

AFRICAN DEVELOPMENT BANK GROUP



**OPERATIONS EVALUATION DEPARTMENT
(OPEV)**

LESOTHO: MPHARANE-BELA BELA ROAD UPGRADING PROJECT

Project Performance Evaluation Report (PPER)

Project and Program Evaluation Division (OPEV 1)

July 2011

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ABBREVIATIONS AND ACRONYMS

AADT	=	Average Annual Daily Traffic
ADB	=	African Development Bank
ADF	=	African Development Fund
ARV	=	Anti-Retro Viral
BOQ	=	Bill of Quantities
CBR	=	California Bearing Ratio
DOF	=	Department of Finance
DOP	=	Department of Planning
DRR	=	Department of Rural Roads
EA	=	Executing Agency
EIRR	=	Economic Internal Rate of Return
ESA	=	Equivalent Standard Axle
ESAL	=	Equivalent Standard Axle Loads
GDP	=	Gross Domestic Product
GoL	=	Government of the Kingdom of Botswana
HDI	=	Human Development Indicator
ITP	=	Integrated Transport Project
KPH	=	Kilometres per hour
LHDA	=	Lesotho Highlands Development Authority
LHWP	=	Lesotho Highlands Water Project
LNTS	=	Lesotho National Transport Study
MCC	=	Maseru City Council
MLG	=	Ministry of Local Government
MFDP	=	Ministry of Finance and Development Planning
MODP	=	Ministry of Development Planning
MOLG	=	Ministry of Local Government
MONR	=	Ministry of Natural Resources
MOPWT	=	Ministry of Public Works and Transport
MoU	=	Memorandum of Understanding
MSL	=	Mean Sea Level
NTP	=	National Transport Plan
PAC	=	Project Appraisal Schedule
PAR	=	Project Appraisal Report
PCR	=	Project Completion Report
PPC	=	Projects Planning and Control
PPER	=	Project Performance Evaluation Report
PRS	=	Poverty Reduction Strategy
PS	=	Permanent Secretary
RB	=	Roads Branch
RD	=	Roads Directorate
RF	=	Road Fund
RFB	=	RF Board
RRMP	=	Road Rehabilitation and Maintenance Programme
RSA	=	Republic of South Africa
RTB	=	Road Transport Board
SAA	=	South African Airways
SADC	=	Southern Africa Development Community
SATCC	=	Southern Africa Transport and Communications Commission
SPN	=	Specific Procurement Notice
TA	=	Technical Assistance

USD	=	United States Dollars
UA	=	Unit of Account
VDC	=	Village Development Committee
VKT	=	Vehicle Kilometres Travelled
VOC	=	Vehicle Operating Costs
VPD	=	Vehicles per Day
WB	=	World Bank
WMA	=	Wildlife Management Area

CURRENCY EQUIVALENTS

Appraisal	1 UA =	10.8256 Maloti
PCR	1 UA =	12.4415 Maloti
PPER	1 UA =	11.2000 Maloti
	1 USD =	7.66 Maloti

WEIGHTS AND MEASURES

1.00 metre (m)	=	3.281 ft.
1.00 kilometre (km)	=	0.621 mile
1.00 square kilometre (km ²)	=	0.386 square mile (mi ²)
1.00 hectare (ha)	=	2.471 acres
1.00 kilogram (kg)	=	2.205 lbs.

FISCAL YEAR

1 April – 31 March

BASIC PROJECT DATA

Preliminary Data

Country : Lesotho
 Project : Mpharane-Bela Bela Road Upgrading Project
 Loan Number : 2100150006779
 Borrower : The Kingdom of Lesotho
 Beneficiary : The Kingdom of Lesotho
 Executing Agency : Ministry of Public Works and Transport, RD

A. Key Dates

	<u>Appraisal</u>	<u>Actual</u>
1. Loan Amount (UA million)	4.29	7.41
2. Loan Approval Date	--	16 January 2002
3. Loan Signature Date	--	16 April 2002
4. Loan Effectiveness Date	--	4 October 2002
5. Effective Date of First Disbursement: September 2002		March 2003
6. Effective Date of Last Disbursement: December 2004		December 2004 (Bank) October 2006 (GOL)

B. Financing Plan (UA equivalents)

Source of Finance	In UA Million							
	Appraisal				Actual			
	FE	LC	Total	%	FE	LC	Total	%
AfDB	3.92	0.37	4.29	90.0	4.29	0.00	4.29	57.9
GoL	0.00	0.48	0.48	10.0	0.00	3.12	3.12	42.1
Total	3.92	0.85	4.77	100.0	4.29	3.12	7.41	100.0

C. Performance Indicators

1. Cost Over-run	:	55.3%
2. Time Over-run	:	9 Months
• Slippage on Effectiveness (%)	:	0
• Slippage on Completion Date (%)	:	75%
• Slippage on Last Disbursement (%)	:	54%
• No of Extensions of Grant Validity Period	:	0
3. Project Implementation Status	:	Completed

D. Missions

Type of Mission	Number of Missions	Number of Persons	Period	Composition	Man Days
Identification	---	---	---	---	---
Preparation	1	2	01/2001	Transport Engineer and Transport Economist	28
Appraisal	1	3	09/2001	Transport Engineer, Transport Economist and Environmentalist	42
Supervision	1	2	11/2002	Transport Engineer and Transport Economist	22
	1	2	04/2003	Transport Engineer and Transport Economist	14
	1	2	07/2003	Transport Engineer and Transport Economist	18
	1	2	02/2004	Transport Engineer and Transport Economist	26
	1	1	10/2005	Transport Engineer	7
PCR	1	2	02/2005	Transport Engineer and Transport Economist	28
PPER	1	5	09/2010	Evaluation Officer, Consultant Team (Transport Economist, Environmentalist, Socio-Economic Specialist, Project Administrator and Project Director)	9

E. Disbursements (UA Million)

Year	Appraisal		Actual	
	Amount	%	Amount	%
2002	1.10	25.6	0.00	00.0
2003	2.32	79.7	0.62	14.5
2004	0.87	100.0	3.67	100.0
Total	18.50		10.59	100.0
Un-disbursed Loan Balance Cancelled			0.00	00.0

F. Economic Internal Rates Return

Section	Appraisal	PCR	PPER
Mpharane Bela Bela Road	16%	12.5%	7.26%

RATINGS SUMMARY

Evaluation Criteria	PCR	PPER
Relevance and Quality at Entry	Satisfactory	Satisfactory
“Efficacy”	N/A	Satisfactory
Efficiency	Unsatisfactory	Unsatisfactory
Institutional Development	N/A	N/A
Sustainability	Satisfactory	Unsatisfactory
Other development Impact	N/A	Satisfactory
Aggregate Performance Indicator	Satisfactory	Satisfactory
Borrower Performance	Satisfactory	Satisfactory
Bank Performance	Satisfactory	Satisfactory

EXECUTIVE SUMMARY

1. INTRODUCTION

1.1 The Project Performance Evaluation Report (PPER) presents the findings of the independent evaluation of the Mpharane Bela Bela Upgrading Project in Lesotho. In January 2002, the Bank approved an ADF loan of UA 4.29 million to finance the upgrade of 25 km gravel road to bitumen standard between Mpharane, Bela Bela, also the spurs roads of St Theresa and Kolojane.

1.2 The objectives of the project were to improve the quality of road transport service levels and reduce vehicle operating costs and road maintenance costs between Mpharane, Bela Bela and Kolojane and St Theresa.

1.3 The Road Works Operations Directorate administered the contract and supervision of the project road. The project preparatory work was done through feasibility studies and detailed designs financed by the Bank and the GoL completed in July 2000. The studies recommended the upgrade of the road between Mpharane and Bela Bela.

2. MAJOR FINDINGS

2.1 The implementation of the project and the achievement of development objectives have been affected by significant time delay and additional financing by the GoL. The implementation schedule was very optimistic and implementation works were delayed from 12 to 21 months.

2.2 However, the project was *relevant* in view of its consistency with the Bank's Country Strategy Paper particularly regarding rural development as well as with the Poverty Reduction Strategy 2003/04 – 2006/07 (PRS) that emphasized the development of infrastructure (with specific emphasis on roads). The upgrading of this road is also referred to in the Transport Sector Programme (TSP). In terms of Quality at Entry, there are two major design weaknesses: (i) the project objectives were limited to the reduction of transport costs and provision of all-weather access to selected communities. Socio-economic dimensions such as poverty reduction, strengthening socio economic development of the target areas and rural development were not explicitly spelled out or taken into account in project design (ii) there was no appropriate socio-economic baseline or poverty/socio-economic assessment at the start-up of the project.

2.3 The project was *efficacious* in achieving its intended results but the major shortcoming lies in achieving long term results. Travel times were reduced from about one hour to about half an hour. The road is now accessible all year around by all vehicle types, and estimations on Vehicle Operating Costs (VOC) show a reduction of about 40%. Nonetheless, the achievement of long term results i.e. promotion of economic growth and development, socio-economic development; poverty alleviation is not evident at this stage. This can be attributed to the fact that the road was only completed in 2005 and typically, the impact of rural roads takes some time to materialize.

2.4 Updated information on traffic counts, physical implementation of outputs and VOC were used to recalculate the Economic Internal Rate of Return (EIRR) which amounted to 7.26% against the 16% expected at appraisal. The main underlying reason is below expectation traffic count. In addition, project implementation was characterized by 9 months delay, 55.3% cost overrun (from appraisal until completion) and the use of labor force for maintenance. Overall the efficiency of the project is rated *unsatisfactory*.

2.5 There are two major issues that affect sustainability namely (i) inadequate funding for maintenance and (ii) limitations in institutional capacity. Cost recovery from road users is not sufficient to make a contribution towards rehabilitation of the road. According to a recent study conducted by the Roads Fund (RF) in 2010¹, the current recovery levels from road users amount to Maloti 56.78 million (approximately equivalent to UA 5.07 million) for the 2007/08 financial year compared to the Maloti 155.48 million (approximately UA 13.9 million) needed per annum for routine and periodic maintenance only to maintain the road network in a fair condition. This represents cost recovery from road users of about 36.5%. In case the recurrent budget allocations from central government are included, the financing gap narrows to about 56%.

2.6 In terms of institutional sustainability, RD is currently undergoing a major institutional reform as staff levels are in the process of being reduced from 1,800 (technical and professional) to 150 (professional only). Only 60 positions out of the 150 positions of the RD have been filled, and the remaining positions are being advertised.

2.7 Overall, the project is rated satisfactory despite the fact that traffic growth estimations did not materialize and that both implementation delays and costs overruns have hampered the project efficiency leading to an achievement of some results slower than expected.

3. LESSONS

- Baseline data and continuous follow up after project completion with country's executing agencies are paramount to ensure appropriate impact assessment of projects with socio-economic and poverty reduction dimensions.
- Private sector development in contracting road works is a condition to ensure proper competition in the bidding process and suitable qualifications of the national capacity in the sector.
- Appropriate M&E system with key performance indicators to measure socio-economic impact and poverty reduction are key to ensure that objectives are met and project is yielding expected impacts.
- Regular and sufficient funds allocation for road maintenance is a necessary condition to ensure project's sustainability. This allocation must be based on a sound road maintenance planning program.
- Adequate institutional capacity and expertise of the Road Department on planning and executing road maintenance works is another necessary condition to ensure project sustainability in particular and the national road network in general.
- Enforcement of safety measures and preservation of existing safety equipments on the road are key to ensure road users safety. Traffic Sign Vandalism can hamper road safety. In some instances, the traffic signs are stolen from the road and then used in building dwellings or the poles of guardrails are used for firewood.

¹ Review and Update of the Study of the Review of the Projected Road Maintenance Needs and the Generation of Road Fund Revenue, Final Report, March 2010

Recommendations

Recommendations to the Bank

- In order to avoid changes in quantities and consequently extra cost and delays, the Bank should ensure that at appraisal, the bidding documents are based on a detailed engineering design.
- Adequate levels of financing for road maintenance can be resolved by strong commitment from the GOL in implementing recommendations from previous studies as well as the phasing of increased road user charge levels.

