



REPUBLIC OF ZAMBIA
OFFICE OF THE
AUDITOR GENERAL



PERFORMANCE AUDIT

On the Utilisation of the Road Fund for Road
Maintenance in Zambia, 2020 to 2022



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FOREWORD

I have the honour to publish and submit the Performance Audit Report on the Utilisation of the Road Fund with a focus on Road Maintenance in Zambia. In accordance with the Provisions of Article 250 of the Constitution of Zambia (Amendment) Act No. 2 of 2016, Public Audit Act No.13 of 1994 and the Public Finance Management Act No. 1 of 2018, I am mandated to carry out Performance Audits in Ministries, Provinces and Agencies (MPAs).

One of the primary functions of any Road Fund is to finance road maintenance as it is essential to preserve the road in its originally constructed condition; protect adjacent resources and user safety; and provide efficient, convenient travel. Zambia has demonstrated commitment to achieving the Goals related to the road sector by domesticating SDG No. 9 and 11 through the 8NDP under the Strategic Development Area - Economic Transformation and Job Creation in which Government intends to develop climate resilient infrastructure across all sectors for sustainable development.

I, therefore, present to you this Performance Audit Report together with recommendations, which if implemented by Road Sector Agencies (RSA) and Ministry of Local Government and Rural Development (MLGRD) will ensure that the Road Fund is effectively utilised and road maintenance is prioritised on the Core Road Network (CRN). As Zambia strives to achieve the Agenda 2030, my Office will continue to contribute towards this achievement by auditing the implementation of the SDGs.

I wish to take this opportunity to thank the management and staff of Ministry of Finance and National Planning (MoFNP), National Road Fund Agency (NRFA), Road Development Agency (RDA), Ministry of Local Government and Rural Development (MLGRD) and other stakeholders for the cooperation and assistance rendered during the audit.

Dr. Ron Mwambwa, FCMA, FZICA, CGMA, CFE

ACTING AUDITOR GENERAL



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ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
BoQ	Bill of Quantity
BoZ	Bank of Zambia
BMS	Bridge Management System
CEO	Chief Executive Officer
CPs	Cooperating Partners
CFI	Contractor Facilitated Initiative
CRN	Core Road Network
DHID	Department of Housing and Infrastructure Development
EU	European Union
EBC	Exim Bank of China
GRZ	Government of the Republic of Zambia
HMS	Highway Management System
ISSAI	International Standards for Supreme Audit Institutions
INTOSAI	International Organisation for Supreme Audit Institutions
ILO	International Labour Organisation
IPC	Interim Payment Certificate
JICA	Japanese International Cooperation Agency
KPI	Key Performance Indicator
LRA	Local Road Authority
MDB	Multilateral Development Bank
MoA	Ministry of Agriculture
MCTI	Ministry of Commerce, Trade and Industry
MoE	Ministry of Energy
MoFNP	Ministry of Finance and National Planning
MoJ	Ministry of Justice
MoT	Ministry of Tourism
MTL	Ministry of Transport and Logistics
MLGRD	Ministry of Local Government and Rural Development
MWDS	Ministry of Water Development and Sanitation



NAPSA	National Pension Scheme Authority
NATSAVE	National Savings and Credit Bank
NCC	National Council for Construction
NRTP	National Road Tolling Programme
NRFA	National Road Fund Agency
OAG	Office of the Auditor General
OPRC	Output and Performance Based Road Contracts
PPP	Public Private Partnership
PFR	Primary Feeder Road
RDA	Road Development Agency
RoadSIP	Road Sector Investment Plan
Ro ToMaP	Road Tolling Maintenance Programme
RMI	Road Management Initiative
RMS	Road Management Strategy
RSA	Road Sector Agencies
RSASP	Road Sector Annual Work Plan
RTSA	Road Transport and Safety Agency
RUC	Road User Charges
SADC	Southern African Development Community
SDG	Sustainable Development Goal
SSATP	Sub-Saharan Africa Transport Policy Programme
ST	Secretary to Treasury
TMD	Trunk, Main and District
ToR	Terms of Reference
VOC	Vehicle Operating Costs
ZNS	Zambia National Service
ZRA	Zambia Revenue Authority



GLOSSARY OF TERMS

Agency	Refers to National Road Fund Agency. ¹
Bank of Zambia Policy Rate	A short-term reference rate set by Bank of Zambia to implement or signal its monetary policy stance. ²
Core Road Network	The barest minimum network which when improved will spur socio-economic development and contribute to poverty reduction. ³
Domestic debt	Liabilities of Government to local creditors. ⁴
Emergencies	Unplanned works carried out in reaction to adverse weather conditions that disrupt the road network with related infrastructure such as culverts, bridges and embankments. ⁵
External debt	Liabilities of NRFA to foreign lenders. ⁶
Force Account	In-house works and usually small projects carried out by RDA through its regional offices. ⁷
Government Bond yield rate	Interest rate that Government pays on its debt obligations expressed as a percentage. ⁸
Implementing Agencies	Agencies or institutions that implement projects in the RSAWP and in this context these are RDA, MLGRD and ZNS ⁹
Inland fees/collections	Road User Charges collected at Toll Plazas, weighbridges, etc. away from borders. ¹⁰
Interim Payment Certificate	A legally binding document issued by RDA to a contractor certifying that the contractor has completed a certain amount of work and is entitled to receive payment for that work. ¹¹
Maintenance	Means all works to preserve road quality, road shape, drain, culverts, structures and bridges, spot improvement of bad spots to maintain accessibility, re-sealing, re-shaping and re-gravelling. ¹²
Moratorium	Legally mandated hiatus in debt collection from creditors. ¹³
Paved road	An asphalt or concrete surfaced road used for vehicular traffic. ¹⁴

¹ Performance Audit 2023

² www.focus-economics.com/economic-indicator/policy-interest-rate/

³ RDA Annual Report 2022

⁴ Performance Audit 2023

⁵ RDA Annual Report 2022

⁶ Performance Audit 2023

⁷ RDA Annual Report 2022

⁸ www.investopedia.com/treasury-yield.asp

⁹ Performance Audit 2023

¹⁰ Performance Audit 2023

¹¹ www.structuralguide.com

¹² Tolls Act No. 14 of 2011

¹³ www.investopedia.com/moratorium.asp

¹⁴ Performance Audit 2023



Periodic Maintenance	Work carried out on a road after a specified maintenance period has been attained, once in five (5) to seven (7) years and include works such as gravelling, resealing, overlaying and line markings. ¹⁵
Port of entry	A border post where customs officers are stationed to oversee people and goods entering or leaving the country. ¹⁶
Road Sector Agencies	Government Agencies responsible for the planning, construction, maintenance and regulation of roads and highways and in this context refers to NRFA, RDA and RTSA. ¹⁷
Road Sector Debt	Arrears payable to contractors and consultants in the road sector. ¹⁸
Road User Charges	Fees levied by the Agency under the provisions of the NRFA Act No. 13 of 2002 for construction, rehabilitation and maintenance of roads. ¹⁹
Roughness measurements	Measurement of surface texture of a road defined as the vertical deviation of a real surface from its ideal smooth form. ²⁰
Routine maintenance	Works applied on road/ drainage structures in good and fair condition to preserve the road/drainage structure asset by keeping it in a maintainable condition. The scope of work encompasses, among others: pothole patching, vegetation control, line marking and drainage works. ²¹
Structural design life	The time from original construction to a terminal condition for a pavement structure. ²²
Sub-Account	Kwacha and dollar accounts held at Bank of Zambia in which Road User Chargers are deposited. ²³
Tolled Road	A road on which a toll is payable. ²⁴
Toll	A fee paid or payable on any road, border post, bridge, pontoon or other place, where the Agency or a concessionaire operates a toll point. ²⁵
Treasury Single Account system	A unified structure of Government Bank accounts that consolidates and manages Government's cash resources in a single account. ²⁶
Unpaved Road	A road not covered with a firm level surface of asphalt or concrete. ²⁷

¹⁵ RDA Annual Reports 2020 - 2022

¹⁶ Performance Audit 2023

¹⁷ www.investopedia.com/transport_sector.asp

¹⁸ Performance Audit 2023

¹⁹ NRFA Act No.13 of 2022

²⁰ www.bioline.com/measurements

²¹ RDA Annual Report 2022

²² <https://pavementinteractive.org/.../design-life>

²³ Performance Audit 2023

²⁴ Tolls Act No. 14 of 2011

²⁵ Tolls Act No. 14 of 2011

²⁶ www.imf.org

²⁷ Performance Audit 2023



EXECUTIVE SUMMARY

Introduction

The Road Fund is an umbrella fund where all road and fuel levies, licensing fees, loans, grants and donations for the roads and all monies appropriated by Parliament for roads in Zambia are held.²⁸ It is managed by the National Road Fund Agency (NRFA) which was established under the National Road Fund Act No. 13 of 2002.

Road maintenance is essential to preserve the road in its originally constructed condition; protect adjacent resources and user safety; and provide efficient, convenient travel. However, road maintenance is often neglected or improperly performed resulting in rapid deterioration and eventual failure from both climatic and vehicle use impacts.²⁹

Zambia has demonstrated commitment to achieving the Goals related to the road sector by domesticating SDG No. 9 and 11 through the 8NDP.³⁰

Audit Objectives

To assess the extent to which NRFA has effectively utilised the Road Fund and prioritised road maintenance on the Core Road Network (CRN) in conjunction with key stakeholders in the road sector.

Specific Objectives

1. To assess the extent to which the Road Fund is being managed in a sustainable manner to facilitate the effective utilisation of the Road Fund.
2. To assess the extent to which roads are maintained to ensure that their structural design life is achieved or exceeded.

Audit Questions

1. To what extent has the Road Fund been managed in a sustainable manner to facilitate the effective utilisation of the Road Fund?
2. To what extent are roads maintained to ensure that their structural design life is achieved or exceeded?

Audit Scope

The audited entity was NRFA as it was responsible for mobilisation, administration and management of all financial resources in the road sector. The RDA and the MLGRD were part of the audit as they were Implementing Agencies. RTSA was also engaged during the audit as the Agency responsible for the collection of toll fees at ports of entry. The period covered by the audit was three (3) years, from January 2020 to December 2022.

²⁸ www.dbsa.org/case-studies/national-road-fund-agency-nrfa-zambia accessed on 28th December 2023

²⁹ <https://www.fao.org/3/t0099e/t0099e07.htm>

³⁰ 8NDP (2022-2026) Pg 17



Sources of Criteria

The criteria were extracted from documents such as: National Road Fund Act No. 13 of 2002; the Tolls Act No. 14 of 2011; Public Roads Act No. 12 of 2002; National Council for Construction Act No. 10 of 2020; RDA Road Maintenance Strategy 2014 – 2024; and Report on the Review of the Road Maintenance Strategy 2015–2024.

Summary of Findings

1. Sustainability of the Road Fund.

a) Tracking of the usage of Toll Fees

The audit revealed that toll fees and other Road User Charges (RUCs) were comingled in line with the Government Treasury Single Account system. This made it difficult to link the source of funds to the designated use as it was not possible to clearly identify specific projects that benefited from toll fees.

b) Foreign versus Local Contractors

The audit established that while the NCC Act No. 10 of 2020 and the Public Procurement Act No. 8 of 2020 provided for the promotion of local contractors, thresholds were not prescribed which limited the ability of the audit to ascertain the extent to which local contractors were contracted.

2. Debt Sustainability

a) Locally Contracted Loans

The audit established that the Agency had contracted debt in excess of K5.9 billion between 2017 and 2021 from National Pension Scheme Authority (NAPSA), National Savings and Credit Bank (NATSAVE), and Indo Zambia Bank (IZB).

b) Usage of Road User Charges for Local Debt Servicing

The audit established that 24.1% of RUCs were allocated to debt servicing in 2020, 32.3% in 2021 and 39% in 2022 when the law did not explicitly allow for this.

c) Contract Commitments against Available Funds

The audit revealed that the value of ongoing signed contracts was more than the total funds available during the period under review.

d) Externally Contracted Loans

The audit revealed that the MoFNP contracted external debt from various Multilaterals and Bilaterals. external loans increased by 4% from US\$2,168,281,845.49 in 2020 to US\$2,249,677,985.92 in 2021 and reduced by 0.55% to US\$2,237,300,992.38 in 2022.

3. Frequency of Road Maintenance

The audit established that periodic maintenance activities were not prioritised in that the allocation of funding to the activity was inadequate to meet the maintenance needs.



4. Ideal Funding for Road Maintenance

4.1 Road Maintenance Funding

Despite Toll Plazas on the Copperbelt, Lusaka and Central Provinces receiving the most revenue collections between 2020 and 2022, the tolled roads were generally in a bad state.

4.2 Maintenance Allocation versus Toll Fees Collection

The audit revealed that the maintenance allocation in the RSAWP did not increase at the same rate as the toll fees collection.

5. Rehabilitation and Upgrading of Roads

The audit revealed that the road sector was preoccupied with the construction and upgrading of roads with little emphasis being given to maintenance.

