94 has seen a broad spectrum of activities covering engineering design consultancies, calling of tenders for design and construction contracts, evaluations of tenders received and planning for future project development. Main activities included the evaluation of tenders and award of contracts for the 'Muela Hydropower Project, continuing discussions with the consultants on the requirements for Transfer Tunnel lining, coordination of design reviews by LHDA Panel of Experts and preparation for Phase IB works.

HYDROPOWER

The tender documents for the 'Muela Hydropower Project were prepared by the Lahmeyer MacDonald Consortium engaged by the Lesotho Highlands Development Authority.

Five contracts were tendered and these were:

- LHDA 129A Underground Power Facilities
- LHDA 129B 'Muela Dam, Infrastructure and Operations Building
- LHDA 134 Turbines, Generators and Ancillary Plant
- LHDA 135 Transformer and 132kV Switchgear
- LHDA 136 132kV Transmission Line and Substation Bays

Evaluations of tenders for Contracts 129A and 129B were completed. Contract 129B was awarded and work commenced in March 1994. Reviews of the Consultants, designs for the 'Muela arch dam and abutment stability issues raised by the LHDA Panel of Experts were also carried out.

Procedural problems with the evaluation of the tender for Contract 129A, however, have led to a serious delay in its award. The financing agency for this contract, African Development Bank, raised issues with regard to the tender opening. As a result the Bank did not accept the recommendation made by an independent Tender Evaluation Team consisting of international self-employed consultants. This ultimately led to an inability to award this contract during the year. A decision was subsequently made to retender this contract, and this is currently in progress.

Evaluations of tenders for Contracts 134, 135 and 136 and negotiations with the successful tenderers were completed. Contracts 134 and

135 were awarded in December 1993 but the award of Contract 136 has been delayed pending financial negotiations with French funding authorities.

Given the possible delays in completion of the 'Muela hydropower station, options were considered and evaluated for design and construction of a flow bypass which would allow water delivery according to Treaty requirements.

WATER TRANSFER

Activities continued in water transfer, predominantly in the administration and review of consultant design and construction supervision and related interaction with the LHDA Expert Panel.

Issues related to the Katse Dam and its appurtenant structures included review of required excavation and construction and reinforcing drawings of the Katse dam and its components prepared by the consultant. Concrete quality control procedures and proposals for reduction of concrete cement content were also reviewed in an attempt to reduce costs. Arrangements for grouting galleries and shear keys were also checked in relation to comments made by LHDA Expert Panel. Other activities related to resolution of the rating of generating equipment for the Katse mini hydro scheme. Work commenced on a Request for Proposal (RFP) for design and construction supervision of the proposed Katse Information Centre.

Preparation of the tender documents and award of a contract was also undertaken for design and construction supervision of replacement housing in the Katse Reservoir area.

Issues that arose in the design reviews, and Expert Panel comments related to the Transfer Tunnel, centred on the assessment of rock conditions, rock quality testing and the resulting recommendations for those sections of tunnel that may or may not require concrete lining. Investigation of the possible costs of additional concrete lining was also undertaken together with an assessment of the cost of measures to protect the permanent works from rock falls along the Northern Access Route above the intake.



Design activities related to the Delivery Tunnel included review of tenders and award of the contract for flow measurement equipment and for provision of water supply for the villages near the intake area. Consultant proposals for the increase in the length of concrete lining in the Ngoajane Drive and the need for rock traps upstream of the tunnel syphons were also evaluated.

Other issues raised by the Expert Panel included concerns about rock quality and possible lining requirements in the Transfer Tunnel and 'Muela arch dam design and abutment stability.

CONSTRUCTION POWER

Monitoring of operation of the Phase IA construction power facilities for the Hololo and Katse Systems and of LEC maintenance activities continued without serious interruption. An architectural consultancy contract was prepared, awarded and administered, for design and construction supervision of replacement housing for residents along the transmission line corridor.

TELECOMMUNICATIONS

Monitoring of the operation of the LHWP Radio Telecommunications system continued. Some malfunctions of equipment, mainly repeater stations, have occurred and were dealt with. The Consulting Engineer, British Telconsult, completed its responsibilities and demobilised.

PHASE IB

MAIN WORKS PLANNING STUDY

The Phase IB Main Works Planning Study was substantially completed, as a basis for selection of a fully qualified and experienced design consultant for the Mohale Dam. The Mohale Reservoir on the Senqunyane River is planned to be connected via the Mohale Intake and Tunnel to the Katse Reservoir. The planning study comprised initial site selection for the dam on the Senqunyane River, followed by dam type selection studies and associated geotechnical investigations at the selected site. The work included consideration of four alternative potential dam sites and a total of five different types of dam; rock fill with central core, rock fill with upstream concrete face, concrete arch, roller compacted concrete (RCC) gravity and RCC arch gravity.

The conclusion of these studies was that a 150m high concrete face rock fill dam should be constructed immediately downstream from the confluence of the Senqunyane River and its Likalaneng tributary. The studies also considered alternative designs for appurtenant river diversion, spillway and low level outlet facilities. Comprehensive construction programming and cost estimating analyses were undertaken to ensure that the least-cost alternative was selected to meet Treaty requirements.

As part of the site and dam type selection process, a programme of environmental studies was also undertaken using the services of the University of Cape Town, to compare the impacts of alternatives. These studies confirmed the selected site and dam type. The field work component (drilling and test pitting) of the geotechnical investigation was essentially complete at the end of the period.