Recommendations to the Borrower

- It is imperative that the GOL in conjunction with development partners continue to invest in the promotion of local construction industry which ultimately would foster competition and reduce bid prices.
- The appraisal process of rural road projects with socio-economic and poverty reduction dimensions should include a project component for the establishment of a baseline/socio-economic assessment. In addition, time series statistical data should be available at constituency and district levels.
- In project areas where vandalism of traffic signs is prevalent, alternative materials that are less attractive but effective should be used for traffic signs. It is recommended that the GoL continues to address the vandalism of traffic sign in the Roads Safety Campaigns of the Road Safety Department.

1. THE PROJECT

1.1 Country/Sector Economic Context

1.1.1 The Kingdom of Lesotho is a landlocked country surrounded by the Republic of South Africa (RSA). The land area of the country is about 30,355 km². About 60% of the total land area of Lesotho is mountainous where peaks can be as high as 3,482 meters above Mean Sea Level (MSL).

1.1.2 Lesotho depends almost exclusively on road transport for movement of goods and services. The national road network is approximately 6,216 kms long. Of these about 2,255 kms are managed by the Roads Branch (RB) and the Lesotho Highlands Development Authority (LHDA), and are considered public (or 'gazetted') roads. About 3,292 km comprising earth (1,366 km) and gravel roads (about 2,140 kms) are managed by the Department of Rural Roads (DRR). The Ministry of Local Government (MoLG) and Maseru City Council manage the constituency and urban roads (totaling about 790 kms).

1.1.3 The Government of the Kingdom of Lesotho's (GOL) road sub-sector strategy is to ensure a balance between maintaining the current road network, and constructing and upgrading of roads to appropriate standards to serve the needs of both the poorer members of society living in inaccessible (often mountainous) areas and also those of the economy at large. In 1993, the African Development Fund (ADF) financed the Lesotho National Transport Study (LNTS) which was followed by the 10-year National Transport Plan, NTP (1995-2004). Pursuant to that, the GOL has embarked on a 5-year (1996-2001) Road Rehabilitation and Maintenance Program (RRMP). The RRMP was co-financed by the International Development Agency (IDA) of the World Bank, the European Union (EU) and other donors. At the end of the RRMP, the GoL adopted a six year transport sector program (2004-2010).

1.1.4 The GOL national policy for roads is anchored on the need to streamline the road sub-sector putting an emphasis on maintenance and rehabilitation and selective upgrading. The overall objective is to have a network capable of supporting social and economic activities, providing access to communities mainly those isolated rural districts and linking district centers.

1.1.5 Government policy in the road sub-sector is incrementally placing less reliance on force account labor and creating more opportunities for local contractors. A major step in promoting the local construction industry is the provision of a regular flow of routine maintenance works to the local contractors who have been trained in labor-based construction techniques by the road agencies. The development and implementation by the road agencies of routine maintenance activities through contracting is vital to help create the competitive market, whereby qualified contractors gradually develop into medium sized firms able to take on more complex road works.

1.1.6 The actual distribution of the transport infrastructure is unbalanced as a result of past investments in the transport sector in Lesotho, which have been oriented since 1967 towards the primary transit and import/export corridors of the lowlands serving the emerging manufacturing sector along the border with RSA. Most traffic originates and terminates in the lowlands, with the exception of the route to the Lesotho Highland Water Project (LHWP)

dam and tunnel sites and the Bank-financed Khamane-Oxbow-Mokhotolong road. To redress the current imbalances in the distribution of the network, the Bank is financing a study covering two important penetrating roads that will provide access to the central mountain areas. The study is expected to be complete by March 2012.

1.1.7 The Ministry of Public Works and Transport (MOPWT) plans and coordinates investment in the transport sector. The Ministry of Finance and Development Planning (MOFDP) is also involved in transport planning and investment. Responsibility for roads in Lesotho lies with the Roads Directorate (RD – previously Roads Branch and the Department of Rural Roads) under the MOPWT and also the Maseru City Council (MCC) which is responsible for the urban roads within Maseru and the Ministry of Local Government (MOLG) which is responsible for all other urban roads. The RD is responsible for planning, design, construction and maintenance of the entire sealed non-urban road network and for unsealed roads with high volumes of traffic in the country. The total vehicle population of Lesotho is estimated to be 74 968. The average daily traffic volume on the Lesotho road network is estimated to be 352 vehicles of which 93% are light and 7% heavy. The paved road network is generally in a good condition whilst the unpaved network is generally in a poor condition.

1.1.8 As agreed during the formulation of the RRMP, a Road Fund (RF) was established in 1995 and became operational in 1997. The objectives of the RF are to finance maintenance works of the road agencies and to provide funds for road safety improvements. Revenues for the RF are derived primarily from a road maintenance levy, tollgate fees, vehicle license and registration fees and overloading fines. The RF is administered by an autonomous road board.

1.2 Project Formulation

1.2.1 At project formulation, the rural settlement pattern in Lesotho and the growth in agricultural outputs were dependent on the ability of the country's transport system to integrate these areas in a cost-effective manner. It is in this context that the GOL implemented the RRMP with the goal of improving the road transport operating efficiency, providing access to isolated rural areas and developing the institutional capacity of the sub-sector.

1.2.2 Initially the proposed project was admitted into the RRMP as a regravelling /resurfacing project between Mpaharane and St.Theresa. The project preparatory work was done through feasibility studies and detailed designs financed by the Bank and the GoL and completed in July 2000. The studies recommended the upgrade of the road between Mpharane and Bela Bela.

1.2.3 The reason for upgrading the road up to Bela Bela could stem from two facts (i) Bela Bela is larger than St Teresa and the entire area up to Bela Bela and even beyond has considerable agricultural potential, and (ii) high traffic levels on the project road was a reasonable factor for upgrading to paved standard instead of re-gravelling only.

1.2.4 There are indications that project consultation with project beneficiaries was adequate. Regular meetings were held with representatives of the MOPWT, Contractor, and affected communities on issues related to employment, compensation, and resettlement.

1.3 Objectives and Scope at Appraisal (Retrospective Logical Framework)

1.3.1 The rationale for undertaking the project was to provide all-weather access to the agricultural areas of Mpharane, Corn-Exchange, Kolojane, St Theresa and Bela Bela which in turn would introduce more opportunities for economic growth. The sector goal was to facilitate economic development and poverty reduction by improving the efficiency of the national transport infrastructure particularly in the rural areas.

1.3.2 The project was designed to assist the rural people through increased access to markets and basic social services at lower costs, facilitate and improve traffic movements to and from the region, reduce vehicle operating costs and maintenance costs. The project specific objectives were to reduce vehicle operating costs and road maintenance costs and to improve the quality of road transport service levels between Mpharane, Bela Bela and Kolojane and St Theresa. The beneficiaries of the road project include twelve major settlements of scattered villages such as: Mpharane, Mafotholeng, Tuke, Bela Bela, Ha Letsoela, Mokomahatsi, Bakaneng and Ha Pelele.

1.3.3 The project comprised three key components:

- Civil works through upgrading of 25 km of existing gravel road to a Class B bitumen road standard of a width of 7.0m carriageway and 1.0m paved shoulders on either side;
- Consultant services for pre-contract and supervision services of the above civil works; and
- Project audit services.

The detailed retrospective logical framework as well as the intervention logic is provided in appendix E.

1.4 Financing Arrangements – Bank and Others

1.4.1 The total cost of the project was UA 4.77 million (Maloti 51.67 million), net of taxes and duties. ADF financed 90 percent of the total project cost (i.e., UA 4.29 million or Maloti 46.50 million) and GoL financed 10 percent of the total project cost (i.e., UA 0.48 million or Maloti 5.17 million).

1.4.2 The project cost was estimated from quantities and unit prices prepared by the design consultants. A physical contingency of 10% and a price contingency of 3% per annum on foreign costs and 7% per annum on the local costs were allowed. The foreign exchange content amounts to about 82 percent. This results from the fact that all fuel, lubricants, steel, cement, machinery and equipment required for execution of works have to be imported. The local cost component comprises the minimum labor required for construction works, some payments to the supervision consultant and compensation of property loss due to re-alignment of the road.

1.5 Evaluation Methodology and Approach

1.5.1 The first stage of the evaluation draws on a review of literature consisting mainly of the Project Appraisal Report, the Bank's PCR, Supervision Reports, the Bank's Country Strategy

Papers, the Bank's and GOL's Project Completion Reports, as well as discussions with staff members of the Bank involved in project implementation.

1.5.2 The second phase involved a field mission to Lesotho where meetings with relevant government officials and agencies concerned with the project were held to obtain additional information related to the project road. Toward the latter part of the mission, various sections of the road project and project areas such as Mpharane, Bela Bela and Kolokane were visited, where technical, environmental and socio-economic assessments were conducted. The socio-economic assessment entailed interviews which were conducted with community members but there was no data available although some "data" could be extracted from the interviews. The evaluation mission also collected some statistical data and reports as input for the final Project Performance Evaluation Report. Following the Bank's revised guidelines² environmental impact, road maintenance and sustainability were the main focus of this report.

1.6 Key Performance Indicators (KPIs) and Availability of Baseline Data

1.6.1 KPIs used were the following: (i) traffic growth, (ii) improved socio-economic welfare conditions, (iii) reduction in Vehicle Operating Costs (VOCs), (iv) average roughness, (v) Average Annual Daily Traffic (AADT) and (vi) average travel time. The baseline for the above mentioned indicators was established at appraisal however limitations on baseline data were particularly evident for socio-economic indicators.

KPI	Appraisal	PCR	PPER
Traffic growth 2001-2009 (%)	4.00%	6.3% for Busses 4.1% for Other Vehicle Categories	4.854%
Improved socio economic welfare conditions (number of local persons from community employed to carry out maintenance activities)	20	60	30
Reduction in VOC (%)	40.73%	39.00%	41.49%
Average Roughness IRI in m/km)	16.0 (2001) 2.5 (2007)	20.0 (2001) 3.0 (2007)	N/A
AADT	273 (2001) 319 (2005) 345 (2007)	277 (2001) 403 (2007)	222 (2001) 285 (2005) 276 (2007) 373 (2009)
Average travel time	0.5 hours	0.5 hours	0.333 -0.5 hours

² Revised Guidelines Project Completion Report Evaluation Note and Project Performance Evaluation Report (PPER)

2. IMPLEMENTATION PERFORMANCE

2.1 Loan Effectiveness, Start-up and Implementation

2.1.1 The loan processing (from appraisal until loan effectiveness) was conducted under the stipulated 12 months. The time frame between Board approval and loan signature was 3 months and the loan was declared effective 6 months later. The loan covenants were in general relevant and were all fulfilled except the one related to the replenishment of the Road Fund accounts with at least Maloti 50 million per annum for road maintenance by GoL.

2.1.2 The project faced a 9-months delay due to modifications to the financing plan and costs prior and during the implementation of preliminary works. These modifications to the financing plan were related to the revision of the quantities in the bidding documents based on Preliminary Design conducted at Feasibility Stage. Detailed engineering design as requested by the Bank's procurement procedures, were not conducted on time. The referred revision led to a project cost overrun of UA 1.01 million borne by the GoL. The unanticipated increase in counterpart funds gave rise to cash flow problems and to 5 months delay in the disbursement of counterpart funding.

2.1.3 The modifications to the financing plan during the execution of preliminary works of the project include (i) equipment for Engineer's material laboratory, (ii) removal of oversized materials, and (iii) contract price adjustment. These modifications resulted in time delay of 4 months and a cost overrun of UA 1.63 million in total.