6. Coordination between Implementing Agencies

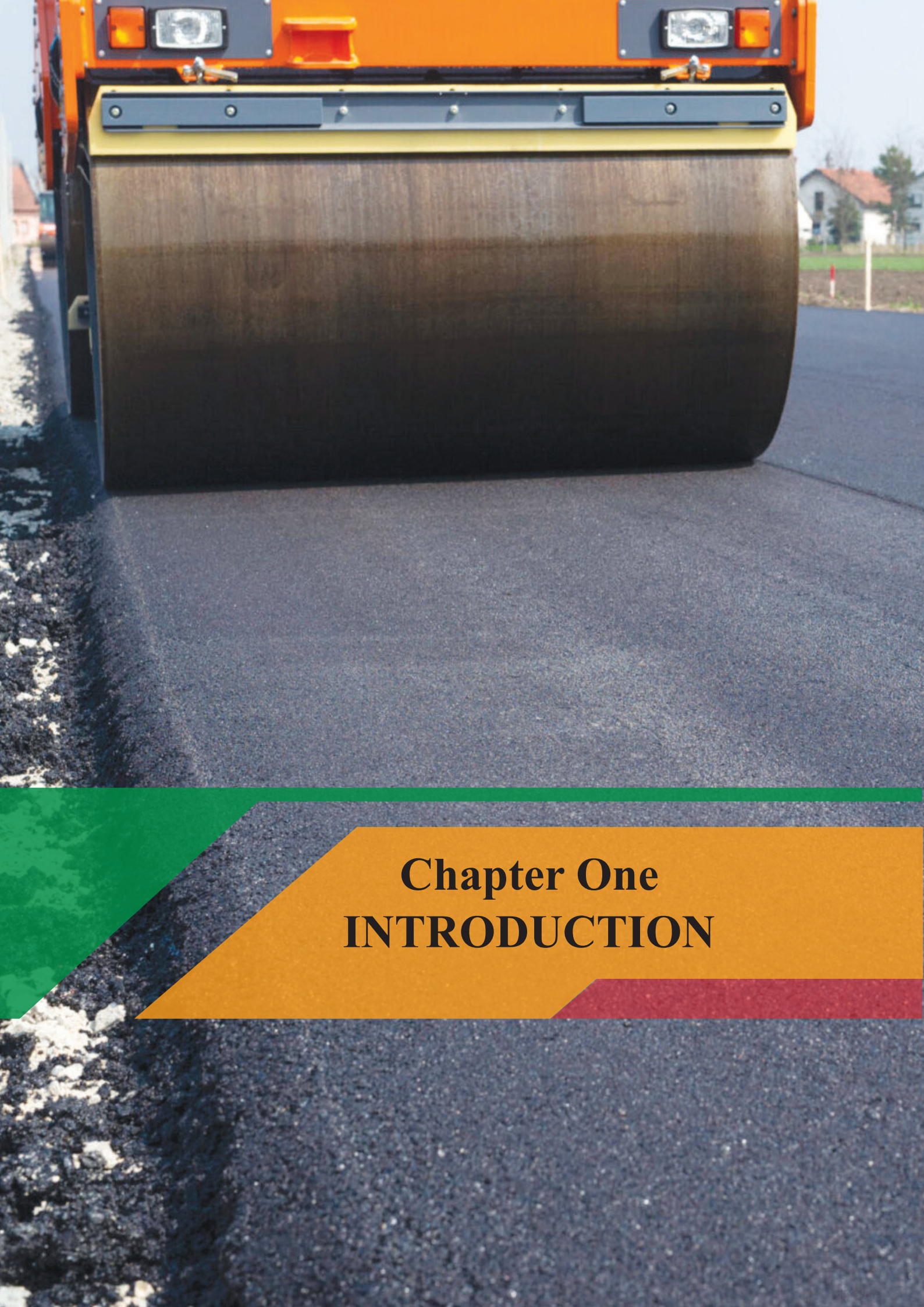
The audit established that there was no clear distinction between the roles of RDA and LRAs in relation to the rehabilitation, construction and maintenance of roads.

Conclusion

Despite strides made by various stakeholders, to a great extent, the Road Fund has not been managed effectively to guarantee its sustainability. The audit also concludes that road maintenance has been treated more like an “after thought” than a priority by the NRFA, Implementing Agencies and other stakeholders. Overall, there is still room for improvement in the management of road maintenance.

Recommendations

- i. NRFA through the MoFNP should consider revising the Tolls Act No. 14 of 2011 to ensure that toll fees are exclusively ring fenced for maintenance of tolled and other roads.
- ii. RSA, MLGRD and NCC should promote the engagement of local contractors within the road sector.
- iii. RSA should devise practical ways of reducing the debt burden to sustainable levels.
- iv. RSA should categorise the CRN further to prioritise higher traffic roads.
- v. RDA in conjunction with relevant stakeholders should conduct annual road condition surveys and update the Road Maintenance Needs Assessment 2012.
- vi. MTL, RSA and MLGRD should coordinate to prioritise the use of rail transport for bulk cargo to preserve roads.
- vii. RSA and MLGRD should prioritise road maintenance in the RSAWP to ensure sufficient resources are allocated for this purpose.
- viii. Collaboration between RDA and LRAs should be improved by ensuring that they have clearly defined and streamlined roles and responsibilities in their legal framework to avoid duplication of roles.



Chapter One

INTRODUCTION



INTRODUCTION

1.0 Introduction

The chapter briefly presents the background of the audit and discusses the motivational factors that led to the commencement of the audit.

1.1 Background

The Road Fund is an umbrella fund where all road and fuel levies, licensing fees, loans, grants and donations for the roads and all monies appropriated by Parliament for roads in Zambia are held.³¹ The Road Fund is managed by the National Road Fund Agency (NRFA) which was established under the National Road Fund Act No. 13 of 2002 for the purpose of construction, rehabilitation and maintenance of the road network. The NRFA in return reports to the Ministry of Finance and National Planning (MoFNP). The focus of this report is the usage of the road fund for road maintenance.

Zambia has a total classified road network of 67,671km public roads comprising: Trunk; Main; District; Primary and Secondary Feeder; Urban; and Park roads. Owing to scarce resources, 40,454kms of public roads have been deemed as the Core Road Network (CRN). It is the barest minimum network which when improved will spur economic development and contribute to poverty reduction. It comprises Trunk, Main and District (TMD), Urban and Primary Feeder roads.³²

The road asset in Zambia is one of the most valued asset gobbling approximately 13% of the National Budget with an asset value of over US\$8 billion.³³ Most roads were constructed after independence (between 1964 and late 1970's) at which time Zambia was classified as a Middle Income Country (Raballand and Whitworth, 2012). Following the nationalisation of the copper mines in 1972, there was a sharp economic decline that led to inadequate resources being available for road maintenance. Thus, due to inadequate maintenance, most of the roads deteriorated sharply by the late 1980s.³⁴

Road maintenance is essential to preserve the road in its originally constructed condition; protect adjacent resources and user safety; and provide efficient, convenient travel. There are several benefits to having roads in maintainable condition: improved access to hospitals, schools, markets and tourist sites; improved comfort, speed, and safety; and lower vehicle operating costs.³⁵ Maintenance of road infrastructure is not only important because Zambia is a land-locked copper producer, and thus predominantly relies on its road network to ship exports overseas, but also because the country has invested in road infrastructure through multi-million-dollar projects which include the Link Zambia 8,000 project which was launched in 2012.

³¹ www.dbsa.org/case-studies/national-road-fund-agency-nrfa-zambia accessed on 28th December 2023

³² RDA Annual Report 2020 – 2022, RDA Road Maintenance Strategy 2014 - 2024

³³ National Road Fund Agency Road Sector Debt Management Strategic Plan 2020

³⁴ RDA Road Maintenance Strategy 2014-2024

³⁵ RDA Road Maintenance Strategy 2014-2024

The project was aimed at rehabilitating and constructing an efficient road network and international highways linking Zambia to South Africa, Zimbabwe, Mozambique, Malawi, Tanzania, the Democratic Republic of Congo, and Namibia³⁶.

However, road maintenance is often neglected or improperly performed resulting in rapid deterioration and eventual failure from both climatic and vehicle use impacts.³⁷ A backlog of outstanding maintenance may cause irreversible deterioration of the road network. Without sufficient maintenance, roads may need replacing or major repairs after a few years. The deterioration may spread across a road system quickly and result in soaring costs and a major financial impact on the economy and citizens. The impacts of poor road maintenance are mostly borne by road users in the form of increased Vehicle Operating Costs (VOCs) due to the poor state of the riding surface leading to frequent breakdowns and repairs.³⁸

One of the primary functions of any Road Fund is to finance road maintenance. Maintenance is prioritised because economic benefits are generally much higher than those of road improvements. There is a general acceptance that \$1 spent on maintenance can save between \$3 and \$5 in terms of avoided or delayed rehabilitation³⁹. Conversely, rehabilitating 1 km of road in poor/bad condition takes away maintenance funding for 3-5 km of roads in good/fair condition. The length of road and the percentage of the road network that can be brought or kept in good/fair condition is far greater if roads are maintained, than if they are allowed to deteriorate and subsequently rehabilitated or upgraded. The practice in Zambia has been the prioritisation of road construction and rehabilitation with an increasing portion of the available budget allocated towards it. Funding allocations to road maintenance have also been decreasing every year; where road maintenance made up nearly 20% of the Road Sector Annual Work Plan (RSAWP) in 2015, by 2022 this had reduced to 10%. Maintenance is mainly funded from the Road User Charges (RUCs), where allocations to maintenance have gradually been replaced by allocations to upgrading and rehabilitation, and more recently to debt servicing of the National Pension Scheme Authority (NAPSA), Indo Zambia Bank (IZB) and National Savings and Credit Bank (NATSAVE) loans.⁴⁰

The Agenda 2030 has highlighted the importance of quality infrastructure development through Sustainable Development Goal (SDG) No. 9 which seeks to provide resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation⁴¹. Similarly, SDG 11 focuses on making cities safe, inclusive, resilient and sustainable through Target 11.2⁴².

Zambia has demonstrated commitment to achieving the Goals related to the road sector by domesticating SDG No. 9 and 11 through the 8NDP under the Strategic Development Area 1 -

³⁶ Zambia Development Agency (2019) Infrastructure Sector Profile, (<http://www.zda.org.zm/?q=download/file/fid/216>)

³⁷ <https://www.fao.org/3/t0099e/T0099e07.htm>

³⁸ Ibid

³⁹ RDA Road Maintenance Strategy 2014 - 2024

⁴⁰ Road SIP III October 2020

⁴¹ Target 9.1 advocates the development of quality, reliable, sustainable and resilient infrastructure, including regional and trans- border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

⁴² Target 11.2 aims to provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.



Economic Transformation and Job Creation in which Government intends to develop climate resilient infrastructure across all sectors for sustainable development.⁴³

In light of the challenges highlighted above, one of Government's interventions was the introduction of road tolling in 2013. As part of the strategy to improve funding towards road maintenance, Government established twenty-six (26) toll roads and thirty-seven (37) toll sites across Zambia⁴⁴ with the first toll operation in 2016. This saw the appointment of National Road Fund Agency (NRFA) as the Lead Tolls Agent to operate all toll collection points in the country on behalf of RDA. Toll fees were expected to provide financing that would mitigate against loss of road infrastructure investment. However, toll fees were not utilised exclusively for road maintenance as the NRFA Act. No 13 of 2002 provided that toll fees can be used for rehabilitation and construction as well. This has further reduced the budget allocation for road maintenance.

1.2 Motivation

The audit was motivated by the need of citizens to have well maintained road networks especially given that there is a Road Fund in place that is intended for road maintenance.⁴⁵ Specifically, the audit was motivated by the following factors:

1.2.1 Media Reports

According to Zambia Daily Mail of 3rd February 2022, the Permanent Secretary under Ministry of Infrastructure, Housing and Urban Development (MIHUD) stated that Government had collected over K7.35 billion in toll fees from inland and ports of entry since the launch of the National Road Tolling Programme (NRTP) in 2013 and that Government needed US\$720 million per annum to maintain the CRN and bring it to acceptable standard.⁴⁶ The Zambia Daily Mail dated 2nd July 2022 also reported that the public had bemoaned the poor state of roads in the country and demanded to know how much of toll fees collected was applied towards road maintenance.⁴⁷

Similarly, in an article from Zambia Daily Mail dated 24th April 2021, it was reported that collection from toll gates in the first quarter of the year exceeded the targeted K430 million by K110 million. Further, NRFA Chief Executive Officer (CEO) encouraged toll collectors to be law-abiding and transparent to ensure the Agency meets its targets. It was also reported that the Agency was eager to ensure revenue collected was put to good use through development, rehabilitation, maintenance and construction of roads.⁴⁸

The Shippers Council of Zambia reported that the road network in most parts of the country was undoubtedly in distress and needed urgent repair.

⁴³ 8NDP (2022-2026) Pg 17

⁴⁴ SI No. 73 of 2013

⁴⁵ <http://www.parliament.gov.zm/publications/debates-list>

⁴⁶ <http://www.daily-mail.co.zm/state-collects-k7bn-road-toll-fees/>

⁴⁷ <http://www.daily-mail.co.zm/use-road-tolls-for-roads/> Accessed on 15th May 2023

⁴⁸ <http://www.daily-mail.co.zm/toll-gate-revenue-k110m-above-target/>



They further identified various factors behind the poor state of roads such as lack of consistent and routine maintenance of infrastructure, while others believed the uncontrolled haulage of heavy goods was the reason for the bad state of roads. Another reason attributed was poor workmanship by contractors.⁴⁹

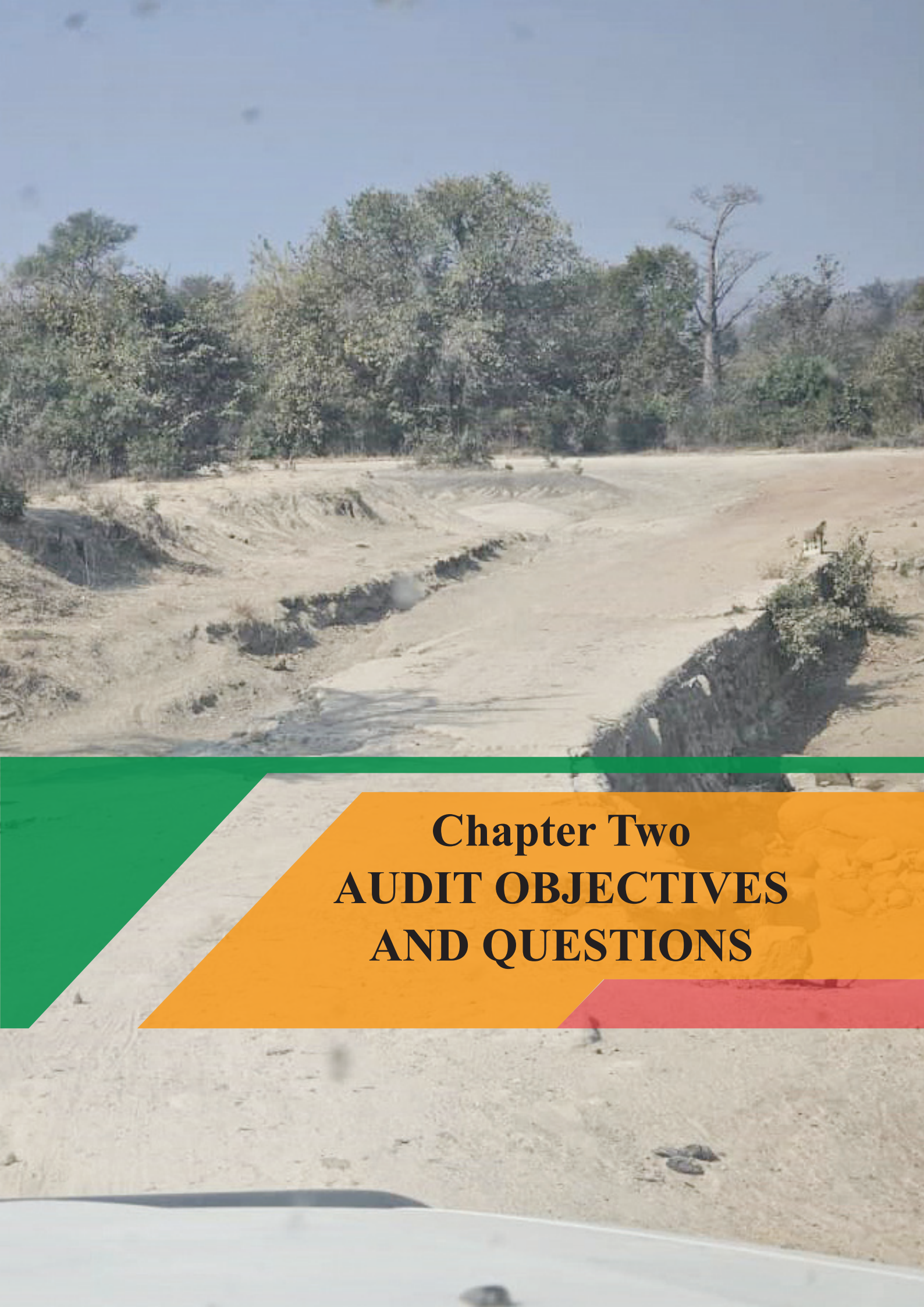
1.2.2 Presidential and Ministerial Address