Laboratory testing of field samples to evaluate the long term durability of the available rock for use as aggregate and fill was continuing.

Based on the selected Mohale site and dam type, preparation of RFPs began for selection of consultants for design and construction supervision for the Mohale tunnel and dam and the associated Matsoku Weir and Tunnel. The Matsoku Diversion is also planned to divert additional flows from the Matsoku River to the Katse Reservoir.

In parallel with the comparison of dam sites and types, studies were also undertaken to compare alternatives for providing electric power to the Mohale and Matsoku sites during construction. These studies included design, environmental impact assessments, construction cost estimates and programmes and economic comparison of three alternative transmission line routes and on-site diesel generation schemes. Following completion of this study, work began on preparation of the RFP for design, tender documents and construction supervision of the selected transmission line alternative.

INFRASTRUCTURE PLANNING AND DESIGN STUDIES

Access Roads

The Phase IB planning and design studies of access roads commenced in January 1993. The planning study was completed in May 1993 and recommended the route through Maseru via Mountain Road to Mohale as the least-cost and



STUDIES AND ENGINEERING DESIGN (CONTINUED)

PHASE IB (CONTINUED)

environmentally acceptable to be adopted for construction traffic to Mohale Dam and tunnel intake. The design studies for access roads have been packaged into two contracts as follows:

- 1) St Michaels – Likalaneng – Mohale Dam and Tunnel Intake (Contract 1000)
- 2) Maseru railhead/border post – Thetsane – Masianokeng – St Michaels

Contract 1000

The design of St Michaels – Likalaneng – Mohale Dam and tunnel intake commenced in January 1993 and was completed in February 1994. It is scheduled to invite tenders for construction in May 1994 with construction commencing in October 1994 for 30 months.

Contract 1002

Preparation of the Request for Proposals for the design of Maseru railhead/borderpost – Thetsane – Masianokeng – St Michaels commenced in March 1994. Proposals are scheduled to be invited in August 1994 with design commencing in January 1995.

Camps

Preparation of the Request for Proposals for the planning and design of Mohale advanced infrastructure, i.e. Mohale camp, commenced with proposals scheduled to be invited in May 1994.

PHASE IB RURAL DEVELOPMENT STUDIES

Feeder roads and reservoir crossings (Contract 78)

A contract to plan and design the feeder roads and reservoir crossings in the Katse reservoir local catchment was awarded in September 1993. Planning was completed in December 1993. Design started in January 1994 and is scheduled to be completed in July 1994.

Construction Communities (Contract 531)

Proposals for the planning, design and

supervision of construction communities (a project intended to mitigate the adverse effects at construction sites brought about by the main LHWP construction activities) were invited in August 1993. Planning and design studies are scheduled to commence in May 1994.

LHDA/LEC INTERFACE STUDY

The final report on the LHDA/LEC Interface Study was completed in July 1993. This document incorporated comments received after circulation and presentation of drafts of the report and establishes the technical, institutional and financial arrangements between LHDA and LEC relating to the implementation of the 'Muela Hydropower Project.

The Power Agreement between the LHDA and LEC, which was contained in the Interface Study, was signed by the Chief Executive of LHDA and the Managing Director of LEC on November 11 1993.

OPERATIONS & MAINTENANCE SPECIALIST

An Operations and Maintenance Specialist is to be appointed under contract to LHDA to advise on staffing and training requirements for operation and maintenance of the Lesotho Highlands Water Project and 'Muela Hydro. Documents were prepared, proposals were received and evaluated and recommendations made for the award of this contract to Manitoba Hydro of Canada for the services of the specialist. Work commenced on implementation of this contract.

ORGANISATION AND MANPOWER STUDY

This study will review the current organisation of LHDA and make recommendations to take LHDA into its next organisational and operational phase, when it begins to operate a water transfer and hydroelectric power scheme.

Preparation and finalisation of the RFP required



extensive discussion with all parties involved: the LHDA, GOL, the JPTC, and the World Bank. The RFP for this study was sent out in January 1994. A bidders' meeting was held in March 1994. Proposals were received in April and evaluation commenced.

ECONOMIC IMPACT OF LHWP

Several parties, including the World Bank, see a need to monitor the actual impact of the LHWP on the economy of Lesotho, and to compare it with the predicted impact. Draft Terms of Reference were prepared for the study to accomplish this, together with a proposed strategy for selection of consultants to carry out the work. These proposals were reviewed and accepted by the World Bank. Work continued on producing a full RFP.

Katse Dam takes shape.



3 WATER RESOURCES

ROYALTY HYDROLOGY STUDY

The consultant has presented three draft reports on rainfall analyses, proposed stochastic model and flow analyses.

The reports are summarised as follows:-

Rainfall Analyses Report reviews and validates all the work that has been performed by LHDA on the rainfall data. It also recommends the rainfall data to be used for the LHWP implementation.

Proposed Stochastic Model discusses the stochastic model to be used in the generation of flow series at the ungauged sites, e.g. dam sites, and to extend short term series according to the long term series, e.g. rainfall data series.

Flow Analyses deals with the analysis of all the available flow data and recommends the flow data to be used for the LHWP.

There were constructive discussions and comments made by all parties on the reports under the guidance of the management committee.

EROSION AND SEDIMENTATION STUDY

LHDA has negotiated with the University of Natal Pietermaritzburg and the National University of Lesotho to conduct the above study. The proposal has been reviewed to outline the critical tasks to be undertaken during 1994/95 fiscal year.

Site visits were done by the consultant to Phase IA and Phase IB catchments.