2.1.4 The 6-months extension in project completion were due to: (i) adverse weather conditions related to abnormal rain fall that resulted in 35 days delay, (ii) approval of change in actual quantities versus estimated quantities in BOQ associated with a delay of 64 calendar days, and (iii) the suspension of road construction during Christmas Shutdown that led to a delay of 25 calendar days.

2.2 Socio-Environmental Safeguards

2.2.1 The primary concerns were the loss of land and relocation issues. However, as the project road essentially was confined to the existing road alignments, with only minor realignments and improvements to the horizontal and vertical curves to achieve the desired geometric criteria and to meet road safety requirements, the physical disruption in human settlements and natural environment was minimal.

2.2.2 The road construction activities were implemented with minimum property relocation and compensation issues. GOL had engaged a Property Consultant to value the extent of damage and recommended the amount of compensation to be paid before commencement of works. This avoided further project implementation issues. A budget of UA 10,000 was allotted as compensation for houses and properties loss due to the project. The affected properties ranged from small to large quantities of loss of land for agriculture, residential and commercial purposes; and demolition of buildings located in the road reserve. Loss of dwelling (i.e., 1,400 m² of dwelling plots and 2 homes without roofs) and commercial land (i.e., 2,140 m², 20 fruit trees and 1,500 m² of brick making site) were compensated by providing replacement on alternative sites and compensation for loss of trees and properties.

2.3 Adherence to Project Costs, Disbursements and Financing Arrangements

2.3.1 At appraisal, the total cost (net of taxes) of the project was estimated as UA 4.77 million of which the foreign exchange component was UA 3.92 million and the balance of UA 0.85 million was the local cost component. A physical contingency of 10% and a price contingency of 3% per annum on foreign costs and 7% per annum on the local costs were applied. The foreign exchange content amounts to about 82 percent. This resulted from the import of all fuel, lubricants, steel, cement, machinery and equipment required for execution of works. The local cost component comprises the minimum labor required for construction works, some payments to the supervision consultant and compensation of property loss due to re-alignment of the road.

2.3.2 The total actual completion cost (net of taxes) of the road project (civil works and services) was UA 7.41 million, of which the foreign exchange component was UA 4.29 million and the remaining UA 3.12 million was the local costs. This shows a project cost overrun from appraisal until completion of UA 2.64 million (55.3%) above the appraisal cost estimate of UA 4.77 million.

2.3.3 The loan was disbursed against three categories of expenditure: Civil Works, Supervision Consulting Services and Audit Services, using as much as possible the direct payment method made against standard documentation as specified in the Bank's 'Disbursement Handbook'. The major delay in disbursement of funds is associated with the release of funds due to the time and cost overruns and the retention fee. There was a slippage rate of 54% in disbursement schedule, mainly due to delays in project execution.

2.4 Project Management, Reporting, Monitoring and Evaluation Achievements

The Road Works Operations directorate administered the contract and supervision of the project road. The RB had sufficient experience and capacity to supervise the road construction works. The technical unit of the RB was staffed by qualified personnel during project implementation. In order to ensure proper coordination, monitoring and supervision of implementation, the RB designated one of its engineers with the requisite qualifications and experience to act as the project coordinator. An appropriately qualified person was designated for this function, which included preparation of progress reports, processing of payment certificates and the preparation of the Borrower's PCR. The assigning of an engineer for this purpose acceptable to the Bank was included as a loan condition.

3. PERFORMANCE EVALUATION AND RATINGS

3.1 Relevance of Goals and Objectives & Quality at Entry Assessment

3.1.1 The project was rated relevant based on the assessment of its strategic consistency. The project supported the Bank's Country Strategy particularly regarding rural development and is rated relevant in view of its consistency with the sector strategies of both the Bank and the Government of Lesotho. The Poverty Reduction Strategy 2003/04 – 2006/07 (PRS) has expired but it is still being referred to during budget preparations and the National Interim Framework is in place until the National Development Plan is being tabled for 2012/2013. The PRS states that increased agricultural production and food security, development of infrastructure (with specific emphasis on roads which are seen as vital to the implementation

of many strategies listed in the PRS). The upgrading of this road is also referred to in the Transport Sector Programme (TSP). Moreover, the Transport Policy dated February 2006 highlights the role of transport in poverty reduction in general and the role transport plays to provide access to agricultural inputs, markets and appropriate technologies as well as access to education, health and welfare in specific. Socio-economic dimensions such as poverty reduction, strengthening socio economic development of the target areas and rural development were not explicitly specified or incorporated into the project design. The new performance indicators were thought to be more relevant, especially as improved socio - economic welfare conditions is a very broad concept while GDP of project area and percentage of households living below poverty line are thought to be better indicators.

3.1.2 The Mpharane – Bela Bela project road is consistent with the efforts of other development partners addressing the same sector needs. In addition to the RRMP which included a component linked to capacity building of local contractors in the transport sector, the World Bank is also engaged with GOL on the re-establishment of the Lesotho Road Management System (LRMS) which is used for planning purposes.

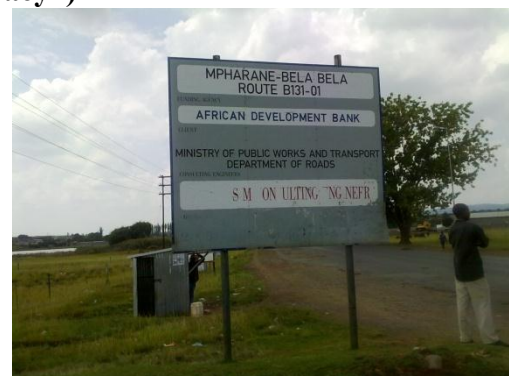
3.1.3 The negative environmental impacts identified by the Project Brief during the assessment and project planning phase were mitigated by a construction Environmental Management Plan. All impacts identified were related to the construction phase of the project. These were monitored and mitigated by the EMP during the construction phase of the project. The project’s environmental classification seems adequate given the minimal resettlement and reallocation of communities involved.

3.1.4 The Mpharane – Bela Bela project is a rural road and thus the upgrade to paved standards would be expected to contribute to the improvement of economic and social growth of isolated areas and ultimately to reduce poverty. Nonetheless, the project was not formulated in a way that would directly achieve this goal. There are two major project design deficiencies: (i) socio-economic dimensions such as poverty reduction, strengthening socio economic development of the target areas and rural development were not explicitly specified or incorporated into the project design, and (ii) during project design there was no development of an appropriate socio-economic baseline or poverty/socio-economic assessment.

3.1.5 It is generally agreed that the construction of additional feeder roads accelerates the social development impact of a road. Although the construction of feeder roads was not envisaged at appraisal, recent developments in the project area which were confirmed during the evaluation mission suggest that the road network has been expanded and currently resembles a “ring road” linking some villages to another.

3.2 Achievements of Objectives and Outputs (“Efficacy”)

3.2.1 The project is rated as *efficacious* but long term results achieved are less than expected. All outputs have been achieved. The road between Mpharane and Bela Bela as well as the spur roads to Kolojane and to St Theresa were constructed to a satisfactory standard (compared with general standards in the region). However, the box culverts were inadequately sized to handle the magnitude of the runoff from the catchment



areas due to the unusual heavy rainfalls during construction impacting on the integrity of the pavement structure and wing walls of the box culverts at km 11.1 and km 12.0, but this is being addressed, as it was established that the consultant was at fault and subsequently the consultant is making use of his Professional Indemnity Insurance for the rectification of the defects.

3.2.2 Short term results: travel times between both ends of the road (Mpaharane and Bela Bela) were reduced from about one hour to about half an hour. Estimations on Vehicle operating costs show a reduction of about 40%. Improved accessibility in the form of an all-weather road has been achieved in the sense that the road is now accessible 365 days a year by all vehicle types (where year-round use of the road was previously only possible for 4x4 vehicles).

Table 1: Comparison between key performance indicators at appraisal (expected) and PPER (achieved)

Key Performance Indicators	Appraisal (estimation at completion) -	PPER (achieved) -	Balance (A-B)
	A	B	
Improved socio economic welfare conditions (number of local persons from community employed to carry out maintenance activities)	20	30	10
Reduction in VOC at completion (%)	40.73%	41.49%	0.76%
Average Roughness IRI in m/km)	2.5 (2007)	between 2 and 3	none
Average travel time	0.5 hours	0.33 -0.5 hours	none

3.2.3 However the traffic growth over the years was in general below estimations at appraisal, as shown in the table below. This downward trend is applicable for passenger cars, light trucks and heavy trucks. Traffic related to buses on the contrary registered figures above expectations. The low traffic growth indicates slower than expected uptake of benefits such as increased economic activity in the project areas. This situation suggests that additional assistance and investment are needed to promote complementary development in the project communities. In addition, to obtain an indication of the origins and destinations, origin and destination (OD) surveys need to be carried out. The duration of these surveys is typically 12 or 24 hours over 7 days. OD surveys are beyond the scope of this study. However, Bela Bela is the ward centre and from the site visit it was evident that significantly more traffic travels to and from Bela Bela than St Teresa.

Table 2: Comparison between expected traffic (Appraisal) and achieved (PEER)

Year	Total Traffic Appraisal (A)	Total Traffic PPER (B)	Difference
2001	273	222	-51
2002	283	235	-48
2003	295	257	-38
2004	307	357	50
2005	319	285	-34
2006	332	239	-93
2007	345	276	-69
2008	359	269	-90
2009	373	324	-49

Traffic figures from Roads Directorate

3.2.4 The short term results of the Environmental Management Plan were achieved during the implementation of the project, through the mitigation of physical construction impacts.

3.2.5 Intermediate results: the movement of people and goods between roadside communities has been greatly facilitated, with access to larger centres outside the project area (such as Maputsoe). This improvement is due to the reduction in travel time and vehicle operating costs mentioned above. As a consequence, the frequency and availability of transport services (bus and taxis) have increased considerably compared to the situation before the project. Prior to the upgrade 6 or 7 taxis were operating on the route between Maputsoe and Bela-Bela compared to 35 to date. Similarly, there was a sharp increase in the number of taxis operating on the route between Maputsoe and Corn Exchange, from 3 taxis to 20 taxis. The frequency of taxi operations is now one taxi approximately every 30 minutes each day in each route. The project did not, however, bring about a reduction in transport fees. The fares applied by local private operators vary between Maloti 9.00 (about UA 0.80) for a one-way trip between Maputsoe and Bela-Bela to approximately Maloti 6.00 (about UA 0.53) for a one-way trip between Corn Exchange and Maputsoe. This represents normal inflationary adjustment compared to costs prior to the road upgrade.



3.2.6 Schools in the project area that existed prior to the upgrade (seven primary schools, one secondary school and one high school) have experienced an increase in enrolment and attendance, while one combined school (Baking Government School) was opened after the project. In addition, the number of people receiving treatment at the St. Theresa Clinic has more than doubled. This is an indication that the road might be a contributing factor for the utilization of and increased access to social services (such as schools and health facilities).

3.2.7 From an environment point of view, reduced erosion is evident from the gabions which were provided as part of the project outputs in the vicinity of culverts to prevent erosion. Protection of downstream water courses by the effective management and release of storm water has also occurred in most instances. Dust control was also achieved in the sense that the road was upgraded from previous gravel or unpaved standard to paved standard thereby eliminating dust resulting from vehicles using the road.

3.2.8 The promotion of economic growth and development leading to socio-economic development and poverty alleviation is not evident. This can be attributed to the fact that the road was only completed in 2005 and typically, the impact of rural roads takes some time to materialize. The lack of availability of indicators at constituency/village level is a limiting factor in assessing results.

3.2.9 The project area is well known for the production of maize, sorghum and wheat however the cultivation of crops for commercial purposes is virtually non-existent in the project area; almost all crops are grown for domestic consumption (exceptions being that some households sell maize to people coming down from the highlands, where agricultural land is scarce, while some also sell crops at Maputsoe). Agriculture activity has not increased significantly and possible underlying reasons are the fact that land tenure is a complex system in the country and individuals do not have the capital required to effectively engage in commercial farming activities.