The President in his speech during the official opening of the second session of the thirteenth National Assembly in 2022 stated that Government intended to improve access to rural communities. He further stated that Government had rehabilitated and maintained over 1,000 kilometers of rural roads in Central, Northern, Luapula and Eastern Provinces as at 30th June 2022. Furthermore, it was highlighted that construction of roads would commence in Muchinga, Southern, Western, North-Western and Copperbelt Provinces, while rehabilitation and maintenance of 4,464 kilometers of roads by 2025 was yet to be actualised.⁵⁰ Similarly, during the 2023 Budget Address by the Minister responsible for Finance and National Planning, mention was made of the lack of maintenance of roads in the country and the intention of Government to rehabilitate roads such as the Lusaka - Ndola dual carriageway, Chingola - Solwezi Road, Lumwana - Kambimba road, among others. The Minister also appealed to Members of Parliament to invest in road maintenance equipment for rural roads. He also highlighted Government's proposal to spend K5.2 billion on construction, maintenance and rehabilitation of various roads in the country.

By conducting this performance audit, the Office of the Auditor General aims to provide an independent and objective assessment of the utilisation of the Road Fund. The findings and recommendations of this audit will contribute to the improvement of the management and utilisation of the fund, ultimately leading to the enhancement of road infrastructure in Zambia.

⁴⁹ <http://www.daily-mail.co.zm/grave-concern-at-state-of-roads/> Accessed on 21st February 2023

⁵⁰ Speech for the Official Opening of The Second Session Of The Thirteenth National Assembly By Mr. Hakainde Hichilema President Of The Republic Of Zambia Friday, 9th September 2022.

A photograph of a dry, sandy riverbed in a savanna landscape. The riverbed is wide and filled with light-colored sand, with some small pools of water visible. The banks are eroded, showing the sandy soil. In the background, there is a dense line of green trees and bushes under a clear blue sky. The foreground shows the top of a white vehicle, suggesting the photo was taken from inside a car.

Chapter Two

AUDIT OBJECTIVES AND QUESTIONS

AUDIT OBJECTIVES AND QUESTIONS

The chapter presents the overall audit objective, specific objectives and audit scope. In order to address the set audit objectives, two (2) audit questions were formulated focusing on: transparency and accountability of the Road Fund and implementation of road maintenance projects.

2.0 Audit Objective

To assess the extent to which NRFA has effectively utilised the Road Fund and prioritised road maintenance on the Core Road Network (CRN) in conjunction with key stakeholders in the road sector.

2.1 Specific Objectives

- i To assess the extent to which the Road Fund is being managed in a sustainable manner to facilitate the effective utilisation of the Road Fund.
- ii To assess the extent to which roads are maintained to ensure that their structural design life is achieved or exceeded.

2.2 Audit Questions

2.2.1 To what extent has the Road Fund been managed in a sustainable manner to facilitate the effective utilisation of the Road Fund?

- i What measures has NRFA and key stakeholders put in place to ensure transparency and accountability of revenue from different components of the Road Fund?
- ii To what extent has the Road Fund achieved its objectives effectively?
 - How does the legal framework enable the efficient utilisation of the Road Fund?
 - How have Road Sector Agencies and Ministry of Local Government and Rural Development (MLGRD) prioritised the use of local contractors in the road sector?
 - How does NRFA ensure that road sector debt does not exceed the available funds?
- iii How have the Road Sector Agencies and Ministry of Local Government and Rural Development (MLGRD) ensured the inclusion of women in road sector projects?

2.2.2 To what extent are roads maintained to ensure that their structural design life is achieved or exceeded?

- i How does the current classification of the Core Road Network (CRN) affect the prioritisation of road maintenance projects?
- ii To what extent does the Road Fund provide adequate financial resources for road maintenance?
- iii To what extent have NRFA, RDA and MLGRD coordinated to ensure that road maintenance strategies are implemented effectively?
 - How do Road Sector Agencies and MLGRD ensure that road maintenance is carried out timely?



2.3 Audit Scope

The audited entity was NRFA as it was responsible for mobilisation, administration and management of all financial resources in the road sector. The audit focused on determining whether the Agency effectively utilised the Road Fund for maintenance of the CRN and also assessed the general management of the Road Fund. While the focus was on road maintenance, construction and rehabilitation of roads was also assessed in comparison to maintenance.

The RDA and the MLGRD were part of the audit as they were Implementing Agencies. RTSA was also engaged during the audit as the entity responsible for the collection of toll fees at ports of entry. The period covered by the audit was three (3) years, from January 2020 to December 2022 as it provided an adequate timeframe within which to evaluate the extent to which the Road Fund was effectively utilised.

2.4 Limitations

There was a scope limitation in the analysis of data pertaining to dates of construction of roads, number of times and dates a road was periodically maintained, and condition of roads particularly roads not inspected during audit.⁵¹ This limitation arose from inadequate record management and the RDA's failure to update the 2015 Road Condition Survey. To address this limitation, the audit relied on records of fourteen (14) roads for which the RDA was able to avail the aforementioned information.

⁵¹ Refer to chapter 6, Section 6.4



Chapter Three

METHODOLOGY



METHODOLOGY

3.0 Introduction

The chapter presents the methodology employed, specifying the target population, sample size, sampling techniques, data collection methods and data analysis techniques employed. The methodology was designed to provide a comprehensive assessment of the utilisation of the Road Fund, and to ensure that the research objectives and questions were addressed thoroughly. The audit was conducted in accordance with the International Standard of Supreme Audit Institutions (ISSAIs) 300 and guidelines in the 2023 Office of the Auditor General (OAG) Performance Audit Manual. The Standards require that the audit is planned in a manner which ensures that an audit of high quality is carried out in an economic, efficient and effective manner.

3.1 Research Design

The audit used a problem-based approach which examines, verifies and analyses the causes of particular problems or deviations from criteria. The audit adopted a mixed method of analysis that was inclusive of quantitative and qualitative approaches. The two (2) approaches were used because of the relevance to the audit as they provided a basis for data analysis.

3.2 Sampling Techniques

Only road projects on the CRN were selected as these are roads which when improved can spur economic development. Random and purposive sampling methods were collectively used to make statistical inferences about the population of three hundred seventy (370) road projects that comprised maintenance, rehabilitation and upgrading projects. The sample size of seventy (70) consisted fifty eight (58) randomly sampled road projects categorised as: three (3) construction; thirty-seven (37) maintenance; thirteen (13) rehabilitation; and five (5) upgrading while twelve (12) road projects were purposively sampled in that they were selected as part of the sample due to their proximity to the fifty eight (58) randomly sampled road projects. As a result, they did not fall under any of the aforementioned categories. The chosen sample formed 19% of the total population while road maintenance formed 53% of the sample size.

The regional distribution of the seventy (70) sampled road projects was as follows: Central 13%; Copperbelt 9%; Eastern 11%; Luapula 19%; Lusaka 13%; Muchinga 6%; Northern 3%; Southern 24%; and Western 3%. **Appendix 1 refers.**

3.3 Data collection and Analysis Methods

The audit obtained both qualitative and quantitative data in order to provide a comprehensive assessment of the utilisation of the road fund for road maintenance.

3.3.1 To what extent has the road fund been managed in a sustainable manner to facilitate the effective utilisation of the road fund?

i. Document review

Data obtained from documents such as key strategic plans, road sector annual work plans,

budget allocations, expenditure records, contract sums and the number of roads maintained against the funded amounts was assessed and analysed using Microsoft Excel. This allowed auditors to identify trends, calculate variances, and evaluate the efficiency of funds usage.

ii. Interviews

Data obtained through interviews was analysed using Content Analysis (C.A) to identify trends, themes and contextualisation. The data obtained from C.A was interpreted using tables and graphs. This allowed the auditors to ascertain whether the road fund was being managed sustainably by the NRFA.

iii. Field inspections

Data obtained from field inspections was analysed through a systematic evaluation of the condition and quality of the roads assessed to show the overall impact of the road fund in maintaining road infrastructure and highlight areas where improvements was necessary.

3.3.2 To what extent are roads maintained to ensure that their structural design life is achieved or exceeded?

i. Document review

Data obtained from documents was analysed by cross-referencing various documents to uncover patterns of efficiency or inefficiency in fund management for road maintenance activities and to extract data that was suggestive of gaps in the planning, allocation and execution of road maintenance projects.

ii. Semi Structured Interviews

Responses obtained through eighty-five (85) interviewees was analysed, transcribed and coded to identify recurring themes and patterns related to: fund management and allocation; frequency of routine and periodic road maintenance; coordination with stakeholders; challenges in running the road fund and; the perceived impact of the road fund on infrastructure. **Appendix 2 refers**

iii. Field inspections

Data obtained from field inspections of seventy (70) road projects was analysed through the evaluation of the physical state of the roads inspected during site observations based on parameters such as potholes, cracks, rutting, surface wear, road side vegetation, etc. This enabled the audit to assess the extent to which roads were maintained to ensure that their structural design life is achieved or exceeded. Pictorial evidence was also used to corroborate information obtained through interviews and document review. **Appendix 3 refers**



Chapter Four

DESCRIPTION OF THE AUDIT AREA

DESCRIPTION OF THE AUDIT AREA

4.0 Introduction

The chapter discusses the mandate, roles and responsibilities, organisational structure, funding details and key stakeholders of NRFA. It also describes the process of funds utilisation and further depicts the ideal pathway for road maintenance.

4.1 National Road Fund Agency Corporate Mandate

NRFA is a corporate body established pursuant to the National Road Fund Act No. 13 of 2002 to provide strategic financial oversight to the road sector and facilitate road infrastructure development in the country. In line with the corporate mandate, the under-listed are the roles and responsibilities of NRFA.

4.1.1 National Road Fund Agency Roles and Responsibilities⁵²:

- a) administer and manage the Road Fund on behalf of the Road Sector Agencies;
- b) prepare and publish audited annual accounts of the Road Fund;
- c) recommend to the Minister responsible for finance, fuel levy and other Road User Charges (RUCs) and tariffs as required;
- d) recommend to the Minister responsible for finance projects for funding;
- e) allocate resources for the construction, maintenance and rehabilitation of roads based on a percentage of the Annual Work Programme of the RDA;
- f) allocate resources for road transport, traffic and safety management based on a percentage of the Annual Work Programme of the RTSA;
- g) recommend funding for development of new roads in consultation with RDA; and
- h) undertake such other activities as are conducive or incidental to its functions under the National Road Fund Act.