WATER RESOURCES MANAGEMENT STRATEGY

During the World Bank Supervision Mission in Lesotho on the LHWP, a strategy for managing the development of the water resources of the Kingdom of Lesotho and the Republic of South Africa was formulated.

The World Bank indicated that prior to any lending of funds in the water sector of Lesotho, there is a need to see a water resources management strategy in place.

Consequently a pre-condition for the financing of Phase IB was set, which is that the Water Resources Master Plan must be developed and be in place by 31st December 1995 for appraisal of Phase IB.

The draft document that deals with the project outline and objectives of the Water Resources Action Plan to be developed, was prepared and approved by the established Steering Committee.



4 ENVIRONMENT

RURAL DEVELOPMENT

Implementation of the Rural Development Plan got off the ground to a slow start. The contract procurement process was initiated for the engineering projects i.e. feeder roads, construction communities, village water supply/sanitation and Information Centres at Katse and 'Muela. Design consultants, including social and environmental assessment teams, started work on these projects.

Regarding the production/agriculture projects, an agreement was signed to sub-contract the Ministry of Agriculture to implement the Land Use Planning with people, livestock and range management, community forestry, horticulture and community forestry projects.

Work concentrated on needs assessments for community mobilisation and awareness, organising farmers, identifying areas for irrigation, testing suitability of tree species, and procurement of equipment. A few hectares were planted by local farmers with hybrid maize seed (3 ha) and potato seed (2.5 ha). Planning for a second Range Management Area was begun.

An interim programme for Rural Training and Income Generation was started with a focus on needs assessment and market potential; imparting basic literacy skills to herdboys; business management to local business women and men; construction (i.e. bricklaying, block-making etc.) to local men; and other cottage industries.

COMPENSATION

More than 440 tons of fodder were distributed to five villages affected by Katse Dam operations. More than 800 tons of compensation grain and beans were delivered, albeit late, to over 1 500 households in all the project areas. A team of LHDA officials and the Compensation Advisory Committee (composed of Principal Chiefs, Attorney General and other government officials) visited the project area in order to review the compensation policy and to obtain people's views on the policy.

Construction of replacement houses was delayed, while the procurement of replacement sites has proven to be a slow and difficult process, despite requests for assistance from the relevant government departments.

NATURAL ENVIRONMENT AND CULTURE

Baseline studies on Flora & Fauna, Water Quality and the Maloti Minnow (an endangered fish) were completed. Agreement was reached between the Universities of Natal and Lesotho to undertake the erosion and sedimentation study.

Archaeological studies and trenching were completed and documented. Paleontological investigations were done in the tunnels. What seemed like an important fossil discovery proved to be deteriorated beyond cost-effective retrieval.

An intensive public awareness effort was mounted on conservation, pollution and safety among schools, villagers, project workers and others.

PUBLIC HEALTH

The Public Health Teams, following completion of the baseline health and nutrition study, re-directed their efforts to greater delivery of public health messages to the communities around the project works, in close collaboration with the Ministry of Health and the Private Health Association of Lesotho (PHAL).

The Trauma Unit had a comparatively higher turnover of patients from the project area when compared to previous years. In general, relatively few patients were received from the project sites and accident/injury severity rates were lower than on other comparable construction projects in other countries.

75% of admissions to the ICU were project related. Average ICU stay was five days.

274 operations were done of which 29 were project related.

341 patients received physiotherapy of which 17 were project related.

181 patients were admitted to the ICU – 135 were project related and 33 were due to industrial injuries.

There were nine fatalities in the Unit.

5 HUMAN RESOURCES

PERSONNEL

The post of Treasury Manager was localised and Treasury Division was strengthened by recruitment of four expatriates on Individual Service Contracts following the expiry of TAC contracts.

The position of Chief Internal Auditor was filled by an expatriate. Agreement was reached with the World Bank on the mechanism to assess the performance of expatriates.

LHDA staff list was updated.
The updated draft of the LHDA Organisational Chart was produced.
Additional positions were approved by JPTC.
Staff appraisal was conducted.
Strength as at 31st March 1994 stood as follows:

<i>Division</i>	<i>Locals</i>	<i>Expatriates</i>	<i>Total</i>
Executive	19	2	21
Treasury	25	6	31
Environment	63	1	64
Administration	31	—	31
Finance	26	1	27
Legal	7	—	7
Human Resources	15	1	16
Construction	21	10	31
Planning & Design	29	6	35
Infrastructure	8	—	8
Water Resources	10	1	11
Public Relations	19	—	19
Information Systems	11	—	11
TOTAL	284	28	312

TRAINING

Construction Skills Training Project was phased out at the end of April and all assets were transferred to the Rural Training Project under Environment Division.

A successful five-day workshop on Project Management was conducted in May 1993. Twenty-three officers participated.

Another successful two-day workshop on Report Writing and Communication skills was conducted in May 1993. Ten officers participated.

A Management Development Programme was launched.

The first Training Plan was produced.

Consultations were made with JPTC on 1994/95 Training Plan.

Approval was obtained from JPTC for LHDA to make arrangements for training technicians for Operations and Maintenance Department.

Training conducted during the period of reporting is summarised:

Administration	18
Construction	26
Environment	76
Finance	31
Human Resources	12
Information Systems	15
Infrastructure	9
Legal	14
Planning & Design	8
Public Relations	11
Treasury	51
Water Resources	10
Executive	13
TOTAL	294

6 PROJECT FINANCING

WATER TRANSFER – PHASE 1A

The final drawdowns were made on the Offshore Commercial Loans and were used to repay the CMA bridging finance that was obtained, initially, to finance the advance payments on the Phase I A contracts.