3.2.10 Notwithstanding the above, the project has contributed substantially to the well-being of people living in communities along the road. This is mainly due to the greater ease of access to facilities and services (e.g. shops at Maputsoe, health facilities at St. Theresa, etc.). Perceptions from community members reveal that the upgrade of the road has made settlements like Bela-Bela, St. Theresa and Kolojane more attractive places to live, thus attracting people from more remote villages further from the road to move to these settlements.

3.3 Efficiency

3.3.1 The efficiency of the project is rated unsatisfactory owing to delays (9 months in overall) and cost overruns (55.3%). The ineffective use of labor force for maintenance also hindered efficiency as well as less than expected Economic Internal Rate of return (EIRR).

3.3.2 As far as maintenance is concerned, a positive aspect to point out is that previously only periodic maintenance was outsourced and routine maintenance was carried out by the so-called In-Departmental Units or Force Account Units. With the restructuring of the road sub-sector Force Account Units of the RD are in the process of being phased out.

3.3.3 The EIRR which was revisited as part of this PPER amounted to 7.26% against the 16% expected at appraisal. The assumptions and the details are provided in appendix J. The main reason is traffic count below expectations. At appraisal it was estimated that traffic would increase to 200-500 vehicles by 2004 however according to most recent counts from RD the traffic amounted to 222 vpd in 2001 and only 276 vpd in 2007.

3.3.4 The recalculated EIRR is also below the Bank's Weighted Average Cost of Capital (WACC) for Lesotho which is equivalent to 12% and slightly below the discount rate of 8% used in the Southern African Customs Union (SACU).

3.4 Institutional Development Impact

The project did not have any specific institutional development objectives and as such the project did not contribute directly to institutional capacity building. However, the RD provided ‘on the job’ training opportunities to students from the polytechnic. Similarly, laborers developed skills while employed on the contract.

3.5 Other Development Impacts

3.5.1 Overall the project is rated satisfactory but there are shortcomings related to road safety, encroachment by housing structures on road reserve. **Road Safety:** the upgrade of the road to paved standard has resulted in increased travel speed and most likely in a subsequent increase in accidents. The summary of safety records are only reported on a district level and accident reporting (refer to Bureau of Statistics, 2004-2005, Transport and Communications Statistics) pertaining to the cause of accidents does currently not include causes such as speeding and intoxication. Nonetheless, consultation with road users suggests that accidents have indeed increased along the road, and that an important cause of accidents is the sharp bend of the Kolojane road at the junction with the Mpharane – Bela-Bela road (an instance of geometric alignment that is not conducive to safety). Signs warning of the bend and the junction beyond it have been stolen, and a number of vehicles (mostly private cars) have ended up in the culvert beside the road at the junction.

3.5.2 Encroachment by housing structures on the road reserve: is common and sometimes even takes the form of speculative encroachment where people purposefully erect structures in an area where they believe resettlement will take place so as to secure compensation. The policy states that the structure/house is deemed to belong to a given household and the compensation process should start all over again in case the household fails to move out of the reserve within three months of a given deadline. Findings from the evaluation mission reveal that at least one new house was under construction within 5m of the road. Consultation with community members suggests that people are aware of the prohibition against the erection of structures within 15m of the road centre-line. Cases have also been reported where, after being compensated, a household failed to move out of the road reserve. Photographic details are provided in appendix L.

3.5.3 Environmental impact: Borrow pits have been successfully rehabilitated. The communities requested a borrow pit at Kolojane (km 6.0) to be retained as a stock watering point which has been successfully converted into a dam. Storm water management has been mostly effective. However, there are singular areas of failure due to under estimation of run-off and poor engineering design support which is a serious environmental and safety issue that must be addressed.

3.5.4 The flooding of the culvert at km 11.2 caused significant damage to the road and protection measures. The extent of the damage is serious and is a safety hazard, and the integrity of the pavement surface is at risk. The contractor is currently engaging his Professional Indemnity Insurance to rectify the problem as it is deemed an engineering design fault.

3.5.5 Land acquisition, compensation and resettlement: although there was no record of Resettlement Action Plan being developed prior to project implementation, both land acquisition and resettlement took place and adequate compensation was paid in all cases. The effectiveness of this process may be attributed to the Employer engaged a Property Consultant to evaluate the extent of damage to properties and recommend compensation amounts. The Consultant developed appropriation drawings for each affected property, which were used as basis for negotiation with landowners. This greatly facilitated the process and minimized disruption of construction activities by compensation issues.

3.5.6 Relocation of graves: was done according to the Environmental and Social Plan (EMP) and sufficient stipends were provided for culturally appropriate reburial.

3.5.7 In-migration of people and associated social problems and health risk: Community regard the project as having minimal negative impact on HIV/AIDS. This may be ascribed to the fact that the construction workforce sourced from outside the project area was relatively small, and the fact that few trucks currently use the road. Initiatives that were implemented in the context of the EMP included consultation with the two Health Centres in the area to ensure distribution of condoms without interference with public health programmes and consultation with Workers of the Ministry of Health. In addition, the project has had a positive impact in respect of HIV/AIDS by improving access to health facilities where testing, Anti Retro Viral (ARV) treatment is carried out.

3.5.8 Employment and Gender Development: Relatively few women were employed on the project (3 from Mpharane and 3 from the Corn Exchange area) whilst the total number of employees from the community was 30. Therefore 20% of those employed on the project constituted of women. The low percentage of women employed in the project is often due to cultural norms in the area, as well as the demands of domestic duties on women's time. The project has, however, had other benefits for women as they were involved in small business such as serving food and drinks to the construction labor force. Currently, women benefit through the greater ease of travel to market towns and social-health-educational facilities. The RD intends to enforce a quota of at least 25% - 30% women in the labour force for labour-based road maintenance to perform tasks suitable for female workers.

3.5.9 Potential for Sandstone Production: Bela Bela has high potential for sandstone production. Exploitation of this economic opportunity would have been facilitated by the extension of electricity to Bela-Bela which took place after project completion. Nonetheless, the sandstone production has not materialized yet.

3.5.10 Unintended impacts: the facilitated access from roadside communities to larger centres such as Maputsoe has brought several benefits for roadside communities but at the same time it has caused several village shops to close down. This may be ascribed to the fact that it is now so much easier to take a taxi to Maputsoe, where there is a larger range of commodities available at lower prices than was the case in village shops. An additional impact is that, in June 2009, an Anti-Retro Viral (ARV) treatment programme was started at the clinic at St. Theresa. The clinic serves 33 villages in the surrounding area, and 132 people (mostly women) are currently receiving ARV treatment there.

3.6 Sustainability

3.6.1 The road sub-sector of the Kingdom of Lesotho continues to experience constraints in two major areas (i) adequate funding for maintenance as evident from the current levels of inadequate budget allocations, and (ii) limitations in institutional capacity. The project benefits in overall are less likely to be sustainable.

3.6.2 Policy and Political Sustainability: One major institutional change has been the creation of the Road Fund (RF) in 1996 which only became operational in 1998. The RF is managed by the RF Board which is a policy-making body with representation from both the Government and the private sector. The primary purpose of the RF is to finance routine and periodic road maintenance of all roads in Lesotho (although part of funding for routine and periodic road maintenance is still being channeled through the recurrent budget of central government), as well as to a lesser extent rehabilitation, upgrading and new road works. These include roads under the jurisdiction of the RD and Department of Rural Roads under the MOPWT and also the Maseru City Council (MCC) and the Maseru Local Government (MCG).

3.6.3 Another positive development has been the recent creation of the Roads Directorate which includes the merger of the Department of Rural Roads (responsible for all rural “access” roads) and Roads Branch (responsible for all main roads connecting important economic centres) with the view to avoid duplication and improve service delivery. The process of forming the Roads Directorate already started in 2002 and since then a number of studies were done. The change entails a transition from a Government institution to a semi-private sector oriented organization.

3.6.4 Despite the above, on a sector-wide basis there are two main issues that are likely to affect the sustainability of road projects in Lesotho. Those two issues are associated with policy matters and entail (i) the increase of charges in order to ensure cost recovery and (ii) the channeling of all funding through the RF in order to increase accountability, transparency and service efficiency. Regarding the former, in 2003 the Road Fund financed a study³ to review the Road Maintenance Needs and the Generation of Road Funds Revenue. The study made several recommendations, including the need to increase gradually the road charges to an affordable level. Although the GoL has increased road user charges in 2005, the current levels are considerably lower than the required charges, except for the case of road toll gates¹.

3.6.5 In addition, data from 2006 -2009 shows the channeling of funding to the RF has been through the capital expenditure allocations and it has remained almost unchanged and equivalent to Maloti 25 million (approximately UA 2.23 million). This is not in line with the undertaking stipulated in the Loan Agreement which required (under Other Loan Conditions) the Borrower to replenish the RF accounts with Maloti 50 million per annum for road maintenance.

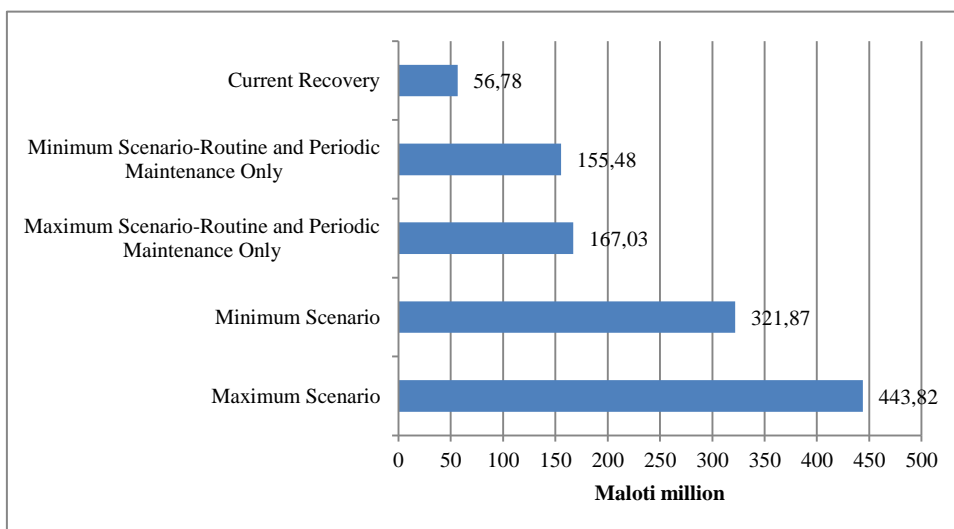
³ Review of Projected Maintenance Needs and the Generation of Road Fund Revenue, 2003

¹ Review and Update of the Study of the Review of the Projected Road Maintenance Needs and the Generation of Road Fund Revenue, Final Report, March 2010

3.6.6 Institutional Sustainability: the institutional capacity of the MOPWT and the RD continue to be constrained by the lack of appropriately qualified human resources. To aggravate this situation, the recommendations of the Study on Recruitment and Retention (Final Report December 2007) were not implemented at the RD as they only pertain to civil servants and the RD is structured along private sector lines. At the moment, the RD is undergoing a major institutional reform as staff levels are in the process of being reduced from 1,800 (technical and professional) to 150 (professional only). This process is being implemented through staff transfers to Local Government, small scale contractors after appropriate training, MOPWT's as well as through early retirement. Only 60 positions out of the 150 positions of the RD have been filled, and the remaining positions are being advertised.