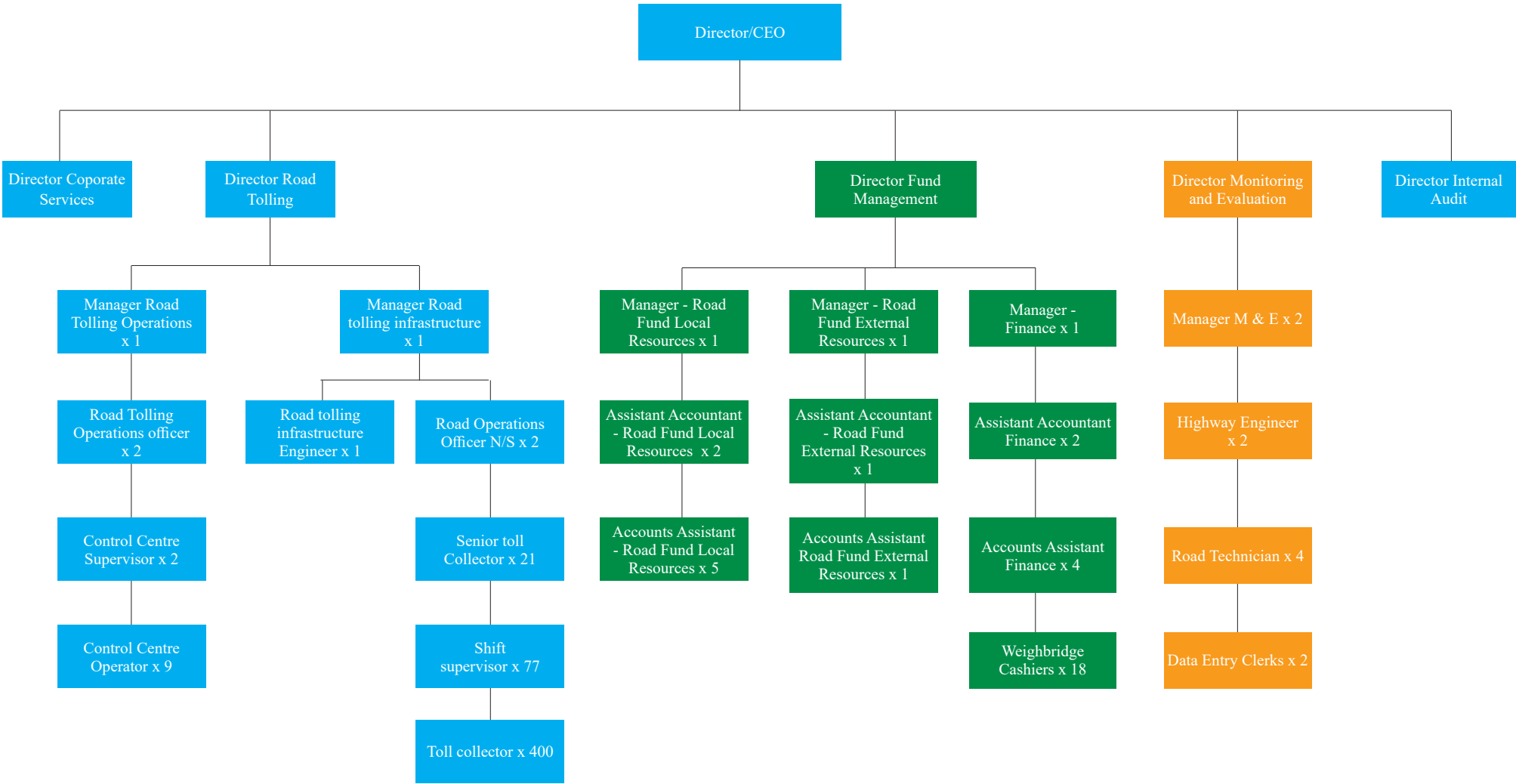
4.2 NRFA Organisational Structure

The NRFA is based in Lusaka and is also present at all the twenty-seven (27) toll gates. The Agency is headed by a Director/Chief Executive Officer (CEO) who is supported by top management, comprising Directors': Internal Audit; Road Tolling; Monitoring and Evaluation; Fund Management and; Corporate Services. The Fund Management Department is responsible for administering the Road Fund. This involves tracking funds collected from the Road User Charges (RUCs) and ensuring that all such funds collected are remitted into the Road Fund. The Department further controls the usage of funds by ensuring that the funds are disbursed for intended road works and road transport, traffic and safety management activities.

The Monitoring and Evaluation (M&E) Department has the following core functions: monitoring; evaluation; technical audits; stakeholder communication and feedback; and technical assistance to Road Sector Agencies. These functions are aimed at ascertaining and promoting value for money on the various road sector programmes, projects and related activities. Depicted in figure 4.2 below is an extract of the organisational structure of NRFA with a focus on the Departments of Fund Management, Road Tolling and Monitoring and Evaluation as these are key in the Road Fund management.

⁵² National Road Fund Act No. 13 of 2002, Part II, Sec 4 (i)

Figure 4.1: Extract of NRFA Organogram



Source – Extract from NRFA Organisational Structure 2023

4.3 Funding Arrangements

The Road Fund comprises two (2) main sources of revenue streams namely, Local and External Resources. Local Resources consist of RUCs (Tolling Revenue, Fuel Levy, Road Taxes, Driver License Fees, Weighbridge Fees and Fines), grants, donations, GRZ budget allocations and local loans obtained from local financial institutions. External Resources include loans and grants signed by the MoFNP with Bilateral and Multilateral Partners.⁵³ The budget for operations and the amounts released during the period under review are as shown in **Table 4.1**.

Table 4.1: NRFA Budget vs Receipts

2020				
	BUDGET	RECEIPTS	VARIANCE	
	K'million	K'million	K'million	%
Road User Charges & GRZ Project Funds	2,543.71	3,861.51	1,317.80	52%
NAPSA Loan	1,073.37	820.26	-253.11	-24%
NATSAVE Loan	500	500	-	0%
Local Funding	4,117.08	5,181.77	1,064.69	26%
Cooperating Partners	2,918.30	2,971.49	53.19	2%
Contractor Facilitated Financing	3,022.90	800.17	-2,222.73	-74%
Total External Funding	5,941.20	3,771.66	-2,169.54	-37%
TOTALS	10,058.28	8,953.43	-1,104.85	-11%
2021				
	BUDGET	RECEIPTS	VARIANCE	
	K'million	K'million	K'million	%
Road User Charges & GRZ Project Funds	2,903.25	5,048.52	2,145.27	74%
NAPSA Loan	253.11	253.11	0	0%
INDO Zambia Loan	500	500	-	0%
Local Funding	3,656.36	5,801.63	2,145.27	59%
Cooperating Partners	3,123.85	1,025.21	-2,098.64	-67%
Public Private Partnerships	370	-	-370	-100%
Contractor Facilitated Financing	154.6	1,093.92	939.32	608%
Total External Funding	3,648.45	2,119.13	-1,529.32	-42%
TOTALS	7,304.81	7,920.76	615.95	8%
2022				
	BUDGET	RECEIPTS	VARIANCE	
	K'million	K'million	K'million	%
Road User Charges & GRZ Project Funds	3,459.90	4,754.76	1,294.86	37%
Supplementary Budget	800	502.61	-297.39	-37%
Local Funding	4,259.90	5,257.37	997.47	23%
Cooperating Partners	1,469.38	952.73	-516.65	-35%
Total External Funding	1,469.38	952.73	-516.65	-35%
TOTALS	5,729.28	6,210.10	480.82	8%
Grand Total (2020 to 2022)	23,092.37	23,084.29	-8.08	0.05

Source: NRFA Approved Budgets 2020 to 2022

⁵³ NRFA Annual Report 2020

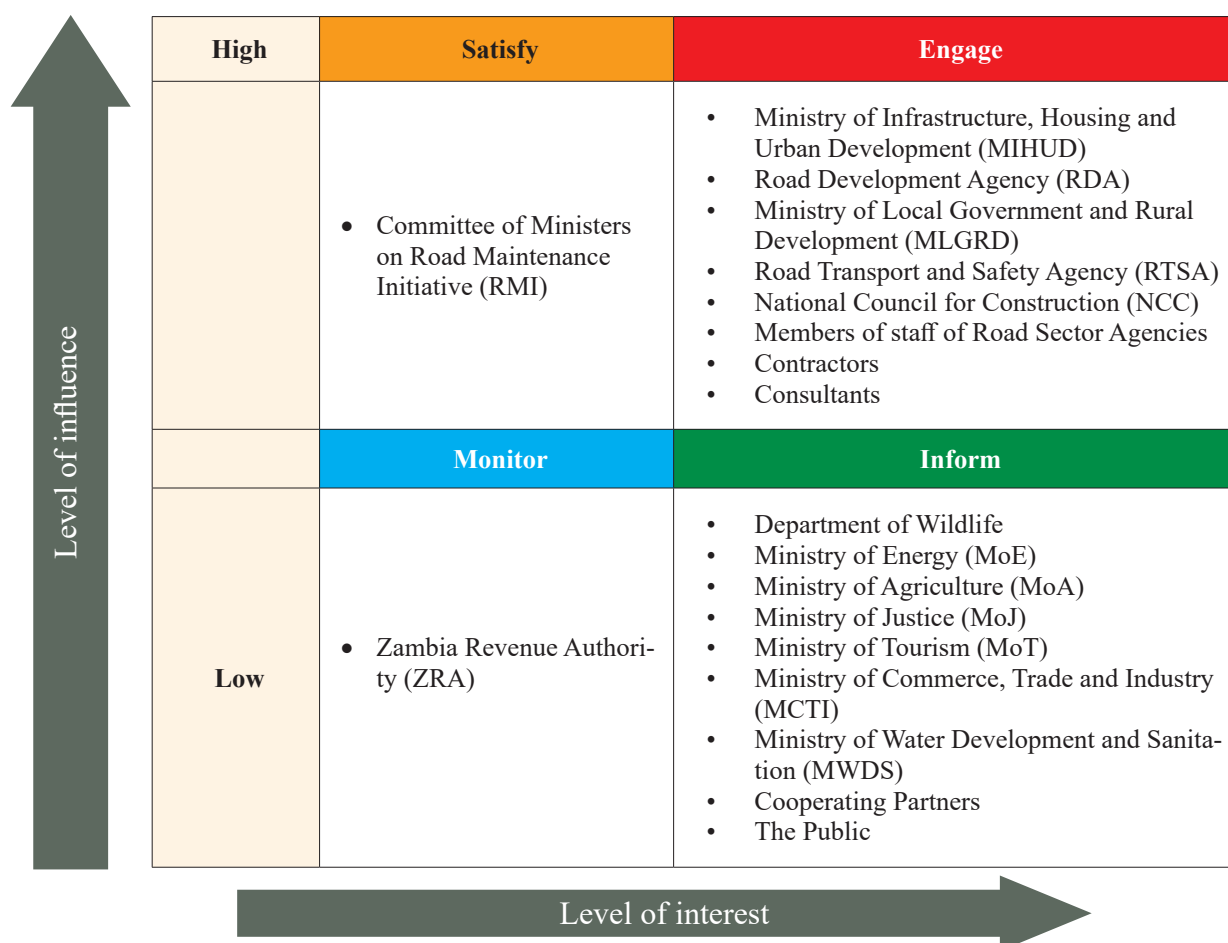


The contribution of local funding to the Road Fund was substantial, averaging 72% of total receipts during the period under review. It was further observed that, during the period under review, the total budget for the Agency amounted to K23,092.37 million, out of which K23,084.29 million was funded resulting in a negative variance of K8.08 million representing 0.05% underfunding.

4.4 Key Stakeholders

The audit undertook a stakeholder analysis and mapped twenty (20) stakeholders who either had high interest and/or influence in the audit area. It must however be noted that the key stakeholders engaged were: RDA; MLGRD; RTSA; and NCC. Figure 4.2 below depicts a visual representation of the various actors involved or affected by activities in the road sector and shows their relative interest and/or influence of all mapped stakeholders.

Figure 4.2: Stakeholder Map



Source: Performance Audit Analysis 2023

As depicted in Figure 4.2 above, MIHUD, RDA, MLGRD, NCC, Members of staff of Road Sector Agencies, Contractors and Consultants had both high interest and high influence in the audit area due to their involvement in decision making in the road sector.

On the other hand, Department of Wildlife, Ministry of Energy (MoE), Ministry of Agriculture (MoA,) Ministry of Justice (MoJ), Ministry of Tourism (MoT), Ministry of Commerce, Trade and Industry (MCTI), Ministry of Water Development and Sanitation (MWDS), Cooperating Partners and the Public have high interest but low influence. Stakeholders in this category were important as they provided valuable information which can form the basis for decision making. Zambia Revenue Authority (ZRA) had low influence and low interest as Government removed fuel levy subsidies in 2021.

The Committee of Ministers on Road Maintenance Initiative (RMI) have high influence but low interest as they rarely met as a committee despite being at the apex of the Governance structure of the road sector. Table 4.2 below shows the stakeholder profile and the related recommended actions which further explain Figure 4.2.

Table 4.2: Stakeholder Profile and Recommended Actions

Stakeholder profile	Recommended actions
High influence, high interest	Engage <ul style="list-style-type: none">• Consultations with stakeholder• Joint decision making• Keep closely informed
High influence, low interest	Satisfy <ul style="list-style-type: none">• Monitor satisfaction• Keep informed!• If possible, raise their interest to high
Low influence, high interest	Inform <ul style="list-style-type: none">• Keep informed.• Hold surveys to gather opinions and insights.• Offer ambassador roles
Low influence, low interest	Monitor <ul style="list-style-type: none">• No need to reach out to them.• Make basic information available.• Monitor their reactions

Source: Performance Audit Analysis 2023

Section 4.5.1 to 4.5.5 below describes key stakeholders in the road sector and the nature of collaboration with NRFA.

4.4.1 Road Development Agency

The Road Development Agency (RDA) is a statutory body falling under the MIHUD that was established through the Public Roads Act No. 12 of 2002 to provide for the care, maintenance, and construction of public roads in Zambia. The RDA commenced its operations in 2006 and its functions are to provide for the care, maintenance and construction of public roads in Zambia;



to regulate maximum weights permissible for transmission on roads; and to provide for matters connected with and incidental to the foregoing. It is responsible for the entire classified road network of 67,671 kilometers, including bridges and culverts. Owing to scarce resources, RDA mostly concentrates its efforts on a rationalised network of 40,454 kilometers deemed as the Core Road Network (CRN).⁵⁴ RDA implements the Road Sector Annual Work Plan (RSAWP) which is funded by NRFA.

RDA is also mandated under the Tolls Act No. 14 of 2011 to administer and implement the National Road Tolling Programme (NRTP). In this regard, on 1st September 2015, the RDA appointed the National Road Fund Agency (NRFA) as a Lead Tolls Agent through the provisions of the Tolls Act. The functions of RDA under the Tolls Act are to: regulate the operation and maintenance of tolled roads; monitor compliance of concessionaires with the terms and conditions of Concession Agreements; advise the Minister responsible for Infrastructure on the design, construction, safety, regulation, operation and maintenance of toll roads; and perform any other function as may be conferred by, or under the Tolls Act or any other Law.

The principal functions of the RDA are to plan, manage and coordinate the entire road network in Zambia with the following specific function⁵⁵:

- a) Carry out routine and emergency maintenance of public roads;
- b) Conduct such studies as it may consider necessary for the development, maintenance, and improvement of the road network in Zambia;
- c) Advise Road Authorities regarding the construction, rehabilitation, and maintenance of roads under their jurisdiction;
- d) Provide guidance and technical assistance to Road Authorities;
- e) Receive and consider reports from Road Authorities on their activities and prepare quarterly and consolidated Annual Reports;
- f) Recommend to the Minister responsible for Infrastructure the appointment of any person or institution as a Road Authority;
- g) Prepare and review Terms of Reference (ToR) and guidelines for Road Authorities including budget guidelines;
- h) Review from time to time the status of Road Authorities and recommend appropriate action to the Minister responsible for Infrastructure;
- i) Make recommendations in relation to siting of buildings on roadsides;
- j) In consultation with the NRFA, recommend to the Minister responsible for Infrastructure funding for the development of new roads;
- k) In consultation with the owners of property served by an estate road and the NRFA, determine the proportion of the cost of construction and maintaining an estate road to be borne by such owners;
- l) Prepare and award contracts and certifying works for public roads;
- m) Review design standards and classification of roads and traffic signs;

⁵⁴ RDA 2023 Annual Report

⁵⁵ Public Roads Act No. 12 of 2002

- n) Plan and coordinate the road network in the country;
- o) Enforce Axle Load Control; and
- p) Carry out any other activities relating to roads which are necessary or conducive to the performance of its functions under the Public Roads Act.