The CMA II facilities that were extended by ABSA are to be repaid from the CMA IV facilities that were negotiated during the year with ABSA and FirstCorp. The conditions precedent for implementing these loan facilities were being finalised at the time these accounts were being prepared.

The LHDA made an initial Capital Market bond issue of R642 million into the South African market on 26 November 1993, jointly with the TCTA. The LHDA received R500 million proceeds from R521 million nominal out of the total issue. The LHDA made a further issue of R200 million on 18th February 1994 and received R199 million net. The proceeds from these issues were used to repay long term finance from the DBSA and short term money market facilities from South African commercial banks.

WATER TRANSFER – PHASE 1B

The scope of services and the shortlist for the appointment of a Financial Advisor to advise on the foreign funding required for Phase 1B were approved and the request for proposal drafted. It was anticipated that the successful advisor would be appointed in October 1994.

The Phase 1B funding plan has been prepared, identifying therein the various categories of costs to be financed. It is expected that the cost figures will be refined further with the receipt of engineers' estimates so as to form a sound basis for procurement of funding.

'MUELA HYDROPOWER

Major parts of the funding for the 'Muela Hydropower Project were resolved, including the following:

CONTRACT 134 – TURBINES & GENERATORS

Grant and loan agreements for the financing of this contract were signed in February and expected to be effective concurrently with the contract by 1st April, 1994. In support of the UK portion of the costs, funding has been sourced from the Overseas Development Administration for the grant element, and West Merchant Bank for the export credit facility.

On the side of the Swedish part of the consortium, funding has been sourced in a mix of 50% credit and 50% grant from Svenska Handelsbanken and BITS respectively.

CONTRACT 135 – TRANSFORMERS AND SWITCHGEAR

Funding has been secured for this contract from the European Investment Bank. All of the required funding will come out of the Own Resources loan of ECU 5 million, which was signed in Brussels by the Lesotho Ambassador to the EU. The guarantee documentation was also duly signed and completed in March 1994. The necessary operational procedures have been agreed and put in place with the Central Bank of Lesotho.

CONTRACT 129A – POWER STATION

The ADB/ADF facilities were signed in May 1993 and are close to becoming effective.

PROJECT FINANCING (CONTINUED)

'MUELA HYDROPOWER (CONTINUED)

CONTRACT 129B – DAM

The contract is earmarked for funding by the following agencies:

European Development Fund; whose facility has been effective for some time now, and part of which is being used to finance the supervision contract as well.

European Investment Bank: The Risk Capital loan was also signed in Brussels in March and effort is underway to satisfy a few minor outstanding conditions.

Development Bank of South Africa: The Board of DBSA has agreed to make available for the financing of this contract an amount of M33 million. The appraisal process has been set in motion, and it is expected that the facility would be operational by September.

CONTRACT 136 – TRANSMISSION LINES

Funding has been offered by the French Government for a soft loan to cover 60% of the cost of the contract, and Banque Nationale de Paris will provide an export credit facility to take care of the remainder of the costs. Negotiations for this funding are expected to take place before the end of July.

Including GOL participation, 60% of the funding for the project, including administration and services, is effective. The above arrangements will ensure that the project is fully funded.

A power sales agreement was signed between LHDA and Lesotho Electricity Corporation and steps are being taken to bring its provisions into effect.

RURAL DEVELOPMENT PLAN

The funding plan was approved by the Government of Lesotho and reviewed by the Joint Permanent Technical Commission. Provision was made in the budget of Government of Lesotho to finance projects for which Lesotho has cost responsibility. Initial disbursements have been received.



PROJECT FINANCING (CONTINUED)

'MUELA HYDROPOWER (CONTINUED)

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FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 1994

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DIRECTORS' APPROVAL

The financial statements which appear on pages 22 to 34 were approved by the Board of Directors on 23rd June, 1994 and are signed on its behalf by:

Z. Tsotsi
CHAIRMAN

M.E. Sole
CHIEF EXECUTIVE



REPORT OF THE INDEPENDENT AUDITORS TO THE MEMBERS OF THE BOARD OF THE LESOTHO HIGHLANDS DEVELOPMENT AUTHORITY

We have audited the annual financial statements set out on pages 22 to 34.

Respective responsibilities of directors and auditors

These financial statements are the responsibility of the Authority's Directors. Our responsibility is to report on these financial statements.

Basis of opinion

We conducted our audit in accordance with generally accepted auditing standards. These standards require that we plan and perform the audit to obtain reasonable assurance that, in all material respects, fair presentation is achieved in the financial statements. The audit included an evaluation of the appropriateness of the accounting policies, an examination, on a test basis, of evidence that supports the amounts included in the financial statements, an assessment of the reasonableness of significant estimates and a consideration of the appropriateness of the overall financial statement presentation. We consider that our audit procedures were appropriate to enable us to express our opinion presented below.

Opinion

To the best of our knowledge and belief and on information supplied to us, the financial statements reflect a true statement of the assets and liabilities of the Authority at March 31 1994.

KPMG PEAT MARWICK
CHARTERED ACCOUNTANTS (Lesotho)
June 29, 1994.