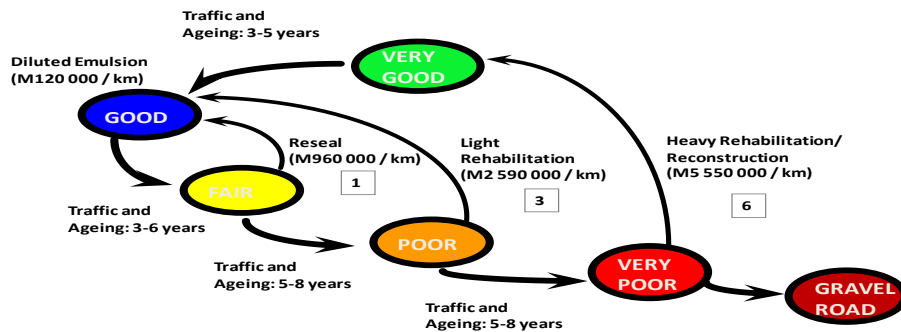
3.6.7 Financial Sustainability: the risk of inadequate road maintenance remains high. Cost recovery from road charges is not sufficient to make a contribution towards rehabilitation of the road network. According to a recent study conducted by the RF in 2010ⁱ, revenue from the RF (derived primarily from a road maintenance levy, tollgate fees, vehicle license and registration fees and overloading fines) amount to Maloti 56.78 million (approximately equivalent to UA 5.07 million) for the 2007/08 financial year. However the required funding for routine and periodic maintenance only to maintain the road network in a fair condition is approximately Maloti 155.48 million (approximately UA 13.88 million) as shown in the figure below. This represents therefore cost recovery from road users of about 36.5%. The cost recovery is improved in case the recurrent budget allocations from central budget is included (approximately Maloti 30.4 million or UA 2.71 million) as the financing gap narrows to about 56%. As part of a previous study the total annual road funding requirements for the whole network were developed for two funding scenarios namely the maximum and minimum scenario. The maximum scenario was arrived at by determining the funding requirements to improve the road network to a good condition (70-85 Condition Index). If the road is already in a good condition it will be increased to a very good condition. The minimum scenario was arrived at by determining the funding requirements to improve the road network to a fair condition (50-70 Condition Index). If a road is already in a fair condition it will be improved to a good condition.

Figure 1: Comparison between required recovery and current recovery (Maloti million)



In cases where the road is allowed to deteriorate from good to poor condition, it is often increasingly expensive to bring the road back to good condition, as indicated in the figure below:

Figure 1: The condition and deterioration of a road over time for different maintenance strategies requiring different funding levels



3.6.8 Technical Sustainability: there are three key factors impacting on the technical sustainability. First, the defects pertaining to integrity of the pavement structure and the wing walls at km 11.1 and km 12.0 are still present but are being remedied. The longitudinal groove or crack at km 6.3 is still present but RD has expressed its intention to undertake appropriate sealing. Vandalized traffic signs are still evident on the road, and a substantial number of signs are missing altogether.

3.6.9 Second, the asphalt edge in certain areas where a gravel shoulder is lacking is breaking up. Over time this will exacerbate the side drain erosion problem, as well as the integrity of the road surface. Periodic maintenance is needed in the near future on the project road, as the road has reached 5 years of age already. It was established that routine activities are postponed on the project road, as drainage is blocked in some cases. Road marking for especially the centre line is needed on some sections but it is understood that road markings are typically carried out in Lesotho as part of periodic maintenance activities.

3.6.10 Third, the purpose of the LRMS is to facilitate better planning in the execution of road maintenance activities. The LRMS became non-functional in about 2002 due to a lack of funding and a lack of necessary commitment. Recently the GoL has expressed its commitment to the support of the LRMS to avoid the situation as in 2002. It is envisaged that the LRMS will be fully functional before July/August 2010. The initial costs for the re-establishment of the LRMS were funded by the World Bank as part of the ITP. Road condition surveys will be undertaken from April 2010 until about July 2010, and the results of the surveys will be fed into the LRMS.

3.6.11 Lastly, few traffic signs are in line with the traffic sign standards of the Southern African Development Community (SADC).

3.6.12 On a positive note, the appropriate pavement and geometric design standards were used.

3.6.13 Social Sustainability: the findings of the field mission indicate that the project enjoys wide community support, and that community members are of the opinion that the project's intended benefits have been realized.

3.6.14 Another factor that influences the project's social sustainability is its ability to provide long-term economic and employment opportunities. Despite the absence of a formal policy on female participation in road maintenance and the fact that the involvement of women in such activities often contravenes traditional social norms, some progress has been made towards greater inclusion of women. In particular, the RD intends to enforce a quota of at least 25%-30% women in the labor force for labor-based road maintenance, with these being employed to perform tasks suitable for female workers. This intention is further supported by a study on involvement of women in labor-based road maintenance in Lesotho, which revealed that, while women tend to work more slowly than men, they tend to work with greater accuracy.

3.6.15 A third factor that contributes towards the project's social sustainability is its impact on HIV/AIDS and the manner in which this impact is being addressed. HIV/AIDS is regarded by the RD as a cross-cutting issue that is now being mainstreamed in all its activities. The importance assigned to HIV/AIDS-related issues is further underscored by the fact that the position of HIV/AIDS Coordinator has been included as part of the Integrated Transport Project (ITP) under the RD's Planning Unit. In addition, guidelines for the promotion of awareness and mitigation of HIV and AIDS in the road sector have recently been developed by WSP International Management Consulting and CARE Lesotho. These guidelines constitute one of the planned outputs of the Likalaneng to Thaba Tseka Lot 1 Road Upgrading Project, which is being funded by the AfDB. These developments are a positive indication that active steps are being taken to address the impact of road projects on the HIV/AIDS pandemic in Lesotho.

3.6.16 Vandalizing of traffic signs is a continuous problem in Lesotho. Traffic signs are being cut off and sold as scrap metal and the poles of guardrails are removed and are being used for firewood. There are a number of cases whereby traffic signs were vandalized on the project road involving essential signs such as the turn-off sign to Bela Bela and reflector signs ahead of bridges. Mitigating measures to reduce the occurrence of traffic sign vandalism has been implemented by the RD. Recently, the RD approached the local chiefs to engage in discussions with the local community and a regulation has been implemented whereby written permission needs to be obtained by the chief when scrap metal is being sold. Indications are that the issuance of this regulation resulted in a decrease in the vandalism of traffic signs. The RD also intends to engage in research on the design of poles made out of alternative materials which are not attractive for use as firewood. The implementation of fines for vandalizing traffic signs should be considered to serve as a deterrent.

3.6.17 **Environmental sustainability:** objectives have been achieved for the upgrade of the road from a gravel surface to all-weather asphalt. Historical environmental issues were mitigated and addressed however operational monitoring of the road is not apparent. There are specific storm water erosion and management issues adjacent to the road which needs to be addressed by an operational management plan, as part of routine maintenance, due to the highly erosive nature of the landscape. Most of the materials quarries have been rehabilitated. Communities have requested that singular quarries be retained as ponds and watering holes for domestic livestock. No sensitive or significant environmental and social features are affected as the road largely follows the existing alignment. Ongoing road maintenance is required to ensure the integrity of side drains and storm water drainage features in a highly erosive landscape.

3.7 Aggregate Performance Rating

3.7.1 This project is rated satisfactory. The project remains relevant to the development needs of the country, especially the provision of all-weather access to remote places. However the quality at entry, especially in terms of project design issues has some room for improvement. The project is rated efficacious but the achievement of some results has been slower than expected. The road between Mpharane and Bela Bela as well as the spur roads to Kolojane and to St Theresa were constructed to a satisfactory standard but there are two limiting factors, the defects pertaining to integrity of the pavement structure and the wing walls at km 11.1 and km 12.0 that are still present and the asphalt edge in certain areas where a gravel shoulder is lacking is breaking up.

3.7.2 Traffic growth estimations did not materialize and this coupled with both implementation delays and costs overruns have hampered efficiency. Sustainability is mainly affected by inadequate levels of funding for maintenance as well shortage of staff at Roads Directorate. Other development impact is in overall satisfactory but road safety, theft of road signs, and encroachment by housing structures on road reserve. Land acquisition and resettlement took place and adequate compensation was paid in all cases.

3.8 Borrower and Executing Agency Performance

The performance of the borrower and the MOPWT is rated unsatisfactory. Although there were some delays in implementation, the completed works were of satisfactory quality and met the project requirements and the project management unit under the Executing Agency with the help of project supervision consultants effectively managed physical implementation of the project. Nevertheless, some project management capabilities need to be improved upon for the following reasons: (i) the unrealistic project costs that were eventually revised after project appraisal and prior to project implementation led to significant cost overruns borne by the GoL and delays in disbursement of counterpart funds. This could have been avoided by appropriate planning and estimation of project costs, (ii) the EA is ultimately the entity responsible for the bidder documents and the fact that the list of equipment for the Engineer's material laboratory was inadvertently omitted from the Bill of Quantities (BOQ) raises some questions. This omission led also to significant cost overruns, (iii) the submission of the 2005/2006 Audit Report which is still outstanding.

3.9 Bank Group and Co-Financier Performance

AfDB performance is rated satisfactory. From project preparation until loan approval, the operation was processed within 12 months and from loan approval to loan effectiveness, the loan was processed in 6 months. This indicates a short time for loan processing. Nonetheless, there was significant Bank staff turnover and poor knowledge transfer. Although AfDB gave satisfactory attention to the project through five supervision missions over four years, the skills mix could have been more diversified. Given the socio-economic and rural development dimensions of the project, the inclusion of socio-economic and environment experts in the project supervision team would have benefited the supervision of the project. Also, the unrealistic and over ambitious schedule for project implementation with little room for contingency issues suggests that due diligence in future Bank's assistance needs to be improved upon.

3.10 Factors Affecting Implementation Performance and Outcome

3.10.1 The implementation of the project and the achievement of development outcomes have been mostly affected by factors that led to cost overrun prior or at the beginning of the preliminary works. Those issues entailed additional financing by the GoL and significant time delays. To aggravate that situation, the implementation schedule was very optimistic which in turn has led to excessive prolongation or time extension during the actual implementation of works. In the case at hand, the implementation period increased from 12 to 21 months.

3.10.2 Also the unrealistic or inadequate detailed engineering design at appraisal stage resulted in a revision of costs and a subsequent cost overrun of UA 1.01 which was totally borne by the GoL and disbursed with delays. Although most of the implementation issues were resolved, the nature of the challenges encountered points to less stringent prequalification requirements. In addition, the absence of competition was another key factor responsible for a higher bid price and consequently a contributing factor for the cost overrun of 55.3%.

4. CONCLUSIONS, LESSONS AND RECOMMENDATIONS

Conclusions

4.1 The project is rated *relevant* in view of its consistency with the Bank's Country Strategy Paper particularly regarding rural development as well as with the Poverty Reduction Strategy 2003/04 – 2006/07 (PRS) that emphasized the development of infrastructure (with specific emphasis on roads). The upgrading of this road is also referred to in the Transport Sector Programme (TSP). In terms of Quality at Entry, there are two major project design deficiencies: (i) the project is mainly a rural road project but the typical objectives of the project were limited to the reduction of transport costs and provision of all-weather access to selected communities. Socio-economic dimensions such as poverty reduction, strengthening socio economic development of the target areas and rural development were not explicitly specified or incorporated into the project design (ii) during project design there was not an appropriate socio-economic baseline or poverty/socio-economic assessment.

4.2 The project is rated *effective* in achieving its intended results but the major shortcoming is with regard to long term outcomes. Travel times were reduced from about one hour to about half an hour. The road is now accessible all year around by all vehicle types, and estimations on Vehicle Operating Costs (VOC) show a reduction of about 40%. Nonetheless, the achievement of long term results i.e. promotion of economic growth and development, socio-economic development; poverty alleviation is not evident at this stage. This can be attributed to the fact that the road was only completed in 2005 and typically, the impact of rural roads takes some time to materialize.

4.3 The efficiency of the project is rated *unsatisfactory*. Updated information on traffic counts, physical implementation of outputs and VOC were used to recalculate the Economic Internal Rate of Return (EIRR) which amounted to 7.26% against the 16% expected at appraisal. The main underlying reason is below expectation traffic count and underestimation of quantities in the engineering design. In addition, project implementation was characterized

by 9 months delay, 55.3% cost overrun (from appraisal until completion) and the use of labor force for maintenance.