The RDA also receives operational funding from the NRFA. In line with the objective of the audit, the Road Maintenance Directorate is the focus of the audit. The Road Maintenance Directorate is headed by a Director who reports to the CEO. The directorate comprises two sections: Road Maintenance and Bridges, and Emergencies which are each headed by a Senior Manager. The directorate also has ten (10) Regional Offices headed by Regional Managers.

4.4.2 Road Transport and Safety Agency

The Road Transport and Safety Agency (RTSA) under Ministry of Transport and Logistics (MTL) was established under the Road Traffic Act No. 11 of 2002 as a corporate body. It is responsible for implementing the policy on road transport, paying out such percentages of money into the road fund from revenues collected at ports of entry in a transparent and accountable manner, traffic management, road safety and enforcement of road transport and safety laws in Zambia. RTSA is also mandated to undertake activities relating to road transport and traffic. In this vain, NRFA appointed RTSA as a tolls agent at ports of entry.⁵⁶ RTSA also receives operational funding from the NRFA.

4.4.3 Ministry of Local Government and Rural Development

The Ministry of Local Government and Rural Development (MLGRD) has the mandate to establish and maintain roads through the Local Government Act No. 2 of 2019 and Government Gazette Notice No. 1123 of 2021. It also manages public road networks through delegated authority from the RDA in line with Section 20 (1)(2)(3) and Section 73 (1) of the Public Roads Act No. 12 of 2002. The Ministry oversees the implementation of delegated functions and responsibilities by Local Authorities and is responsible for the maintenance of feeder/townships roads.

The Department of Rural Development (DRD) is key in the development, maintenance and sustainable management of urban, peri-urban and rural infrastructure to enhance the delivery of social services to the people of Zambia. These services are delivered through Local Authorities (LAs) in partnership with the private sector.

The DRD aims to work with and through key players and stakeholders – LAs, Cooperating Partners (CPs) and Non- Governmental Organisations (NGOs) in ensuring provision of quality municipal infrastructure throughout Zambia by providing: adequate coordination; professional technical advice; mobilisation of resources; and monitoring and evaluation of municipal infrastructure.

The Department has four units: Urban and Feeder Roads; Markets and Bus Stations; Fire and Rescue Services; and Solid Waste Management. The Department facilitates the planning and

⁵⁶Road Transport and Safety Status Report 2021



sourcing of funds for the care and maintenance of urban and feeder roads including community access roads in the country and is therefore the focus of the audit.

4.4.4 National Council for Construction

National Council for Construction (NCC) is a statutory body under the MIHUD governed by the National Council for Construction Act No. 10 of 2020. NCC is charged with the responsibility of providing for the promotion, development, training and regulation of the construction industry in Zambia. In fulfilling its mandate, it undertakes the following activities:

- a) Registration of contractors;
- b) Registration of manufacturers and suppliers;
- c) Registration of projects;
- d) Testing of construction materials;
- e) Conducting research into the use of local construction materials;
- f) Monitoring of contractors; and
- g) Capacity building of medium and small-scale contractors.

NCC collaborates with NRFA on matters concerning the development of the construction industry and provide guidance and advice on construction related matters. The NCC fulfils an important role, both for the construction industry and construction quality.

One of the key objectives of the NCC is to support local contractors and allow or support the gradual growth and improvement of the local industry.

4.5 Systems Description

This section describes the process of the collection and utilisation of the Road Fund, maintenance pathway and axle load control process.

4.5.1 Management of the Road Fund

The Road Fund comprises: such moneys as may be appropriated by Parliament for the purposes of the Road Fund; all fuel levy collected less the cost of collection which should not exceed three per cent in every fiscal year; such percentage of licence fees, registration fees and international transit fees payable to RTSA under the Road Traffic Act No. 11 of 2002; road user levies including tariffs, taxes and tolls; and such monies as may be paid to the Road Fund by way of loans, grants or donations.⁵⁷

Upon collection of the various components of the Road Fund, funds are remitted to relevant transit commercial bank accounts after which they are transmitted to either the RTSA Revenue Sub -Account, Toll Fees Sub - Account or Dollar Toll Fees Sub - Account all of which are housed at Bank of Zambia (BoZ). All funds in the Sub- Accounts are then remitted to Control 99 after which funds are remitted back to the NRFA Road Fund Account at Zambia National Commercial Bank (ZANACO). Consider Figure 4.3. However, the system for loans varies in that loans from Cooperating Partners (CPS) such as Export- Import (EXIM), Japan International

⁵⁷

Cooperation Agency (JICA) and European Union (EU) are paid directly to Contractors except for the World Bank which remits the funds directly to NRFA through INDO Zambia Bank. Similarly, local loans are paid directly to NRFA who then disburse the funds to Contractors based on Interim Payment Certificates (IPCs). Consider Figure 4.4.

Figure 4.3: Operational Framework for the National Road Fund

Road Fund components

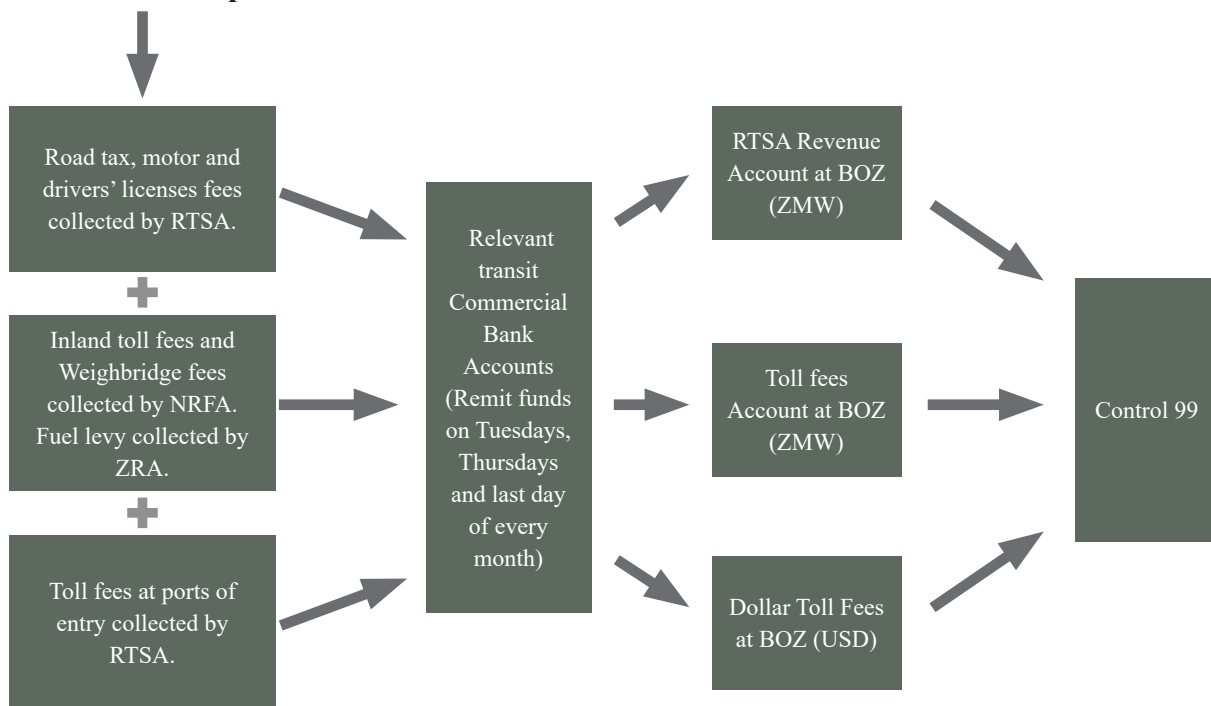
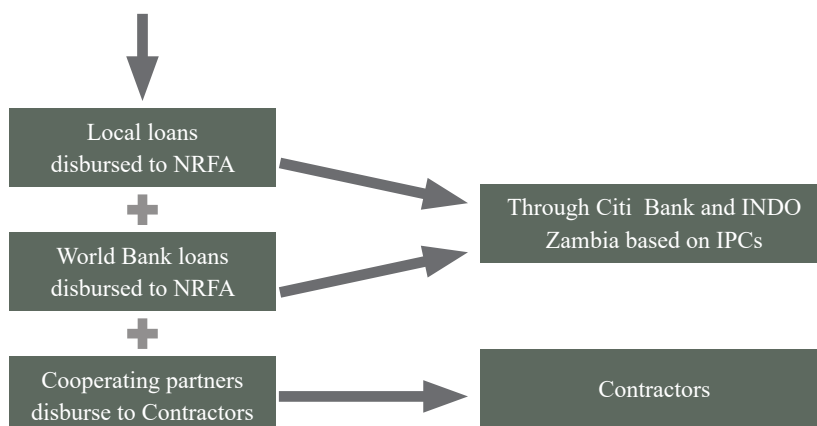


Figure 4.4: Local and Cooperating Partners Loan Disbursements

Road Fund components



Source: Performance Audit Analysis 2023



4.5.2 Road Maintenance Pathway

The RDA uses the Highway Management System (HMS) and Bridge Management System (BMS) as a tool for management of roads and to facilitate the prioritisation of road maintenance activities. Ideally, the tool is supposed to be populated with information from the Road Condition Survey on an annual basis.

RDA Regional Managers are responsible for the performance management of routine maintenance activities which are executed by contracting out or by Force Account. Performance management is carried out through regular inspections (a minimum of two inspections per month per contract). This is done to ensure that works are carried out in line with specified provisions in the respective contracts. The Director- Road Maintenance is also responsible for performance management of periodic maintenance activities which are executed by contracting out or by Force Account. Performance management is carried out through strict contract management and through performance assessments using performance management tools such as vendor rating.⁵⁸

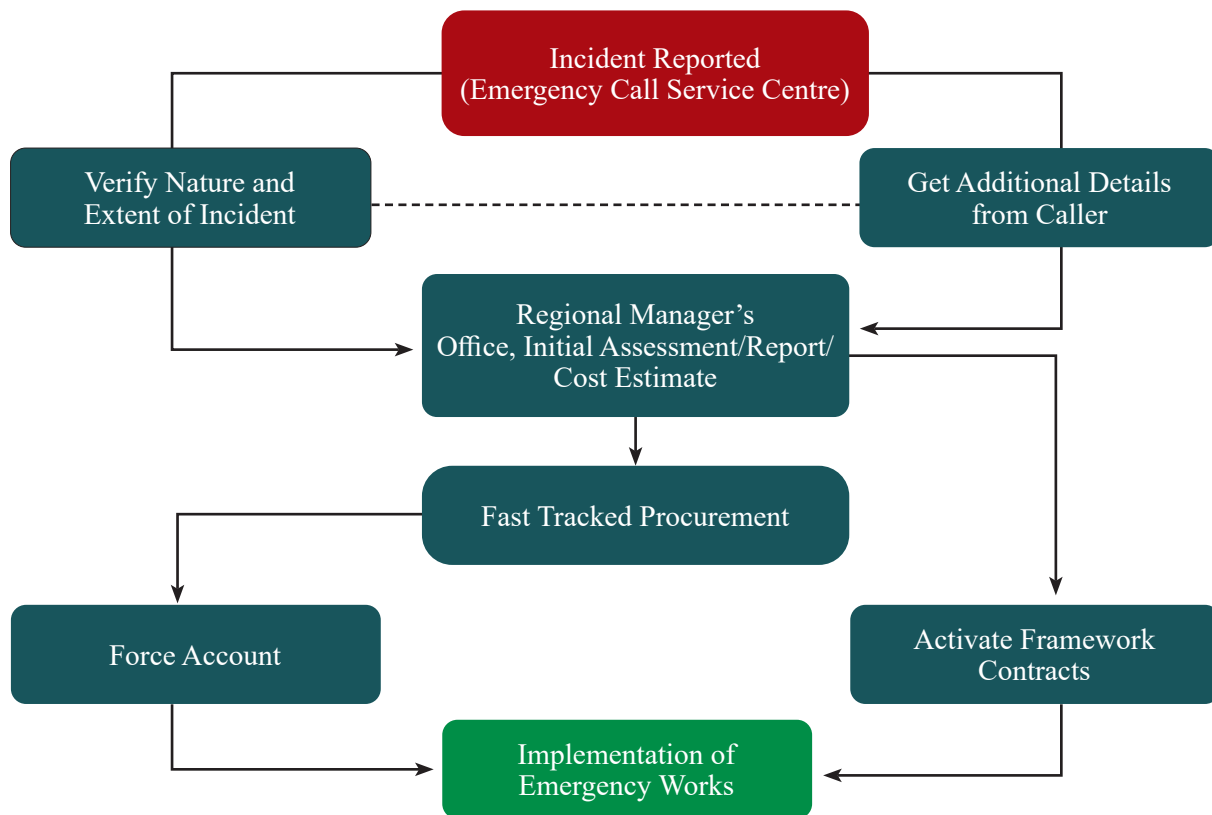
Once a road is constructed and/or rehabilitated, it should be maintained throughout its design period to preserve the road. As such, the following activities should be implemented:

- a) **Routine Maintenance:** Routine maintenance works are applied on roads in good and fair condition to preserve the road asset by keeping it in a maintainable condition throughout its design period. The scope of works comprises pothole patching, vegetation control, sweeping, line marking and drainage works.
- b) **Periodic Maintenance:** These are works carried out periodically, typically once in 5-7 years and include works such as re-surfacing, re-gravelling, repair of culverts, re-sealing; and
- c) **Emergencies:** These are works carried out as a reaction to unplanned works that occur on the road network arising, for instance, from wash aways on culverts, bridges, road wash-out among others.⁵⁹ Figure 4.5 below shows the emergency response flow chart.