STATEMENT OF ACTIVITIES AND ACCOUNTING POLICIES FOR THE YEAR ENDED 31 MARCH 1994

STATEMENTS OF ACTIVITIES

The Authority is entrusted with the responsibility for the implementation, operation and maintenance of the Lesotho Highlands Water Project as defined in the Treaty on the Lesotho Highlands Water Project signed by the Government of the Kingdom of Lesotho and the Government of the Republic of South Africa on 24 October 1986.

The Authority is also conferred with general functions in relation to water resources, electricity, education and training of its employees, monitoring activities and land transactions.

The Authority is presently engaged upon construction of Phase IA and the planning for Phase IB of the Lesotho Highlands Water Project. At this time progress upon Phase IA is satisfactory and the Authority envisages completion in 1997.

The principal physical features of Phase IA in Lesotho are:

- a) A 182 metre high concrete arch dam on the Malibamats'o River at Katse.
- b) A 55km transfer tunnel north from the Katse reservoir to the Hydropower complex at 'Muela.
- c) A 72 MW underground Hydropower complex at 'Muela.
- d) A 15km delivery tunnel north from 'Muela under the Mohokare (Caledon) River, which forms the border between the Kingdom of Lesotho and the Republic of South Africa.
- e) Associated infrastructure, including construction of new roads, upgrading and rehabilitation of existing roads, two new bridges, upgrading of border crossing facilities and new river crossings, camps, communications, power supply etc.
- f) Associated conservation, environmental and rural development activities.

The principal physical features of Phase IB are:

- a) The 146m high Mohale Dam.
- b) A 30km transfer tunnel from the Mohale intake to the Katse Dam.
- c) The Matsoku Weir and a 6km diversion tunnel from the weir to the Katse Reservoir outfall.
- d) Associated infrastructure, including construction of new roads, upgrading and rehabilitation of existing roads, camps, communications and power supplies.
- e) Associated conservation, environmental and rural development activities.

PRINCIPAL ACCOUNTING POLICIES

The financial statements are prepared on the historical cost basis and incorporate the following principal accounting policies:

2.1 CAPITAL WORK-IN-PROGRESS

Costs incurred on the implementation of the Lesotho Highlands Water Project, including costs incurred prior to the establishment of the Authority on 24 October 1986, are capitalised and shown as fixed assets on the Balance Sheet of the Authority. As construction will not be completed before 1997, no depreciation is charged.

Costs comprise all attributable costs of bringing the asset or group of assets to working condition for their intended use, and include inter alia:

- a) all costs of investigations, surveys, feasibility studies, engineering studies, preparation of designs, construction, construction supervision, procurement and commissioning;
- b) the establishment and administration costs of the Authority;
- c) the costs of any land or interest in land, and any improvements to such lands;

STATEMENT OF ACTIVITIES AND ACCOUNTING POLICIES FOR THE YEAR ENDED 31 MARCH 1994 (CONTINUED)

2 PRINCIPAL ACCOUNTING POLICIES (CONTINUED)

- d) the costs of measures taken, including compensation paid, in order to ensure that members of local communities in Lesotho are not adversely affected by Project related activities;
- e) all finance charges (including interest payments, financing and foreign exchange cover charges and other charges) relating to finance raised to fund capital expenditure.

All costs incurred are apportioned to one or more of the following activities:

- i) generation of hydro-electric power in the Kingdom of Lesotho ("Hydropower")
- ii) delivery of water to South Africa ("Water Transfer")
- iii) ancillary developments in the Kingdom of Lesotho ("Ancillary Developments")

The Government of the Kingdom of Lesotho is, by way of Cost Related Payments, responsible for the costs of the Hydropower and Ancillary Development Activities. The Government of the Republic of South Africa is, by way of Cost Related Payments, responsible for the costs of the Water Transfer activities.

2.2 INVESTMENTS

Investments are stated at market value.

2.3 FOREIGN CURRENCIES

Assets and liabilities in foreign currencies are translated to Maloti at rates of exchange ruling at the end of the financial year or, where applicable, at forward cover rates.

Transactions in foreign currencies are translated to Maloti at rates of exchange ruling at the date of the transaction or where appropriate, at forward cover rates.

Premiums on forward exchange contracts are amortised over the period of the contract.

Under the terms of the Treaty covering the project and the Ancillary Agreement to the Treaty of 13 November 1991, the Government of the Republic of South Africa is obligated to effect debt service payments on all loans guaranteed by it. The forward cover contracts have been effected by the Government of the Republic of South Africa.

Exchange differences are allocated to the cost of the related activities.

2.4 COST RELATED PAYMENTS

Cost Related Payments from the Governments of Lesotho and South Africa are recognised and credited to the Capital Fund on the date due for payment.

Cost Related Payments become due when the relevant cost falls due for payment; provided that Cost Related Payments may be paid directly to contractors or consultants, or, where costs have been financed by way of loans shall be due for payment at the time such loans become redeemable.

Funds obtained on concessionary terms for the Water Transfer component are, for the purpose of Cost Related Payments, deemed to be loans at the interest rate and redemption terms applicable to loans of the International Bank for Reconstruction and Development.

2.5 ROYALTIES

Royalties arising from the Lesotho Highlands Water Project, including advance royalty payments through the Southern Africa Customs Union, accrue to the Government of Lesotho and are therefore not reflected in the financial statements of the Authority.

2.6 OTHER INCOME

Other income arising, such as interest earned, exchange gains and miscellaneous income, is credited to the cost of the activity to which it relates.