4.4 The project sustainability is unlikely and is rated unsatisfactory. There are two major issues that affect sustainability namely (i) inadequate funding for maintenance and (ii) limitations in institutional capacity. Cost recovery from road users is not sufficient to make a contribution towards rehabilitation of the road. According to a recent study conducted by the Roads Fund (RF) in 2010⁴, the current recovery levels from road users amount to Maloti 56.78 million (approximately equivalent to UA 5.07 million) for the 2007/08 financial year compared to the Maloti 155.48 million (approximately UA 13.9 million) needed per annum for routine and periodic maintenance only to maintain the road network in a fair condition. This represents cost recovery from road users of about 36.5%. In case the recurrent budget allocations from central government are included, the financing gap narrows to about 56%. In terms of institutional sustainability, RD is currently undergoing a major institutional reform as staff levels are in the process of being reduced from 1,800 (technical and professional) to 150 (professional only). Only 60 positions out of the 150 positions of the RD have been filled, and the remaining positions are being advertised.

4.5 The implementation of the project and the achievement of development outcomes have been mostly affected by factors that entailed additional financing by the GoL and significant time delays. To aggravate that situation, the implementation schedule was very optimistic which in turn has led to significant time extension during the actual implementation of works from 12 to 21 months.

4.6 Since the bidding documents were based on Preliminary Design typically conducted at Feasibility Stage, and not on a detailed engineering design as requested by the Bank's procurement procedures, a revision of the change in quantities was necessary after appraisal and before implementation, and led to a subsequent cost overrun of UA 1.01 that was totally borne by the GOL and disbursed with delays.

4.7 The market of contractors for road works is very limited. Out of the twelve companies that acquired the bidding documents, only four contractors submitted proposals and only one of those was qualified to undertake the activities.

Lessons:

- Baseline data and continuous follow up after project completion with country's executing agencies are paramount to ensure appropriate impact assessment of projects with socio-economic and poverty reduction dimensions.
- Private sector development in contracting road works is a condition to ensure proper competition in the bidding process and suitable qualifications of the national capacity in the sector. The market of contractors for road works is very limited. Out of the twelve companies that acquired the bidding documents, only four contractors submitted proposals and only one of those was qualified to undertake the activities.

⁴ Review and Update of the Study of the Review of the Projected Road Maintenance Needs and the Generation of Road Fund Revenue, Final Report, March 2010

- Appropriate M&E system with key performance indicators to measure socio-economic impact and poverty reduction is key to ensure that objectives are met and projects are yielding expected impacts.
- Regular and sufficient funds allocation for road maintenance is a necessary condition to ensure project sustainability. This allocation must be based on a sound road maintenance planning program. Although the government has expressed willingness to strengthen its maintenance regime, the lack of funds continues to be a dissuading factor. In the case of the project, the risk of inappropriate maintenance can become a constraining factor in the medium to long term. Currently routine activities are being postponed on the project road, as drainage is blocked in some cases and periodic maintenance will be needed in the near future on the project road.
- Adequate institutional capacity and expertise of the Road Department on planning and executing road maintenance works is another necessary condition to ensure project sustainability in particular and the national road network in general.
- Enforcement of safety measures and preservation of existing safety equipments on the road are key to ensure road users safety. Traffic Sign Vandalism can hamper road safety. In some instances, the traffic signs are stolen from the road and then used in building dwellings or the poles of guardrails are used for firewood.

Recommendations

Recommendations to the Bank

- Preparation of rural road projects should have a specific approach for rural development and should take on board the need for complementary activities and services broadening the socio-economic opportunities in the targeted communities.
- In order to avoid changes in quantities and consequently extra cost and delays, the Bank should ensure that at appraisal, the bidding documents are based on a detailed engineering design.

Recommendations to the Borrower

- Adequate levels of financing for road maintenance can be resolved by strong commitment from the GOL in implementing recommendations from previous studies from the RF targeting road maintenance needs. Those include the gradual phasing of increased road user charge levels whilst ensuring that they remain affordable and the channeling of all roads funding to the RF. The Bank in coordination with the development partners active in the sector should continue to invest in policy dialogue with the GoL in order to tackle the road financing needs.
- It is imperative that the GoL in conjunction with development partners continue to invest in the promotion of local construction industry which ultimately would foster competition and reduce bid prices. This can be done through institutional

capacity projects/programs aimed at developing and strengthening country's medium and large road contractors.

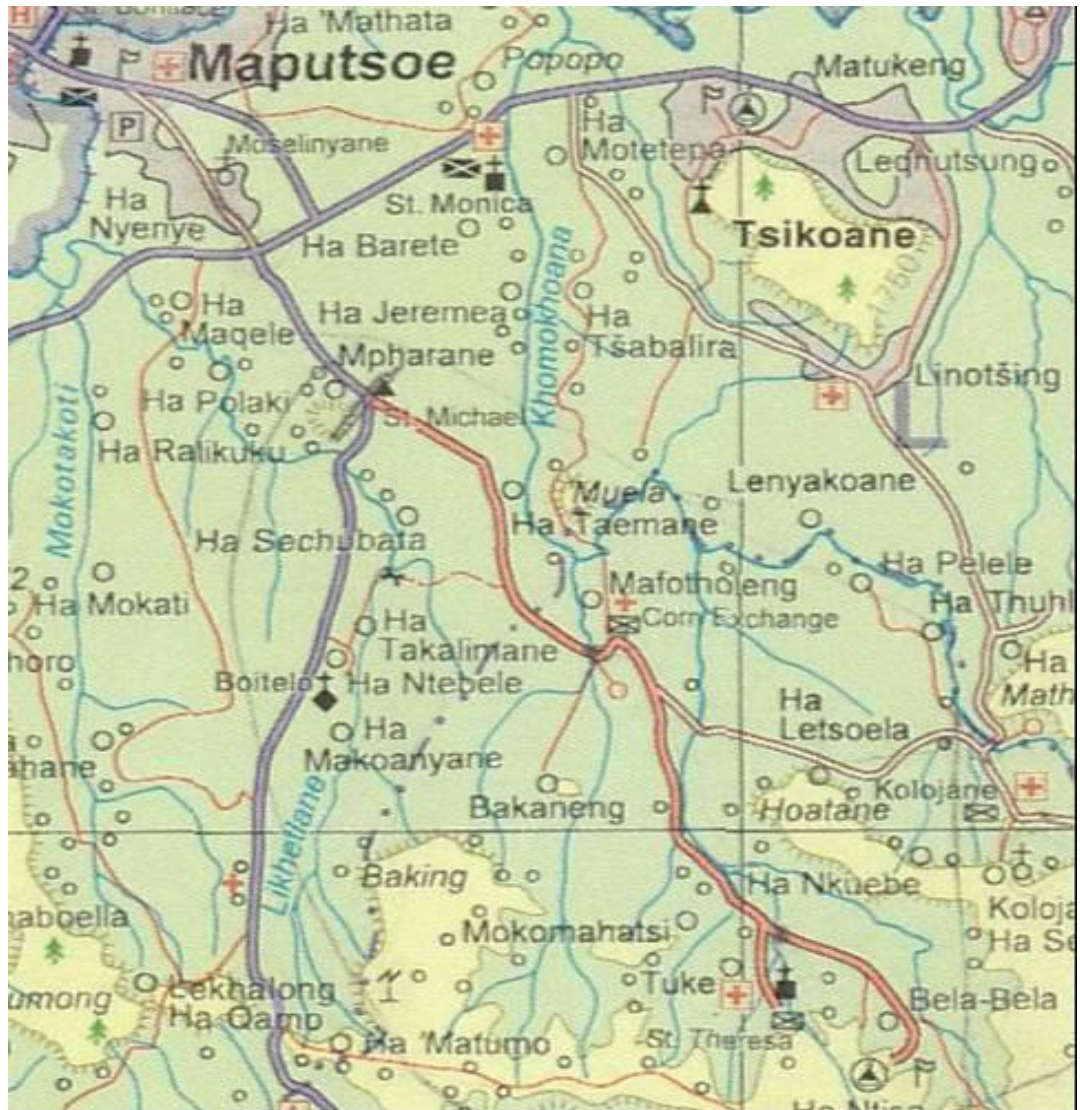
- The GoL needs to strengthen M&E and Data Collection. Time series statistical data was not available at constituency as data is aggregated at district level and discarded afterwards. This situation has hampered both the PCR as well as the PPER exercise. It is recommended that the GoL and the MOPWT put in place mechanisms of data collection and analysis that are not discarded after aggregation.
- It is recommended to perform reseal actions at an earlier point of time to avoid costly rehabilitation actions or pavement reconstruction at a later stage.

FOLLOW UP ACTIONS

Pursuant to the recommendations addressed in the PCR and in the EMP, some issues continue unsolved and require action as follows:

- Rectify the defects in respect of drainage, wearing course, traffic signs and kilometer posts;
- Rectify the ineffective storm water management and structure failure, and implement outstanding aspects pertaining to storm water protection measures, especially side drains and stream outlet structures;
- Proper community consultation on illegal Road Encroachment by housing structures in order to define a clear policy and measures to ban it;
- Submit the 2005 and 2006 Audit reports that are still outstanding.

PROJECT MAP AREA



EVALUATION CRITERIA - RETROSPECTIVE

No.	Component Indicators	Score (1 – 4)	Remarks
1.	Relevance and Quality at Entry	3	Satisfactory. The relevance of the objectives is generally confirmed and presented good quality at entry with only a few shortcomings. The project is consistent with both the country's overall objectives and the Bank's overall Country Assistance Strategy.
i)	Consistency with country's overall development strategy	3	Project is consistent with the country's overall development strategy. GOL's development strategy is outlined in the National Interim Framework which is in place until the National Development Plan is being tabled for 2012/2013.
ii)	Consistent with Bank's Country Assistance Strategy	3	The project road is consistent with Bank's policies and country strategy as it entails poverty reduction and economic growth through the development of synergy between national interventions in the transport sectors taking into account the cross-cutting issues.
v)	Human Resources Development	3	The RD provided "on the job" training for students and labourers who worked on the construction and developed their skills during the construction phase.
vii)	Quality at Entry	2	No detailed studies were undertaken before proceeding with the procurement of works. Although the project was based on the rationale that it would help in the longer term to promote socio-economic development and assist to reduce poverty, it was not formulated in a way that will directly achieve this goal.
2.	Achievements of Objectives and Outputs ("Efficacy")	3	Satisfactory. The project has achieved most of its relevant objectives and has achieved satisfactory development results, with only a few shortcomings. Project did contribute to increase the number and frequency of taxis after the construction of the road, the facilitation of movement of goods and people between roadside communities. Land issues, resettlement and adequate compensation to all concerned occurred and an improvement with regards to drainage and storm water management across the road.
i)	Physical Objectives (Outputs)	3	All physical outputs were achieved as expected.
ii)	Short-Term Results	3	Road users experience reduced travel times from 1 hour to 30 minutes. Vehicle operating costs were also reduced and the accessibility of the road has also increased making the project road accessible 365 days a year by all vehicle types. The implementation of the EMP was achieved.
iii)	Intermediate Results	3	Movement of goods and people between roadside communities has be greatly facilitated. Transport services are frequently available. Prior to the road there were 6-7 taxis operating on the route and now they have increased to 35. School in the area have

No.	Component Indicators	Score (1 – 4)	Remarks
			experience an increase in enrolments. In addition, the number of people receiving treatment at the St. Theresa clinic has more than doubled. The project did not bring about change in transport fares.
iv)	Long Term Results	2	The promotion of agricultural development, economic growth and development, socio-economic development, poverty alleviation and general improvement of the quality of life is not evident. This can be attributed to the fact that the road is still fairly new (2005) and the impact to rural roads on communities tends to take a while to show.
v)	Environmental Objectives	3	There was an improvement with regards to drainage and storm water management across the road, rehabilitation of borrow pits was successful.
	Maintenance of soil, air and water	3	Reduced erosion is evident from the gabions which were provided as part of project outputs in the vicinity of the culverts to prevent erosion. The protection of downstream water courses by the effective management and release of storm water also occurred.
vi)	Maintenance of biodiversity	3	There were no issues with sensitive land uses such as natural areas, game parks and wildlife corridors to the existing alignment
vii)	Social Objectives and Targets	3	Land acquisition, resettlement and adequate compensation to all concerned occurred. Project improved access to healthcare facilities, particularly for HIV/AIDS infected people, where testing, ARVs etc, are administered. In addition, about 30 people from local communities were involved in road maintenance activities
viii)	Private Sector Development Objectives	N/A	The project did not have any specific private sector development objectives.
3.	Efficiency	2	For a major portion of the investment the EIRR is less than the prescribed OCC and a cost-overrun contributed to a less efficient rating.
4.	Institutional Development Objectives	N/A	The project did not have any Institutional Development Objectives.
i)	Other Development Objectives	3	The vandalism of traffic signs causes challenges to drivers on the road. Various measures have been put into place by the RB. Women in the project area are involved in small businesses such as selling drinks and food to the construction labour force. Women travel to market towns and social-health-educational facilities.
ii)	National Capacity	2	Unsatisfactory.
	<ul style="list-style-type: none"> • Environmental Sector Capacity 	2	Environmental Sector Capacity is very limited, as the RD only has one Environmentalist employed in the directorate.
	<ul style="list-style-type: none"> • Transport Sector 	2	Understaffing poses a serious problem for the RD.