⁵⁸ Road Maintenance Strategy 2014 to 2024

⁵⁹ Road Development Agency Road Maintenance Directorate Procedures Manual May 2016

Figure 4.5: Emergency Response Flow Chart



Source: RDA Road Maintenance Strategy 2014 – 2024

4.5.3 Axle load control

Axle load control is essential for preserving road infrastructure. It is enforced using fixed and mobile weighbridges and its objective is twofold: To protect public roads from damage caused by overloaded vehicles and to reduce the risk of accidents on public roads caused by over-dimensional vehicles.⁶⁰ Through load control, road and bridge assets are preserved which allows them to reach their design life.⁶¹

Compensation fines are charged for any load in excess of the allowable load limit while over-dimensional vehicles exceeding the legal load limit in respect of width and length require escort when moving on public roads. There are however loads that are both over dimensional and indivisible. These loads are called abnormal loads as they cannot be dismantled and transported in parts. Abnormality in dimensions include the length, width, height, overhang, load projections or even wheelbase. Although abnormal loads cause the greatest proportion of damage to road infrastructure, their transportation across the road network cannot be barred as their contributions to the global economy is great.⁶²

⁶⁰ RDA 2021 Annual Report

⁶¹ RDA Submission to auditors dated 07.06.2023.

⁶² RDA Regulatory Impact Assessment Report on the Increase of the Abnormal Load Inspection and Escort Fee 2018



Chapter Five

AUDIT CRITERIA

AUDIT CRITERIA

5.0 Introduction

The chapter presents both the sources of criteria and the criteria that was used to assess the extent to which NRFA has effectively utilised the Road Fund and prioritised road maintenance in conjunction with key stakeholders. Criteria are reasonable and attainable standards of performance against which economy, efficiency and effectiveness can be assessed.

5.1 Sources of criteria

The criteria were extracted from the following:

- i. National Road Fund Act No. 13 of 2002
- ii. The Tolls Act No. 14 of 2011
- iii. Public Roads Act No. 12 of 2002
- iv. National Council for Construction Act No. 10 of 2020
- v. National Road Fund Agency Strategic Plan 2017 to 2021
- vi. National Road Fund Agency Strategic Plan 2022 to 2026
- vii. RDA Strategic Plan 2019 to 2021
- viii. RDA Strategic Plan 2022 - 2026
- ix. RDA Road Maintenance Strategy 2014 - 2024
- x. Report on the Review of the Road Maintenance Strategy 2015 - 2024
- xi. National Council for Construction Strategic Plan 2019 - 2021
- xii. MoFNP Annual Report 2020 - 2021
- xiii. NRFA Annual Reports 2020 - 2021
- xiv. RDA Annual Reports 2020 - 2022
- xv. Road Sector Investment Plan (RoadSIP III) Volume 1 and 2 October 2020
- xvi. National Transport Policy - 2019
- xvii. Road Management Policy 2015: An Approach to the Evaluation of Road Agency Performance
- xviii. RDA Regulatory Impact Assessment Report on the Increase of the Abnormal Load Inspection and Escort Fee 2018
- xix. National Road Fund Road Sector Debt Management Strategic Plan 2020
- xx. Road Sector Annual Work Plan (RSAWP) 2020 – 2022
- xxi. NRFA Monitoring and Evaluation Procedures Manual Revised Version No.2 of 2020
- xxii. NRFA Board Minutes - 2020 to 2022
- xxiii. RDA Board Minutes - 2020 to 2022
- xxiv. Various Contract Documents
- xxv. Monitoring and Evaluation Procedures Manual, 2020 - 2022 (NRFA)
- xxvi. The South African National Roads Agency Limited and National Roads Act No. 7 of 1998



5.2 Extent to which the Road Fund has been Managed in a Sustainable Manner to Facilitate the Effective Utilisation of the Road Fund

The Road Management Policy of 2015 by Sub-Sahara Africa Transport Policy Programme (SSATP), states that all revenues due to the Road Fund should be collected and reported; that no funds are diverted for non-authorised purposes; and safe custody of funds. In addition, there should be transparent allocation of funds to various road agencies and the development of sound criteria for allocating funds to various tiers of the road network.

The toll fee or other charge imposed for the use of a toll road and collected by the Agency shall form part of the Road Fund and shall be used exclusively for the construction, maintenance and rehabilitation of roads.

The Agency shall apply the moneys of the Road Fund in the construction, maintenance and care of public roads; and in road transport, traffic and safety management; and for the operations of the Agency, Road Development Agency and Road Transport and Safety Agency provided that the moneys paid out of the road fund for the operations of the three (3) Agencies do not exceed ten per centum of the moneys paid into the Road Fund.⁶³

In addition, the NRFA Strategic Plan 2017 to 2021 and 2022 to 2026 under strategic objectives 2 and 3 respectively: Improve fiduciary management, provides that the Agency should prudently take good care of the financial resources under its custody on behalf of stakeholders and apply them to the intended purpose.

5.2.1 Legal Framework to Enable the Effective Utilisation of the Road Fund

The NRFA Strategic Plan 2017 to 2021, objective 6: Strengthen legal mandate, entails reviewing the current legal framework of the Agency in consultation with key stakeholders to give the effect of law to the expanded mandate and enable the Agency to effectively undertake technical audits and mobilise additional funding for road infrastructure development. Similarly, NRFA should engage relevant stakeholders to review the Tolls Act No. 14 of 2011.

The NRFA Act No. 13 of 2002 provides that the Agency must seek approval from the Minister responsible for Finance before accepting moneys by way of grants or donations from any source in and outside Zambia. Approval is also required to raise loans or any other moneys the Agency may require for the discharge of its functions. Similarly, the Agency must seek approval to invest any funds not immediately required for the discharge of its functions.

5.2.2 Prioritisation of the Use of Local Contractors in the Road Sector

The National Council for Construction Act No. 10 of 2020 provides for the promotion of the prioritisation of a Zambian contractor in the procurement of construction works and accessing opportunities in the construction industry in accordance with the NCC Act and any other written law. Similarly, it provides for the promotion of the development of local contractors, in consultation and collaboration with an appropriate authority.

⁶³ NRFA Act No. 13 of 2002 Part IV Sec (17 a, b) and Amendment Act No. 5 of 2006 17 c)

5.2.3 Debt Sustainability

The National Road Fund Act No. 13 of 2002 provides that the NRFA shall raise by way of loans or otherwise, such moneys as it may require for the discharge of its functions subject to the approval of the Minister.⁶⁴

The vision of the National Road Fund Agency is to have “A sustainable and dynamic Road Fund for national development”. To realise the vision, the NRFA has identified two (2) key result areas of focus and their related strategic results as follows: road sector financial sustainability resulting in timely and adequate funding of road infrastructure projects; and operational efficiency resulting in effective and efficient service delivery.⁶⁵ Similarly, the mission statement of the National Road Fund Agency is “To mobilize and sustainably manage financial resources for good and safe roads”.⁶⁶

In order to achieve sustainable debt levels, the target of the Agency is to: secure a bailout package from Treasury; restructure existing loans by engaging Financial Lending Institutions and; implement the approved 10 year Debt Service Sustainability Plan.⁶⁷

The MoFNP obtained Cabinet approval in December 2019 for NRFA to re-scope locally financed road infrastructure projects under Link Zambia 8000 to reduce the project cost from ZMW10billion to ZMW1.4billion.⁶⁸

5.2.4 Inclusivity in Road Sector Projects

The NRFA Monitoring and Evaluation Procedures Manual Revised Version No.2 of 2020 under Key Performance Indicators (KPIs) states that one of the objectives of the Agency is to monitor employment levels of women on road projects.

In addition, the National Council for Construction (NCC) Strategic Plan 2019 to 2021 under Core value No.3: Inclusiveness, provides that the desired economic growth from the construction industry must be inclusive in nature and must bring about empowerment without segregating anyone based on tribe, education status, gender, physical ability or anything perceived to demean them. It further provides that NCC should seek to promote inclusiveness in all its operations in the construction industry.⁶⁹

Most World Bank and African Development Bank (AfDB) funded projects require a road contract to have at least 25% of its workforce as women.⁷⁰

⁶⁴ NRF Act No. 13 of 2002, Part IV Section 18 (2b)

⁶⁵ NRFA Strategic Plan 2022 - 2026

⁶⁶ NRFA Strategic Plan 2022 - 2026

⁶⁷ Ibid

⁶⁸ National Road Fund Agency Debt Road Sector Debt Management Strategic Plan 2020

⁶⁹ NCC Strategic Plan 2019 to 2021

⁷⁰ Selected Contracts



5.3 Extent to which Roads are Maintained to Ensure that their Structural Design Life is Achieved or Exceeded

The specific objectives of the RDA RMS 2014 to 2024 are to ensure that: 100 per cent of paved Trunk, Main and District (TMD) roads are in good condition by 2024; greater than 80 per cent of the unpaved TMD roads are in good condition by 2024; greater than 90 per cent of the paved Urban Roads are in good condition by 2024; greater than 80 per cent of the unpaved Urban Roads are in good condition by 2024; greater than 80 per cent of Primary Feeder Roads are in good condition by 2024; Road User Charges (RUCs) are dedicated to road maintenance by 2018; and the application of the Output and Performance Based Road Contract (OPRC) system for road maintenance is done by 2016.

5.3.1 Prioritisation of Road Maintenance on the Core Road Network

The RDA RMS provides that RDA should prioritise routine maintenance activities on the CRN followed by periodic maintenance and finally rehabilitation and upgrading works. Accordingly, prioritisation will be based on traffic volumes; road classification and other socio-economic factors such as access to schools, hospitals and other public facilities.⁷¹

5.3.2 Timely Road Maintenance

Through a systematic method of road and bridge data inventory and data collection, the RDA will have up-to-date information for decision making on maintenance priorities for both roads and bridges including minor and major culverts.⁷²

Programming and prioritisation of periodic maintenance interventions on the (Trunk, Main and District) TMD Network will be achieved using the Zambia Highway Management System, (ZHMS) and the Highway Development and Management tool (HDM-4). A Maintenance Needs Assessment Report indicating a priority list of roads and associated investments required to bring the network into a maintainable condition will be generated annually.⁷³

The RDA Strategic Plan 2022 to 2026 provides that there should be zero roads failing within their design life.

The Board has set compliance to axle loading to 98%.⁷⁴

One of the functions of the RDA is to regulate maximum weights permissible for transmission on roads through axle load control.⁷⁵

Statutory Instrument No. 76 of 2015, Regulation 3 compels all Heavy Goods Vehicles (HGVs) with Gross Vehicle Mass (GVM) of 6.5 tons and above to pass through every weighbridge where they are checked for compliance with allowable dimensional and load limits in terms of GVM, axle load distribution, vehicle width, length and height.⁷⁶

⁷¹ RDA Road Maintenance Strategy 2015-2024

⁷² RDA Road Maintenance Strategy 2015-2024

⁷³ RDA Road Maintenance Strategy 2015 - 2024

⁷⁴ RDA Board minutes 2020 - 2022

⁷⁵ Public Road Act No. 12 of 2002

⁷⁶ RDA Regulatory Impact Assessment Report On the Increase of the Abnormal Load Inspection and Escort Fee 2018

5.3.3 Financial Resources for Road Maintenance

The South African National Roads Agency Limited (SANRAL) and National Roads Act No. 7 of 1998, Chapter 4, Section 34 (3b) states that SANRAL must keep separate accounts of all moneys received as toll or otherwise in connection with toll roads and of the interest earned on the investment of those moneys. Those moneys may be used only for: the maintenance and operation of toll roads and toll plazas and any facilities connected with toll roads and toll plazas.⁷⁷

According to the RDA 2012 Maintenance Needs Report on the CRN, an annual minimum of US\$721 million should be allocated for maintenance activities to bring the road network into a maintainable condition.⁷⁸

The revised RMS 2019-2024 and RoadSIP (Road Sector Investment Plan) III 2020-2030 provides for a target of at least 30% of Road User Charges (RUC) to be channeled towards road maintenance.⁷⁹

Roads are designed to last a long period, typically 15 – 30 years. To reach that design life, a series of maintenance activities should be undertaken to ensure the features of the road perform according to the original design and construction, and for the safety of users.⁸⁰

5.3.4 Coordination among Key Stakeholders

The Urban Roads Maintenance activities will be managed and coordinated by Local Road Authorities in collaboration with the RDA.⁸¹

The NRFA will enhance collaboration with other public bodies for reliable and cost-effective connectivity for improved service delivery. It will also enhance collaboration with Local Authorities on construction, maintenance, and care for road infrastructure.⁸²

One of the objectives of the National Transport Policy is to ensure that systemic and operational challenges associated with mandate overlaps, centralism, financing as well as structural irregularities are appropriately addressed. Likewise, another policy objective is the harmonisation of all pieces of legislation governing the road sector to minimise overlap of mandates and adherence to core mandates. This will be done by harmonising the Public Roads Act No. 12 of 2002 and the Local Government Act Cap 281.⁸³

⁷⁷ Best regional practice

⁷⁸ RDA Road Maintenance Strategy 2014 - 2024

⁷⁹ National Road Fund Agency Road Sector Debt Management Strategic Plan 2020

⁸⁰ Report on the Review of the Road Maintenance Strategy (2015–2024)

⁸¹ RDA Road Maintenance Strategy 2014 - 2024

⁸² NRFA Strategic Plan 2022 - 2026

⁸³ National Transport Policy -2019



Chapter Six

FINDINGS

FINDINGS

6.0 Introduction

The chapter highlights the findings generated by the audit by comparing sufficient and appropriate evidence to criteria, verifying the problem(s) and analysing causes and risks based on the audit criteria.