BALANCE SHEET AT 31 MARCH 1994

	Notes	1994 M'000	1993 M'000
ASSETS EMPLOYED			
<i>FIXED ASSETS</i>	1	3 304 336	2 309 134
<i>INVESTMENT</i>	2	<u>14 315</u>	<u>—</u>
		<u>3 318 651</u>	<u>2 309 134</u>
 <i>CURRENT ASSETS</i>			
Advance Payments		171 256	227 562
Other Receivables		37 658	24 898
Cash on Deposit at Bank		<u>58 459</u>	<u>15 615</u>
		<u>267 373</u>	<u>268 075</u>
 <i>CURRENT LIABILITIES</i>			
Contracts' Payables and Accruals		228 289	185 811
Retentions		84 373	66 054
Other Payables and Accruals		52 332	19 573
Short Term Loan	5	<u>355 984</u>	<u>401 832</u>
		<u>720 978</u>	<u>673 270</u>
 <i>NET CURRENT LIABILITIES</i>	 8	 <u>(453 605)</u>	 <u>(405 195)</u>
		<u>2 865 046</u>	<u>1 903 939</u>
 <i>FINANCED BY:</i>			
<i>CAPITAL FUND</i>	3	704 876	611 742
<i>GOVERNMENT OF LESOTHO FUND</i>	4	70 127	17 069
<i>LONG TERM LIABILITIES</i>	5	1 390 555	1 275 128
<i>FUNDS FROM CAPITAL MARKET</i>	6	<u>699 488</u>	<u>—</u>
		<u>2 865 046</u>	<u>1 903 939</u>

STATEMENT OF CHANGES IN FINANCIAL POSITION FOR THE YEAR ENDED 31 MARCH 1994

	1994 M'000	1993 M'000
SOURCE OF FUNDS		
Government of Lesotho	18 513	9 904
Government of Republic of South Africa	112 257	153 493
Increase in Term Liabilities	69 579	521 742
Increase in Net Current Liabilities	94 258	133 542
Funds from Capital Market	<u>699 488</u>	<u>—</u>
	<u>994 095</u>	<u>818 681</u>

USES OF FUNDS

Expenditure on Capital Work in Progress

Administration	60 520	60 375
Construction	558 846	487 300
Engineering	83 453	77 492
Environment	16 253	13 733
Financing	<u>260 708</u>	<u>179 781</u>
	979 780	818 681
Investment	<u>14 315</u>	<u>—</u>
	<u>994 095</u>	<u>818 681</u>

INCREASE IN NET CURRENT LIABILITIES

Decrease in Advance Payments	56 306	79 899
Increase in Other Receivables	(12 760)	(23 808)
Increase in Cash on Deposit and at Bank	(42 844)	2 098
Increase in Contract Payables and Accruals	42 478	37 270
Increase in Retentions	18 319	26 950
Increase in Other Payables and Accruals	<u>32 759</u>	<u>11 133</u>
	<u>94 258</u>	<u>133 542</u>

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 1994

1 FIXED ASSETS

CAPITAL WORK IN PROGRESS

	Balance 1/4/93 M'000	Increase During Year M'000	Balance 31/3/94 M'000
<i>Phase 1A Hydropower</i>			
Administration	12 753	4 233	16 986
Construction	750	18 000	18 750
Engineering	39 654	12 764	52 418
Environmental	2 052	2 162	4 214
Financing	1 085	565	1 650
	<u>56 294</u>	<u>37 724</u>	<u>94 018</u>

Ancillary Developments

Administration	7 382	158	7 540
Construction	86 608	(21)	86 587
Engineering	6 582	558	7 140
Environmental	2 638	1 779	4 417
Financing	3 792	138	3 930
	<u>107 002</u>	<u>2 612</u>	<u>109 614</u>

Water Transfer

Administration	209 709	56 129	265 838
Construction	1 281 424	540 867	1 822 291
Engineering	232 977	66 862	299 839
Environmental	28 661	12 312	40 973
Financing	391 885	275 427	667 312
	<u>2 144 656</u>	<u>951 597</u>	<u>3 096 253</u>

Phase 1B Water Transfer

Engineering	<u>1 182</u>	<u>3 269</u>	<u>4 451</u>
Total Fixed Assets	<u>2 309 134</u>	<u>995 202</u>	<u>3 304 336</u>

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 1994 (CONTINUED)

1 FIXED ASSETS (CONTINUED)

- i) Included in the financing of Phase 1A Fixed Assets is M47 099 265 representing the finance costs attributable to funds obtained on concessionary terms of the Water Transfer Component, deemed to be loans with interest rates and redemption terms applicable to loans of the International Bank for Reconstruction and Development.
- ii) Phase 1B costs are wholly water transfer and a Republic of South Africa responsibility.

2 INVESTMENT

The Authority purchased during the year zero coupon United States Treasury Bonds, at a cost of US\$4 115 371. The Bonds mature between August 1994 and February 2005, at a value of US\$7 362 000.

The bonds were purchased to provide security for a loan, obtained from the European Investment Bank, to finance the 'Muela Hydropower component of the project, per note 5 (vi).

3 CAPITAL FUND

	Government of Lesotho M'000	Government of South Africa M'000	Total M'000
Balance at 1 April 1993	163 296	448 446	611 742
Reversal of prior year transfers	(41 601)	-	(41 601)
Cost Related Payments:			
Hydropower and Ancillary Development	22 478	-	22 478
Water Transfer	-	112 257	112 257
Balance at 31 March 1994	<u>144 173</u>	<u>560 703</u>	<u>704 876</u>

Total Water Transfer costs at March 31 1994 amount to M3 100 704 000 of which M560 703 000 has been paid as shown above.