No.	Component Indicators	Score (1 – 4)	Remarks
	Capacity		
5.	Sustainability	2	Unsatisfactory. Achievements of the project and accompanying benefits are likely to be sustained with ineffective LRMS due to lack of dedicated funding and commitment, shortage of staff, and insufficient cost recovery from road users to sustainably maintain the road.
i)	Technical Soundness	2	Appropriate pavement and geometric design standards were used. The LRMS is not functional due to lack of funding and commitment.
ii)	Policy and Political Sustainability	2	There is inadequate funding for maintenance. Budget allocation levels are inadequate. The project has limited political commitment as budget allocations to the road sub-sector via government and the RF are still inadequate.
iii)	Social Sustainability	3	The project road enjoys support from community members. Even though some members were involved in the construction and maintenance of the road, women's involvement is limited. RD aims to enforce at least 25% – 30% of women in labour-based maintenance consisting of women. HIV/AIDS, as a cross-cutting issue, is now being mainstreamed in all of RD's activities.
iv)	Financial Sustainability	2	Cost recovery from road users is not sufficient to make a contribution towards the rehabilitation of the road. About 37% is recovered from road users.
v)	Institutional Sustainability	2	The institutional capacity of the RD and MOPWT continue to be constrained by the lack of appropriately qualified human resources, Only about 60 out of 150 vacancies in the RD are filled. Recommendations made in the study on Recruitment and Retention (Final Report Dec 2007) were not implemented.
vi)	Environmental Viability	4	Storm water management across the road has been improved. Dust abatement has improved along with road surface conditions, erosion control as well as driver safety and vehicle longevity. No significant environmental features are affected as the road largely follows the existing alignment.

Appendix B

BORROWER PERFORMANCE EVALUATION

No.	Component Indicators	Score (1 – 4)	Remarks
1.	Quality at Preparation	3	Satisfactory.
i)	Ownership, Beneficiaries Participation	2	Limited Beneficiary participation.
ii)	Government Commitment	2	Commitment is limited as GOL allocated insufficient funds for ongoing maintenance of the project road.
iii)	Institutional Arrangements (Counterpart Funding)	3	Satisfactory.
2.	Quality of implementation	3	Satisfactory.
i)	Assignment of Key Staff	4	Appropriate skilled staff was appointed.
ii)	Management Performance of Executing Agency	3	Satisfactory.
iv)	Adherence to Time Schedule and Costs	2	Unsatisfactory. There was a start-up delay followed by a 9-month time over-run in the implementation of the project.
3.	Compliance with Covenants	3	The GOL fulfilled all the conditions of the loan even though it did so with varying degrees of difficulty.
4.	Adequacy of Monitoring, Evaluation and Reporting	3	Satisfactory. GOL submitted monthly and quarterly progress reports and annual audit reports (except the final audit report) in a timely manner in accordance with the relevant provisions of the General conditions of the loan.
5.	Satisfactory Operations	3	Road is opened to traffic although there are various sections of the road that have not been maintained.
	Overall Borrower Performance	3	Satisfactory. GOL complied with all covenants and met all monitoring requirements during implementation. However, GOL didn't allocate enough funds for the maintenance of the project road. In addition, the delays in the start-up phase of the project were caused by GOL's inability to fulfil loan conditions timely.

BANK PERFORMANCE EVALUATION

COMPONENT INDICATORS	SCORE (1-4)	REMARKS
1. At identification	3	The project was the outcome of the 10-year National Transport Plan, developed by GOL based on the National Transport Study financed by ADF.
2. At preparation of project	3	Done in 2001.
3. At appraisal	2	The project cost estimate appeared to be on the low side resulting in cost overrun. The implementation period of 12 months was short. The project was of high priority to GOL.
4. At supervision	3	Problems encountered were resolved in time and adequate measures were taken during project implementation.
overall assessment of bank performance	3	Satisfactory. The Bank undertook five supervision missions to Lesotho between the Appraisal and PPER stages, Socio-Economic Specialist and an Environmentalist's involvement could have benefitted the project.

**FACTORS AFFECTING IMPLEMENTATION PERFORMANCE AND
OUTCOME**

Factors affecting positively (+) or negatively (-) the implementations and achievements of major objectives

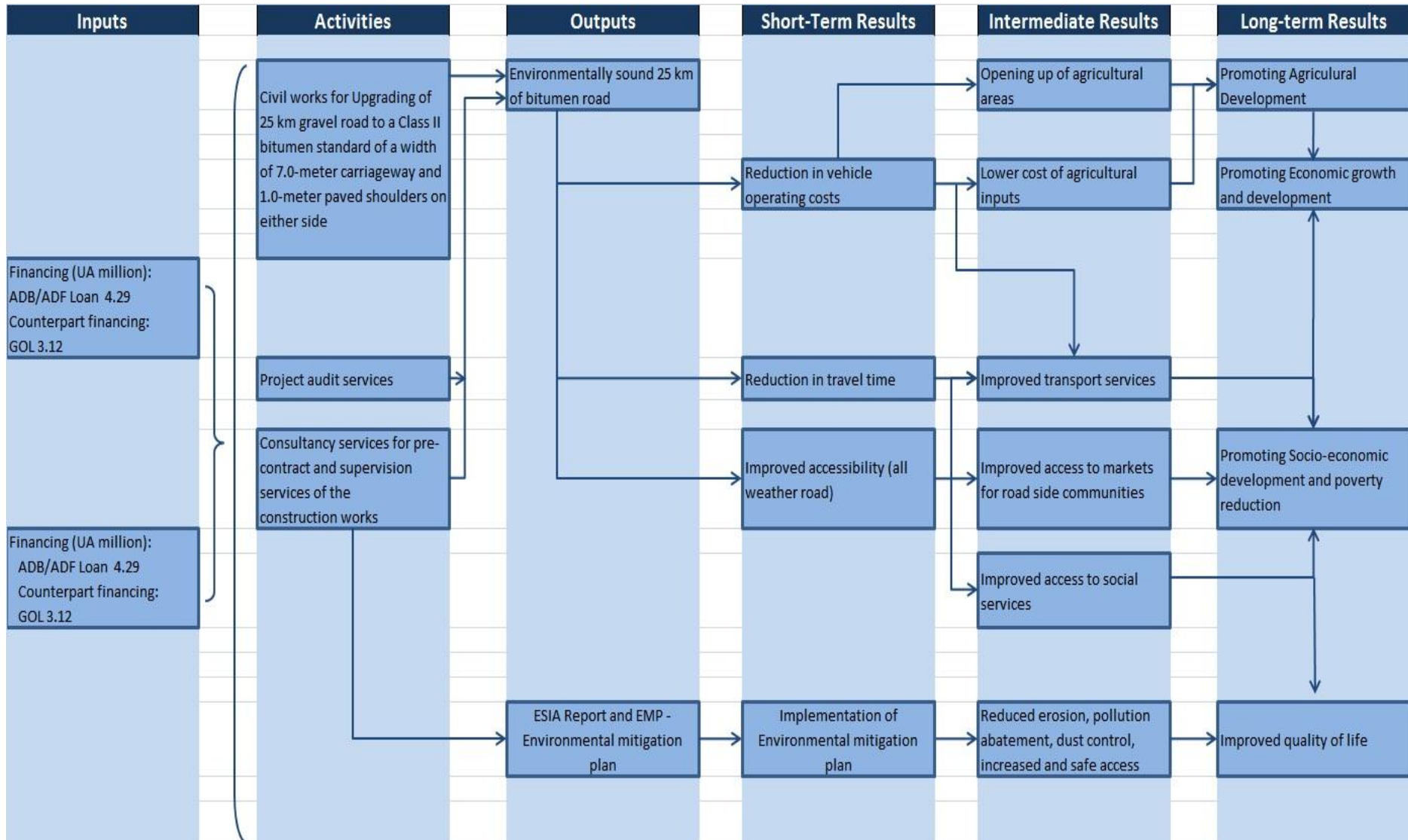
Factors	Sub-stantial	Partial	Negli-gible	N/A	Remarks
Not subject to Government Control					
World Market prices			-		
Natural events			-		
Bank Performance		+			The Bank can assist by strengthening the development impact of the project in providing assistance towards the development of the agricultural sector in the project area, as there is currently very little commercial farming activities in the area. Assistance can also be geared towards the realisation of lime stone production in Bela Bela as this will create employment opportunities for members of the local communities.
Performance of contractors/consultants			+		The road was only completed in 2005 and therefore is still relatively new with little maintenance required.
Civil war			-		
Others (Specify)					
Subject to Government Control					
Macro policies		+/-			The imposition of dedicated funding towards the road sub-sector in the light of over pressing needs is positive but all funding should be channelled through the RF.
Sector policies		+			The non-functionality status of the LRMS in 2002 resulted from lack of funds and not enough commitment from the GOL. The GOL have resolved to re-establish the LRMS in July/August 2010

Factors	Sub-stantial	Partial	Negli-gible	N/A	Remarks
Government commitment		-			The lack of government commitment is shown in that RUC are not raised to enable the sustaining of the road sub-sector.
Appointment of key staff		+			The appointment in key staff is important for the road sub-sector.
Counterpart funding		+			In an attempt to bolster socio-economic development in the project area, the GOL can also supply counterpart funding for efforts to commercialise agriculture in the project area and also take advantage of the limestone deposits in Bela Bela and create employment opportunities for local community members.
Administrative capacity	+				The administrative capacity of the Ministry of Finance and Development Planning and the MOPWT has a significant impact on the performance of the road sub-sector.
Others (Specify)			-		
Subject to Executing Agency Control					
Management		-			There was a slippage of 9 months on the overall implementation schedule which could be partially prevented.
Staffing	-	-			The RD is currently understaffed with 60 out 150 vacancies being unoccupied. There are skills shortages within the Directorate.
Use of technical assistance		+			To ensure that capacity building is achieved for the overall sustainability of the road sub-sector and the project road.
Monitoring & Evaluation		+			Progress was monitored through monthly progress reports prepared by consultants and quarterly progress reports prepared by GOL in line with the Bank's format. In addition the project was monitored through regular Bank supervision missions.