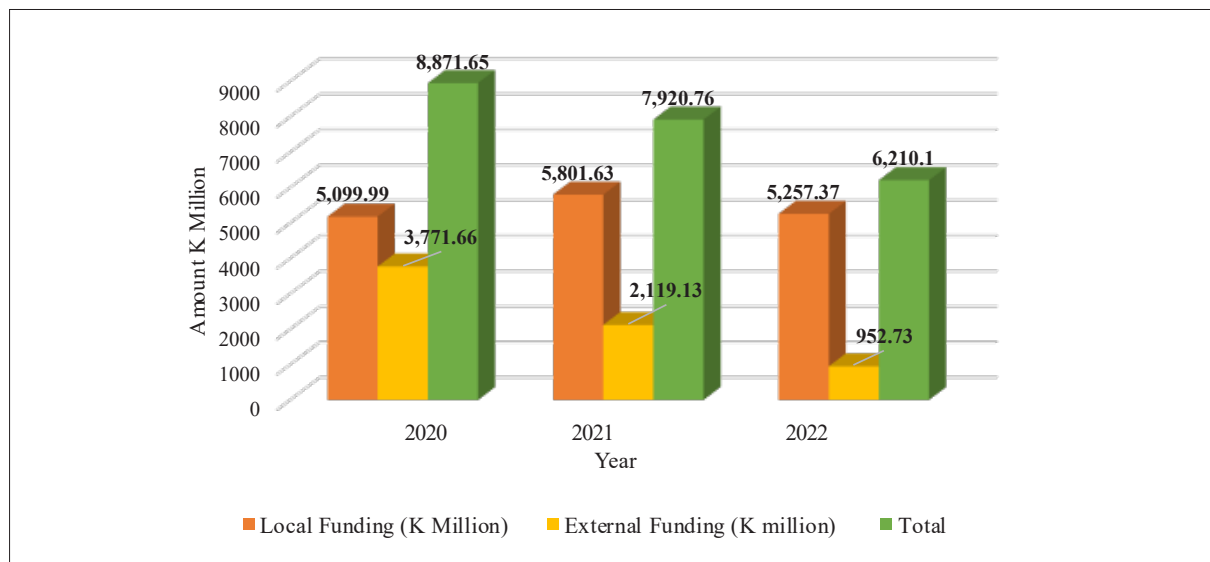
6.1 Sustainability of the Road Fund

6.1.1 Funding Sources of the Road Fund

Annual funding to the Road Sector is derived from two (2) main sources namely local and external sources. Local funding includes fuel levy, inland and port of entry tolls, road license fees, registration and examination fees, weighbridge fees and fines and loans obtained from local and international financing institutions. External funding is derived from loans and grants from Co-operating Partners such as the World Bank, African Development Bank (AfDB), European Union (EU), Contractor Financing Initiatives (CFI) and Public Private Partnerships (PPPs).⁸⁴

An analysis of NRFA Annual Reports 2020 to 2021 and other relevant records revealed that local funding contributed a significant amount of revenue to the Road Fund compared to external sources. Figure 6.1 below shows a summary of local versus external funding.

Figure 6.1: Local versus External Funding Sources 2020 to 2022



Source: Performance Audit Analysis 2023

As seen in figure 6.1 above, local funding amounted to K5,099.99 million in 2020, K5,801.63 million in 2021 and K5,257.37 million in 2022 while external funding was K3,771.66 million in

⁸⁴ National Road Fund Agency Road Sector Debt Management Strategic Plan 2020



2020, K2,119.13 million in 2021 and K952.73 million in 2022. It was noted that local funding increased by 11.96% between 2020 and 2021 and reduced by 9.4% between 2021 and 2022. The overall funding from both local and external sources was K8,871.65 million, K7,920.76 million and K6,210.1 million in 2020, 2021 and 2022 respectively.

The increase in local funding between 2020 and 2021 was attributed to an increase in the allocation towards debt servicing from K1million in both 2020 and 2021 to K106.5million in 2022. The same period saw an increase in funding allocations to the MLGRD from K204million in 2020 to K503million in 2022. This increased allocation was necessitated by feeder roads contracts signed by the MLGRD in 2020.

On the other hand, there was a decrease in external funding of 30.6% between 2020 and 2022 which was attributed to a decrease in the number of externally funded projects. For instance, in 2020, the Road Sector had eighty-eight (88) externally funded projects which included both works and consultancy services which reduced to sixty-three (63) projects as of 2022. The reduction was attributed to some road projects coming to an end and requiring lesser cash flows. Notable projects that came to an end included supervision of the construction of the Kazungula Bridge and One Stop Border Post (OSBP), rehabilitation of the Kafue - Mazabuka Road and the construction of the Mwami/Mchinji OSBP.

6.1.2 Tracking of the Usage of Toll Fees

The toll fee or other charge imposed for the use of a toll road and collected by the Agency shall form part of the Road Fund and shall be used exclusively for the construction, maintenance and rehabilitation of roads.⁸⁵

The Road Management Policy of 2015 by Sub-Sahara Africa Transport Policy Programme (SSATP), states that there is need to ensure that all revenues due to the Road Fund are collected and reported; that no funds are diverted for non-authorised purposes; and safe custody of funds. In addition, there is also need for transparent allocation of funds to various road agencies and need to develop sound criteria for allocating funds to various tiers of the road network.⁸⁶

One of Government's interventions to mitigate against loss of road infrastructure investment, was the introduction of the National Road Tolling Programme (NRTP) in 2013. The programme was part of the strategy to improve funding towards road maintenance. However, the Tolls Act No. 14 of 2011 provided for the use of toll fees for construction, maintenance and rehabilitation of roads.

An analysis of extracts of Revenue Sub-Accounts statements for the period 2020 to 2022 revealed that toll fees and other Road User Charges (RUCs) were comingled in line with the Government Treasury Single Account system under Control 99. This made it difficult to link the source of funds to the designated use as it was challenging to clearly identify specific projects that benefited from tolls. Consequently, there was a publicly held view that tolls revenue was

⁸⁵ Tolls Act No. 14 of 2011, Part III, Sec (11)

⁸⁶ Road Management Policy 2015: An Approach to the Evaluation of Road Agency Performance, Building block 3, element 8.

not seen to have been used for the improvement and maintenance of roads⁸⁷. Table 6.1 shows toll fees as a percentage of RUC during the period under review.

Table 6.1: Toll fees as a percentage of Road User Charges 2020 to 2022

No.	Year	RUC (ZMW)	Toll Fee collections (ZMW)	Percentage (%)
1	2020	3,156,287,987.60	1,621,836,166.62	51
2	2021	3,157,843,990.43	2,431,324,887.04	77
3	2022	3,658,382,641.00	2,613,461,516.24	71
	Total	9,972,514,619.03	6,666,622,569.90	67

Source: Performance Audit Analysis 2023

As highlighted above, table 6.1 showed that an average of 67% of RUCs were from toll fee collections while the balance was from fuel levies, road tax, motor and driver's license collections.

It further showed that toll fees contributions to RUCs had generally increased during the period under review, with a slight decrease of approximately 5% recorded between 2021 and 2022. The increase was attributed to both an increase in the number of toll stations (Inland and port of entry) from thirty-six (36) in 2020 to thirty-seven (37) in 2022 and an increase in the number of vehicle passages in the same period.

The use of the TSA for the collection of RUCs poses a significant limitation to the effective tracking of the use of toll fees which make up the majority of the RUCs. Without this tracking mechanism, there is a further risk that public confidence may be eroded due to lack of transparency and accountability.

In response, the MOFNP stated that various components of the road fund are remitted to relevant transit accounts upon collection after which funds are transmitted to the three sub control accounts at Bank of Zambia. It was further submitted that all funds in the sub control accounts are then remitted to Control 99 for funding to NRFA and that once funded, the road sector funds are transmitted to NRFA Account at Bank of Zambia and later to NRFA at Zambia National Commercial Bank.

6.1.3 Legal Framework for Resource Mobilisation and Utilisation

The NRFA Strategic Plan 2017 to 2021, objective 6: Strengthen legal mandate, entails reviewing the current legal framework of the Agency in consultation with key stakeholders to give the effect of law to the expanded mandate and enable the Agency to effectively undertake technical audits and mobilise additional funding for road infrastructure development. Similarly, NRFA should engage relevant stakeholders to review the Tolls Acts No. 14 of 2011.

The NRFA Act No. 13 of 2002 provides that the Agency must seek approval from the Minister

⁸⁷ Zambia Tax Platform - Tracking the Utilisation of Toll Fees August 2021



responsible for Finance before accepting moneys by way of grants or donations from any source in and outside Zambia. Approval is also required to raise loans or any other moneys the Agency may require for the discharge of its functions. Similarly, the Agency must seek approval to invest any funds not immediately required for the discharge of its functions.

A review of the NRFA Strategic Plans for the period 2017 to 2021 and 2022 to 2026, and interviews with NRFA management revealed that the NRFA Act No. 13 of 2002/Amendment Act 2006 did not explicitly give the Agency the function of resource mobilisation, retention and utilisation when in fact investment and borrowing are incidental to the functions of a Fund. It was further noted that all resource mobilisation was carried out by MoFNP. Whilst the investment and raising of loans functions are implicit under functions of the Agency as shown under clauses (18) (2) b and 18 (4), such functions were not implicit in the functions of the Road Fund and could only be assumed to be included under the listed functions. This meant that there was lack of clear mandate of borrowing and investing which made it difficult for the Agency to engage would be investors without authority from the MoFNP thus protracting negotiations and other decisions.

It was further revealed that the Agency did not have the legal mandate to enforce technical recommendations that arose from technical audits. For example, the Agency engaged a consultant to undertake technical audits on various roads in the country between 2014 and 2018. The overall objective of the audit was to verify that resources managed by NRFA were used efficiently, transparently and economically in accordance with the standards and sound professional practice, thus ascertaining value for money. Following the finalisation of the report by the hired Consultant, the report was shared with RDA for their action. However, the Agency was unable to compel RDA to implement the recommendations, which would have resulted in improvements in the quality of the road network.

The RDA submitted that the proposal by NRFA to enforce technical recommendations that arose from technical audits contradicted Article 250 (1) (c) of the Constitution of Zambia (Amendment) No 2 of 2016 and Section 66 of the Public Finance Act No.1 of 2018 and the Public Audit Act, 2016 that state that the Auditor General shall conduct financial and value for money audits, including forensic audits and any other type of audit, in respect of a project that involves the use of public funds. Further, Section 66 stated that Statutory corporations and state-owned enterprises shall be subjected to audit by the Auditor-General, Controller of Internal Audit or any other auditors appointed by the Secretary to the Treasury to carry out special audits in such statutory corporations or state-owned enterprises as the case may be respectively.

RDA also submitted that there was a likelihood of NRFA being conflicted during such audits which may result in misunderstandings particularly if the Auditor General's findings were at variance with those of NRFA. They also stated that RDA was well capacitated to carry out technical audits for Value for Money assurance.

Further interviews with NRFA management revealed that in 2019, a proposal was made by the Agency through the MoFNP to amend the NRFA Act No. 13 of 2002 to include a clear mandate on resource mobilisation for construction, care and maintenance of roads. However, as at 31st January 2024, it was established that the proposal was still with MoFNP and that the Agency awaited a response. A further probe revealed that one of the reasons for the delay in response was frequent back-and-forth communication caused by varying suggestions raised by the last two (2) NRFA Boards that have since been dissolved.

There is a risk that if the Agency's legal limitations are not addressed, resource mobilisation activities will not be done in line with the Agency's mandate. This will have an impact on the ability of the Agency to raise resources for the effective management of the Road Fund. In addition, failure by the RDA to consider implementing technical recommendations from NRFA may result in delayed improvements in the road network.

Further, failure to ring fence toll fees for road maintenance poses a risk that tolled and other roads will not be in maintainable condition.

6.1.4 Foreign versus Local Contractors

Section 5 (c) and (g) of the National Council for Construction Act No.10 of 2020 provides for the promotion of the prioritisation of a Zambian contractor in the procurement of construction works and accessing opportunities in the construction industry in accordance with the NCC Act and any other written law. Similarly, it provides for the promotion of the development of local contractors, in consultation and collaboration with an appropriate authority.⁸⁸

Section 91 (1)(b) of the Public Procurement Act No. 8 states, "A procuring entity shall grant a prescribed margin of preference to a bidder offering goods, works or services with local content."⁸⁹

The audit established that while the NCC Act No. 10 of 2020 and the Public Procurement Act No. 8 of 2020 provided for the promotion of local contractors, thresholds were not prescribed which limited the ability of the audit to ascertain the extent to which local contractors were contracted.

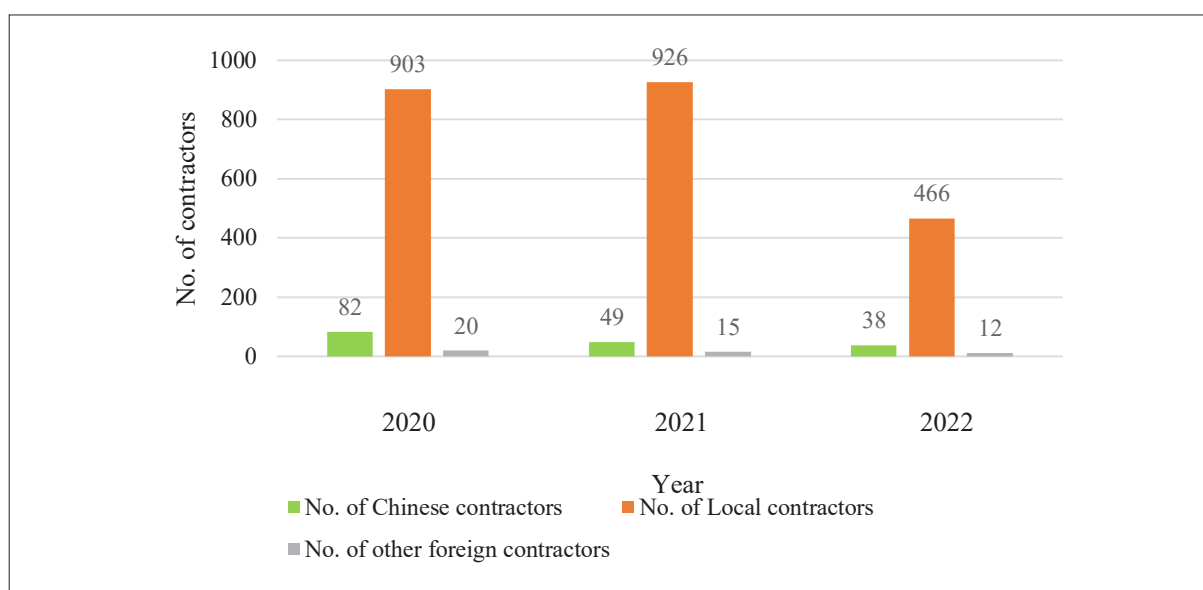
A review of the Road Sector Annual Reports 2020 to 2022 revealed that RDA and MLGRD engaged more local contractors compared to foreign contractors. In this regard, it was revealed that the Agency contracted a total of 2,295 local contractors, 169 Chinese contractors and 47 other foreign contractors between 2020 and 2022. Figure 6.2 below shows the breakdown in contract allocation per year.