The balance of M2 540 001 000 is funded by loans which will be discharged through debt service payments, representing further cost related payments.

Total Hydropower and Ancillary Development costs at March 31 1994 amount to M203 632 000 of which M144 173 000 has been paid as shown above.

The balance of M59 459 000 is funded by loans which will be discharged through debt service payments, representing further cost related payments.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 1994 (CONTINUED)

LONG TERM LIABILITIES (CONTINUED)

	Balance 31 March 1994 M'000	Balance 31 March 1993 M'000
FACILITIES FOR WHICH FOREIGN EXCHANGE FORWARD COVER CONTRACTS HAVE BEEN EFFECTED (CONTINUED)		
KREDITANSTALT FUR WIEDERAUFBAU (KFW)		
<i>Export Credit Loans</i>		
q) Katse Dam	14 161	6 461
r) Transfer Tunnels	36 229	19 868
s) Delivery Tunnel South	18 035	12 446
<i>Commercial Loans</i>		
t) Katse Dam	7 235	7 235
u) Transfer Tunnels	10 690	10 690
v) Delivery Tunnel South	5 051	5 051
COMMONWEALTH DEVELOPMENT CORPORATION		
w) Commercial Loan	124 607	124 607
The above loan is multi-contract and relates to Katse Dam, Transfer Tunnels and Delivery Tunnel South.		
ii) Facility specific to provision of communication systems to the project		
COMMONWEALTH DEVELOPMENT CORPORATION		
Commercial Loan	24 652	20 004
	1 053 780	768 158
Less provision for unamortised cost of forward cover	233 844	187 414
	819 936	580 744

FACILITIES FOR WHICH CONTRACTS FOR PARTIAL FOREIGN EXCHANGE FORWARD COVER HAVE BEEN EFFECTED

iii) Facility specific to provision of consultancy, training and project preparation.

INTERNATIONAL BANK FOR RECONSTRUCTION
AND DEVELOPMENT

World Bank Loan	101 546	15 653
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NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 1994 (CONTINUED)

5 LONG TERM LIABILITIES (CONTINUED)

Balance 31 March 1994 M'000	Balance 31 March 1993 M'000
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FACILITIES FOR WHICH FOREIGN EXCHANGE FORWARD COVER CONTRACTS HAVE NOT BEEN EFFECTED

iv) *Facilities for provision of Infrastructure and Institutional Support*

DEVELOPMENT BANK OF SOUTHERN AFRICA

In respect of

a) Southern Access Road	23 721	25 700
b) Northern Access Road, Northern Portion	156 542	156 932
c) Katse Bridge	2 469	2 557
d) Northern Access Road, Southern Portion	56 483	56 523
e) Border Crossing Facilities	8 154	8 315
f) Infrastructure Management	304	348
g) Katse Village Building Works	—	45 882
h) North End Access Road	44 304	45 501
i) Power Supply	—	77 911
j) Katse Village Engineering Works	26 037	23 185
k) Communication System	1 494	1 676
l) Butha-Buthe Engineering Supervision Compensation	18 273	17 370
m) Civil Construction Training Needs Preparation Costs and Accommodation	772	814
n) Civil Construction Training Needs Moveable Assets	—	432
o) Civil Construction Training Needs Establishment Cost	195	215
p) Butha-Buthe Building Works	—	11 723
q) Accounting Systems Computerisation	3 237	3 118
r) Upgrading existing roads	29 112	—

v) *Facilities for overall project implementation*

a) CMA II FACILITY – ABSA CONSORTIUM	346 773	344 322
b) CMA III FACILITY – STANDARD BANK/FIRST NATIONAL BANK	87 712	258 039

vi) *Facilities for 'Muela Hydropower implementation*

European Investment Bank	19 475	—
	1 746 539	1 676 960
Less: Current Portion	355 984	401 832
	<u>1 390 555</u>	<u>1 275 128</u>



NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 1994 (CONTINUED)

LONG TERM LIABILITIES (CONTINUED)

i) Facilities specific to Katse Dam and appurtenant works, Transfer Tunnels and Delivery Tunnel South.

(Refer to page 29)

- a) Repayable in 20 semi-annual instalments commencing at the earlier of six months after the date of delivery of the provisional acceptance certificate or 31 July 1997, and bearing interest at fixed rates.
- b) Repayable in 20 semi-annual instalments commencing at the earlier of six months after the date of delivery of the provisional acceptance certificate or 31 July 1997, and bearing interest at fixed rates.
- c) Repayable in 20 semi-annual instalments commencing at the earlier of six months after the date of delivery of the provisional acceptance certificate or 31 July 1997, and bearing interest at fixed rates.
- d) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- e) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- f) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- g) Repayable in 20 semi-annual instalments commencing at the earlier of 6 months after substantial completion or 31 July 1997 and bearing interest at fixed and varying rates.
- h) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- i) Repayable in 20 semi-annual instalments commencing at the earlier of six months after date of substantial completion of contract or 31 July 1997 and bearing interest at a varying rate.
- j) Repayable in 20 semi-annual instalments commencing at the earlier of six months after date of substantial completion of contract or 31 July 1997 and bearing interest at a varying rate.
- k) Repayable in 20 semi-annual instalments commencing at the earlier of six months after date of substantial completion of contract or 31 July 1997 and bearing interest at a varying rate.
- l) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- m) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- n) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- o) Repayable in 20 semi-annual instalments commencing at the earlier of six months after commissioning or 31 July 1997 and bearing interest at a fixed rate.
- p) Repayable in one instalment on the last business day in June 1997 and bearing interest at a varying rate.
- q) Repayable in 20 semi-annual instalments commencing at the earlier of six months after substantial completion or 31 July 1997, and bearing interest at a fixed rate.
- r) Repayable in 20 semi-annual instalments commencing at the earlier of six months after substantial completion or 31 July 1997, and bearing interest at a fixed rate.
- s) Repayable in 20 semi-annual instalments commencing at the earlier of six months after substantial completion or 31 July 1997, and bearing interest at a fixed rate.
- t) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- u) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- v) Repayable in one instalment on 30 June 1997 and bearing interest at a varying rate.
- w) Repayable in 28 semi-annual instalments commencing on 30 January 1998, bearing interest at a varying rate.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 1994 (CONTINUED)