Factors	Substantial	Partial	Negligible	N/A	Remarks
Beneficiary Participation	+				The beneficiaries would play a significant role in ensuring socio-economic development of the project region by participating in the initiatives mentioned in section 2.5 of this table.
Others (Specify)			-		
Factors Affecting Implementation					
Changes in project scope/scale/design			-		There were no major changes in the scope/scale/design of the project.
Deficiency in estimating physical inputs, the base unit costs			-		
Inadequacy of price/physical contingencies			+		Due to abnormal rainfall during the construction phase of the project, the course of execution works had to be increased by 124 days and there was also a need to attend to the escalation of prices of materials. The change to the Contract Price Adjustment amount to M 698 805.30 (UA 0.72 million) representing 12.5 of the original contract price.
Changes in exchange rates, in financial and institutional arrangements			-		
Unrealistic implementation schedule		+			9 month delay attributed to issues which increased project costs – this led to a delay in sourcing financing for the balance of the costs not funded by the ADF
Quality of management including financial management	-				The cost overrun of 55.3% shows weakness in the financial management.
Delays in selecting staff/ consultants/ contractors and in receiving counterpart funds		+			The Civil works contract was signed 5 months later than the envisaged date. This was due to the process of getting GOL's commitment to finance the funding of the works, the bid price being UA 1.01 million above the financing agreement with ADF.

Factors	Sub-stantial	Partial	Negli-gible	N/A	Remarks
Inefficient procurement and disbursement procedures	+				Loan funds were disbursed by direct method to the Contractor and consultant.
4.9 Others (Specify)					

INTERVENTION LOGIC



RETROSPECTIVE PROJECT MATRIX

Hierarchy of Objectives	Expected Results	Performance Indicators	Measure				Assumptions & Risks
			Baseline	Indicative Target	PCR Value	PPER Value	
Goal (Overall Objective) Promotion of Increase Agricultural Development Promote socio-economic development & poverty alleviation Promotion of improvement in quality of life	Impacts Increased Agricultural Production	Impact Indicators % households in project area living below poverty line	Not available on district or even project area level	Not available on district or even project area level	Not available on district or even project area level	Not available on district or even project area level	Assumption: Adequate government commitment. Risk: Non-transport factors neutralize economic benefits accrued because of the road
	Socio-economic development/ poverty alleviation in project areas						
	Improved quality of life	Stakeholder Perception	Not available	Positive	Positive	Positive	
Purpose (Specific Objective)	Intermediate Results (indirect) Opening up of agricultural areas Lower cost of agricultural inputs	Intermediate Results Indicators Cost of agricultural inputs (e.g. fertilizer)				Did not decrease due to project road	(All short-term results assumptions/risks)

Hierarchy of Objectives	Expected Results	Performance Indicators	Measure				Assumptions & Risks	
			Baseline	Indicative Target	PCR Value	PPER Value		
	Improved transport services	Frequency of public transport services	6-7 Minibus services per day			35 Minibus services per day		
		Fare of transport service	Maloti 9.00			Maloti 9.00		
	Improved access to markets	Travel time to markets, number of heavy/commercial vehicles using the road	1 hour		30 minute	30 minutes		
	Reduced erosion, pollution abatement, dust control, increased and safe access	Presence of dust	Yes	No	No	No		No
		Presence of Gabions	No	Yes	Yes	Yes		Yes
		Number of accidents	Not available.	Not available.	Not available.	Not available. But indications are that accidents increased.		

Hierarchy of Objectives	Expected Results	Performance Indicators	Measure				Assumptions & Risks
			Baseline	Indicative Target	PCR Value	PPER Value	
	Short-term Results (direct)	Short-term Results Indicators					
	Reduction in vehicle operating costs	Vehicle operating cost per km	VOC reduced by about 50%	VOC reduced by 20%.			Assumption: Reduced transport costs are translated into reduced costs of goods/services
	Reduction in travel time	Travel time	1 hour		30 minute	30 minutes	
	Improved accessibility (all weather road)	Days per year that road is usable	275	365	365	365	
		Average Roughness IRI in m/km)	16.0 (2001) 2.5 (2007)	20.0 (2001) 3.0 (2007)	N/A		
		Traffic Growth (2001-2009)	4.00%	6.3% for buses 4.1% for other categories	4.854%		
Inputs/Activities							No major delay in the project implementation; and Competent consultants and contractors/suppliers selected. No major cost overruns; and
<i>Inputs</i> ADB/ADF Loan 4.29 Counterpart financing: GOL 3.12 HR Resources:							

Hierarchy of Objectives	Expected Results	Performance Indicators	Measure				Assumptions & Risks
			Baseline	Indicative Target	PCR Value	PPER Value	
PIU <i>Activities</i> Civil works for Upgrading of 25 km gravel road to a Class II bitumen standard of a width of 7.0-meter carriageway and 1.0-meter paved shoulders on either side	Environmentally sound 25 km of bitumen road	Construction in budget and on time					Availability of counterpart funds. Adequate resourcing (contractor, consultant, PIU) Clear accountability for project delivery Relevance of loan conditions/covenants, and compliance with these

CALCULATIONS OF ECONOMIC RATES OF RETURN

Comments on PCR and Appraisal Report on calculation of IRR

VOC savings	The overall VOC savings are overstated in the Bank's Appraisal Report and the PCR.
Periodic Maintenance	In the Appraisal Report, the periodic maintenance was erroneously reflected in the calculations as USD 0.26 million and not USD 0.22 as reflected in the text.
Capital Costs	The PCR specified capital costs in years 2006-2025 ranging from USD 0.18 to USD 0.23 million which does not reflect the capital costs spent on the project (capital expenditure only up to year 2004).
Traffic	In the PCR traffic was quoted as 277 vpd in 2001 and 403 vpd in 2007. However, according to most recent counts from RD the traffic amounts to 222 vpd in 2001 and only 276 vpd in 2007.

Assumptions

<i>Distances</i>		
Mpharane-Bela Bela	25.00	km
<i>Routine maintenance costs</i>		
Old Road	5 200.00	USD per km
New Road	800.00	USD per km
<i>Periodic maintenance costs</i>		
Old Road	0	USD per km
New Road		
Reseal every seven years @	8 800.00	USD per km
Capital Costs		
2003	1.07	USD million
2004	6.34	USD million
Days per year	365	
Distance for Transit Traffic	N/A	N/A
Travel time		
Old Road	1	hours
New Road	0.5	hours
Value of Time	0.59	USD per hour
Salvage Value after 20yrs	20%	
Discount Rate	12%	
Elasticity of Demand	1	
Resultant factor for multiplying generated traffic	0.5	
Traffic Growth (from 2004 onwards)	4.00%	per year
Percentage Generated Traffic of Normal Traffic	20.00%	
Number of passengers per vehicle		
Passenger Car	2.2	Pax/veh
Light Truck	0	Pax/veh
Bus	42	Pax/veh
Heavy Truck	0	Pax/veh

Traffic Figures (ADT) – 2001-2009 from RD. Rest grown

Year	Passenger Car	Light Truck	Bus	Heavy Truck	Total
2001	141	74	6	1	222
2002	145	82	5	3	235
2003	161	78	11	6	257
2004	208	76	37	35	357
2005	155	108	17	6	285
2006	118	113	5	4	239
2007	132	139	3	2	276
2008	125	135	6	2	269
2009	152	158	13	2	324
2010	158	165	13	2	337
2011	164	171	14	2	351
2012	170	178	14	2	365
2013	177	185	15	2	380
2014	184	193	15	2	395
2015	192	200	16	2	410
2016	199	208	17	2	427
2017	207	217	17	3	444
2018	216	225	18	3	462
2019	224	234	19	3	480
2020	233	244	20	3	499
2021	243	253	20	3	519
2022	252	264	21	3	540
2023	262	274	22	3	562
2024	273	285	23	3	584

VOC/km (USD)

Type of Vehicle	Upgraded Road	Old Road
Passenger Car	0.124	0.199
Light Truck	0.307	0.521
Bus	0.563	1.080
Heavy Truck	0.716	1.269
Overall Weighted VOC	0.23	0.33

RESULTS

Comparison of Without Project Case with Project Case (Alternative 0 minus alternative 1) (USD)

Year	Capital Cost	Periodic	Routine	VOC-Normal	VOC-Generated	VOC-Diverted	Time Costs	Total	Total-Discounted
2000	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-
2003	-1 070 909	-	-	-	-	-	-	-1 070 909	-762 252
2004	-6 339 091	-	-	-	-	-	-	-6 339 091	-4 028 607
2005	-	-	110 000	340 072	42 509	-	112 544	605 125	343 364
2006	-	-	110 000	273 295	34 162	-	48 975	466 432	236 309
2007	-	-	110 000	310 648	38 831	-	45 833	505 312	228 578
2008	-	-	110 000	313 397	39 175	-	59 276	521 847	210 765
2009	-	-	110 000	386 934	48 367	-	94 110	639 410	230 578
2010	-	-	110 000	402 411	50 301	-	97 874	660 587	212 691
2011	-	-	110 000	418 507	52 313	-	101 789	682 610	196 234
2012	-	-220 000	110 000	435 248	54 406	-	105 861	485 514	124 619
2013	-	-	110 000	452 658	56 582	-	110 095	729 335	167 145
2014	-	-	110 000	470 764	58 846	-	114 499	754 108	154 306
2015	-	-	110 000	489 595	61 199	-	119 079	779 873	142 480
2016	-	-	110 000	509 178	63 647	-	123 842	806 668	131 585
2017	-	-	110 000	529 545	66 193	-	128 796	834 534	121 545
2018	-	-	110 000	550 727	68 841	-	133 947	863 516	112 291
2019	-	-220 000	110 000	572 756	71 595	-	139 305	673 656	78 216
2020	-	-	110 000	595 667	74 458	-	144 878	925 003	95 892
2021	-	-	110 000	619 493	77 437	-	150 673	957 603	88 635
2022	-	-	110 000	644 273	80 534	-	156 700	991 507	81 941
2023	-	-	110 000	670 044	83 755	-	162 968	1 026 767	75 763
2024	1 482 000	-	110 000	696 846	87 106	-	169 486	2 545 438	167 699
NPV at 12%									(1 590 223)
EIRR									7.26%

Appendix H

EXTRACT FROM THE SOCIO-ECONOMIC SURVEY

Before Road Improvement		After Road Improvement	
Negative	Positive	Negative	Positive
Travel was very difficult from Bela Bela and Kolojane to Maputsoe	More small shops	Three box culverts that were inadequately designed and therefore flood nearby houses and cultivated fields during periods of high rainfall. The Roads Department was informed of this some months ago but no action has been taken.	Access to medical services and schools has improved significantly.
Commerce limited			Increase in public transport – increase in mini bus taxis, cabs and bus service.
Limited access to health care centres and education		Theft Road Signs - associated with road accidents and road safety issues	There are 35 taxis operating between Maputsoe and Bela-Bela; a one-way trip costs R9. Before the upgrade there were 6 or 7 taxis on this route.
Dust			There are also 20 taxis operating between Corn Exchange and Maputsoe; a one-way trip here costs R6. Before the upgrade there were 3 taxis on this route
Less availability products			One taxi leaves along each of these routes approximately every 30 minutes of the day. The project has significant reduced travel time from Bela-Bela to Maputsoe. Before the upgrade such a trip took more than 2 hours by car or taxi; it currently takes about 30 minutes
			In June 2009, an ARV treatment programme was started at the clinic. Prior to the treatment programme being started here, people from the surrounding area were being treated at other clinics in the district (e.g. Mutemang).
			In the population served by the clinic, there are currently 388 people confirmed as living with HIV. Of these, 60 are on ARV treatment. The clinic also treats 72 people from the surrounding villages who were previously treated
			The project has not brought about an increase in the incidence of HIV/AIDS, mainly because the road is not used by large numbers of truck drivers. Traffic on the road mostly consists of taxis and buses.
			The road has brought a big change to people's lives by providing easier access to health facilities such as the St. Theresa Clinic
			The road has also brought about an expansion of settlements such as St. Theresa and Bela-Bela. This is because the improvement of access as made these settlements more attractive as places to live; consequently, some people from more remote villages (such as Futhong) are moving here.