LONG TERM LIABILITIES (CONTINUED)

ii) Facility specific to provision of communication systems to the project.

(Refer to page 30)

Repayable in 8 semi-annual instalments commencing on 31 January 1997 and bearing interest at a fixed rate.

iii) Facility specific to provision of consultancy, training and project preparation.

(Refer to page 30)

Repayable in 24 semi-annual and increasing instalments commencing on 1 November 1997, bearing interest at a varying rate.

iv) Facilities for provision of Infrastructure and Institutional Support

(Refer to page 31)

- a) Repayable over 20 years commencing March 31 1993 and bearing interest at 8% p.a.
- b) Repayable over 22.5 years commencing September 30 1991 and bearing interest at 8% p.a.
- c) Repayable over 20 years commencing March 31 1991 and bearing interest at 8% p.a.
- d) Repayable over 20 years commencing September 1992 and bearing interest at 8% p.a.
- e) Repayable over 20 years commencing September 30 1992 and bearing interest at 11% p.a.
- f) Repayable over 10 years commencing September 30 1993 and bearing interest at 4% p.a.
- g) Repaid in full on February 18 1994.
- h) Repayable over 20 years commencing March 31 1993 and bearing interest at 8% p.a.
- i) Repaid in full on February 18 1994.

j) Repayable over 20 years commencing September 30 1993 and bearing interest at 12% p.a.

k) Repayable over 10 years commencing September 30 1993 and bearing interest at 4% p.a.

l) Repayable over 20 years commencing March 31 1994 and bearing interest at 12% p.a.

m) Repayable over 13 years commencing March 31 1993 and bearing interest at 8% p.a.

n) Repaid in full on February 18 1994.

o) Repayable over 10 years commencing March 31 1993 and bearing interest at 4% p.a.

p) Repaid in full on February 18 1994.

q) Repayable over 10 years commencing March 31 1995 and bearing interest at 4% p.a.

r) Repayable over 15 years commencing March 31 1996 and bearing interest at 6% p.a.

v) Facilities for overall project implementation

(Refer to page 31)

- a) The CMA II facility is repayable during June 1994 and bears interest at varying commercial rates.
- b) The CMA III facility is repayable in ten equal annual instalments commencing on the earlier of the first anniversary of completion of Phase IA of the project, or 1 July 1997 and bears interest at varying commercial rates.

All of the above loans are guaranteed by the Government of South Africa.

vi) Facility for 'Muela Hydropower Implementation

(Refer to page 31)

Repayable over 10 years commencing August 20 1999 and bearing interest at 3% p.a. This facility is secured as stated in note 2.



NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 1994 (CONTINUED)

6 FUNDS FROM CAPITAL MARKET

During the year the Authority initiated, in association with the Trans Caledon Tunnel Authority (TCTA), issues of Capital Market Bonds. The bonds are registered by the Johannesburg Stock Exchange as Lesotho Highlands Water Project Stock (LHWP No. WS01), with the TCTA as the registered issuer. The registered nominal value of the Stock is R5 000 million which is guaranteed by the Government of South Africa. The bonds carry a coupon of 12% p.a., payable semi-annually in arrears, and are repayable on 1 December 2005, by the issuer.

The nominal value issued and Maloti equivalent amounts received during the year were:-

	Total Issue M'000	LHDA Issues M'000	TCTA Issues M'000
Nominal value	<u>842 000</u>	<u>721 558</u>	<u>120 442</u>
Net Proceeds	<u>814 595</u>	<u>699 131</u>	<u>115 464</u>

7 FORWARD COVER

All foreign currency denominated loans, except that of the European Investment Bank, are the subject of forward cover.

8 CAPITAL COMMITMENTS

Outstanding capital expenditure contracted for at 31 March 1994 amounted to M1 842 million. Finance has been secured as at 31 March 1994 to meet all of these commitments, including current liabilities.

9 CONTINGENT LIABILITIES

The Authority has been notified of the intention by various contractors to submit claims for additional costs, currently estimated by them at M269 million, arising from legislative changes in Lesotho, relating to taxation and employment practice.

The Authority is of the opinion that the results of ongoing discussions and representations are likely to substantially set aside such claims.

10 TAXATION

In accordance with Section 29(1) of the Lesotho Highlands Development Authority Order (No.23) of 1986, the Authority is exempt from sales tax payable under the Sales Tax Act 1982, tax on any income or profits, transfer duties payable under the Transfer Duty Act 1966, stamp duties payable under the Stamp Duties Order 1972 and any fees payable under the Deeds Registry Act 1967.

11 INCOME STATEMENT

An Income Statement has not been prepared as all expenditure and related income for the period has been charged to Capital Work-in-Progress.