⁸⁸ National Council for Construction Act No. 10 of 2020, Part II Section 5 (c and g)

⁸⁹ The Public Procurement Act No. 8 of 2020, Part VII, Sec (91) (1b)



Figure 6.2 Contract Allocation 2020 to 2022

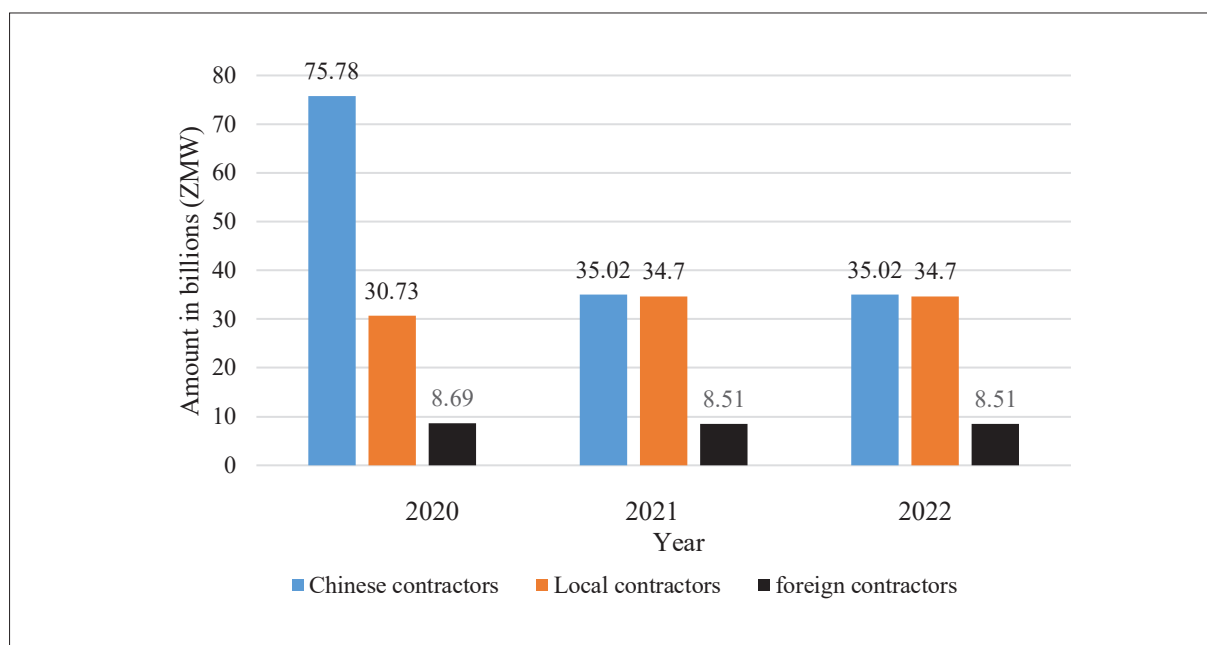


Source: Performance Audit Analysis 2023

The audit established that there were a total of 1,005 contractors in 2020, 990 in 2021 and 516 in 2022 comprised of Chinese, local and other foreign contractors. As seen in figure 6.2 above, there was a reduction in the number of Chinese contractors from 82 to 49 and to 38 in 2020, 2021 and 2022 respectively. Similarly, there was a reduction in the number of other foreign contractors from 20 to 15 and to 12 in the same period. However, there was an increase in the number of local contractors from 903 in 2020 to 926 in 2021 and a marked reduction to 466 in 2022. The decrease in the number of contractors from 990 in 2021 to 516 in 2022 was attributed to the expiration of the RDA routine maintenance contracts which ended in 2021.

It was further established that the process for awarding new contracts was ongoing though it had taken long due to bureaucracies in the procurement process. Despite the larger number of local contractors, Chinese contractors had the highest value of contract sums at K145.82 billion broken down as K75.78 billion in 2020, and K35.02 billion in both 2021 and 2022. On the other hand, local contractors were awarded contracts worth K100.13 billion broken down as K30.73 billion in 2020 and K34.7 billion in both 2021 and 2022 while other foreign contractors were awarded contracts worth K25.71 billion broken down as K 8.69 billion in 2020 and K8.51 billion in both 2021 and 2022 as detailed in figure 6.3 below.

Figure 6.3: Value of Contracts 2020 to 2022



Source: Performance Audit Analysis 2023

Though local contractors dominated the road sector with an average allocation of 91% of road contracts during the period under review, the total value of local contracts was less than Chinese contractors by K45.69billion. This was attributed to inadequate financial capacity, lack of expertise and technological knowhow by local contractors to carry out large projects in comparison to Chinese contractors. This implied that an average of 52% of the money due to local, Chinese and other foreign contractors was allocated to Chinese contractors, 38% to local contractors and 10% to other foreign contractors during the period under review.

Consequently, there is a risk that 62% (Chinese and other foreign contractors) of locally generated resources obtained from RUCs were externalised at the expense of the local economy. There is also a risk of reduced economic activity in that local contractors can help stimulate the economy as money paid remains in the country and may have a trickle-down effect on various sectors of the economy.

6.1.5 Debt Sustainability

The National Road Fund Act No. 13 of 2002 provides that the NRFA shall raise by way of loans or otherwise, such moneys as it may require for the discharge of its functions subject to the approval of the Minister.⁹⁰

The vision of the National Road Fund Agency is to have “A sustainable and dynamic Road Fund for national development”.

⁹⁰ NRF Act No. 13 of 2002, Part IV Section 18 (2b)



To realise the vision, the NRFA has identified two (2) key result areas of focus and their related strategic results as follows: road sector financial sustainability resulting in timely and adequate funding of road infrastructure projects; and operational efficiency resulting in effective and efficient service delivery.⁹¹ Similarly, the mission statement of the National Road Fund Agency is “To mobilise and sustainably manage financial resources for good and safe roads”.⁹²

In order to achieve sustainable debt levels, the target of the Agency is to: secure a bailout package from Treasury; restructure existing loans by engaging Financial Lending Institutions; and implement the approved 10-year Debt Service Sustainability Plan.⁹³

In 2021, Government proposed to transfer at least K4.0 billion in foreign debt to Ministry of Finance and National Planning.⁹⁴

6.1.5.1 Locally Contracted Loans

Interviews with NRFA management and a review of the Monitoring and Evaluation Value for Money Quarterly Reports 2022 revealed that the Agency had contracted debt in excess of K5.9 billion between 2017 and 2021 from National Pension Scheme Authority (NAPSA), National Savings and Credit Bank (NATSAVE), and Indo Zambia Bank (IZB).

It was revealed that the Agency obtained two (2) loans from NAPSA with the first loan agreement on the 24th June 2017 amounting to K2,126,552,025.76 and the second agreement on 17th July 2019 amounting K1,801,000,000.00 at commercial floating interest rates. In addition, interest capitalised in the same period was K717,255,850.39.

The purpose of the loan was to finance the rehabilitation and construction of T2 from Ndola-Kitwe-Chingola to Solwezi and was secured on the Road Fund RUCs collections. The loan tenure was later amended from 10 to 15 years and repriced to 15-year Government Bond yield rate.⁹⁵

In December 2019, the Agency accessed a facility of K300 million from NATSAVE to settle long outstanding debts owed to routine maintenance, small and medium scale local contractors and consultants. The loan carried an interest rate of BoZ Policy Rate 11.5% plus 15.5% margin (effective rate 27% per annum) and was repayable in 5 years. In October 2020, NRFA accessed the BOZ Stimulus Package through NATSAVE for an amount of K500 million to settle long outstanding debts owed to routine maintenance, small and medium scale local contractors and consultants. The loan carried an interest rate of BoZ Policy Rate 8% plus 6% margin (effective rate 14% per annum) and was repayable in 5 years with one year moratorium on capital.⁹⁶

⁹¹ NRFA Strategic Plan 2022 - 2026

⁹² NRFA Strategic Plan 2022 - 2026

⁹³ Ibid

⁹⁴ National Road Fund Agency Road Sector Debt Management Strategic Plan 2020

⁹⁵ NRFA Annual Report 2020 - 2022

⁹⁶ NRFA Annual Report 2020 - 2022



Similarly, another loan of K500 million was obtained by the Agency and financed by IZB to partly finance projects in the road sector for payment of arrears to local contractors, consultants and suppliers. The rate of interest on the loan for the interest period was 14% per annum fixed during the term of the loan which is aggregate of the BoZ policy rate at 8% and 6% margin.⁹⁷ Table 6.2 below shows the road sector loans as at 30th June 2023.

Table 6.2: Road Sector Loans as at 30th June 2023

No.	Type	Amount contracted (ZMW)	Date of loan agreement	Interest paid (ZMW)	Penalties paid (ZMW)	Principal (Actual payment) (ZMW)	Total Paid (Principal + Interest + Penalty) (ZMW)	Outstanding Balance (ZMW)
1	NAPSA I	2,126,552,025.76	24 th June 2017					
2	NAPSA - Extra Funding	1,801,000,000.00	17th July 2019					
	Interest capitalised	717,255,850.39						
	Total NAPSA	4,644,807,876.15		3,561,025,928.87	253,532,682.63	3,615,396,913.85	7,429,955,525.35	1,029,410,962.30
3	NATSAVE I	300,000,000.00	17th December 2019	203,488,305.75	0	126,293,230.98	329,781,536.73	173,706,796.02
4	NATSAVE II	500,000,000.00	Oct-20	167,211,448.50	0	176,373,780.03	343,585,228.53	323,626,219.97
	Total NATSAVE	800,000,000.00						
5	INDO Zambia (Stimulus package)	500,000,000.00	14th January 2021	151,873,463.65	0	95,005,393.28	246,878,856.93	404,994,606.72
	Total	5,944,807,876.15		4,083,599,146.77	253,532,682.63	4,013,069,318.14	8,350,201,147.54	1,931,738,585.01

Source: NRFA data 2023

⁹⁷ NRFA Annual Report 2020 - 2022



An analysis of financing agreements between NRFA and: NAPSA; NATSAVE; and IZB revealed that the Agency contracted a total of K5, 944,807,876.15 with the largest loan financed by NAPSA amounting to K4,644,807,876.15 followed by NATSAVE with K800, 000,000 and IZB with K500,000,000.

The contracted loan amount exclusive of interest payments was K5,944,807,876.15 out of which a total principal of K4,013,069,318.14 was paid by the Agency as at 30th June 2023 with a total interest of K4,083,599,146.77 representing 69% interest. In addition, a total of K253, 532,682.63 was accumulated as penalties for delayed payments leaving a balance owed of K1,931,738,585.01 as at 31st July 2023. The accumulated penalties represented 4.3% of the loan amount and were reportedly as a result of delayed receipt of funding from the MoFNP which in some cases would go up to twenty (20) days. While the Agency made frequent loan repayments (usually monthly for the NAPSA loan) it was noted that payments per month varied greatly from the agreed payment schedule which in this case was equal monthly installments, which also gave rise to penalties. It was further revealed that payment of debt had affected the implementation of projects as financial resources in the form of RUCs were channeled towards debt servicing.

Using RUC for debt servicing may be risky as it may affect the sustainability of the Road Fund: it can lead to increased debt if NRFA continues to borrow money to pay contractors and can lead to a cycle of debt that is difficult to break; defaulting on loans may introduce credit risk which may lead to a lower credit rating and higher borrowing costs in future; if interest rates rise, the cost of servicing debt can increase which puts a strain on the Road Fund; and funds for road maintenance will further reduce which may result in inefficient execution of road maintenance activities.

In response, NRFA submitted that the NATSAVE Loan of K300,000,000 was fully paid off as of January 2024. A confirmation letter copied to OAG from NATSAVE to NRFA dated 12th February, 2024 also confirmed the liquidation of the said loan facility.

In an effort to ensure that loans were paid on time to avoid penalties, NRFA stated that the MoFNP had committed to release funds by 25th of every month. Furthermore, it was stated that MoFNP was actively being engaged by the Agency to provide funding to clear off loans in an effort to free up RUC. The NRFA further proposed an amendment to its ACT which will allocate toll fees exclusively for maintenance of roads.

6.1.5.1.1 Use of Road User Charges for Local Debt Servicing

The audit established that the acquisition of locally contracted loans were premised on RUCs as a revenue stream to service repayment of debt over the tenure of the loans.⁹⁸ A review of the NRFA Annual Reports for the period 2020 to 2022 revealed that the Agency collected RUCs amounting to K3,156,287,987.60 in 2020, K3,157,843,990.43 in 2021 and K3,658,382,641.00 in 2022. Further, an analysis of the Road Sector Annual Work Plan (RSAWP) and NRFA

⁹⁸ The NRFA Debt Management Strategic Plan 2020, NRFA Annual Reports 2020 - 2021 and analysis of interviews

Annual Report for period 2020 to 2022 revealed that K761,038,000.03, K1,201,038,000.03 and K1,426,000,000.00 was allocated towards debt servicing in 2020, 2021 and 2022 respectively as shown in table 6.3 below.

Table 6.3: Road User Charges Collections against Debt Servicing Allocations 2020 - 2022

Year	Road User Charges Collections (ZMW)	Amount allocated towards debt servicing amount (ZMW)	Percentage %
2020	3,156,287,987.60	761,038,000.03	24.1
2021	3,157,843,990.43	1,021,038,000.00	32.3
2022	3,658,382,641.00	1,426,000,000.00	39.0
Total	9,972,514,619.03	3,208,076,000.03	

Source: Performance Audit Analysis 2023

As seen in table 6.3 above, there was an increase in the collection of RUCs from K3,156,287,987.60 in 2020 to K3,658,382,641.00 in 2022 representing 13.7% which was attributed to an increase in number of vehicle passages processed. The audit further established that 24.1% of RUCs were allocated to debt servicing in 2020, 32.3% in 2021 and 39% in 2022. The increasing allocation towards debt service was attributed to Governments debt service sustainability plan which aimed at settling arrears over a ten-year period.

In response, the Agency indicated that authority from MoFNP was sought to use RUCs for loan repayment through the Escrow Account Management Agreement on Infrastructure.

The bulk of RUCs were from toll fees which implies that a greater percentage of funds allocated for debt servicing were paid from toll fees. This may further reduce the availability of funds for road maintenance and ultimately result in inefficient execution of road maintenance activities and in turn higher costs of rehabilitation.

6.1.5.1.2 Contract Commitments against Available Funds

The MoFNP obtained Cabinet approval in December 2019 for NRFA to re-scope locally financed road infrastructure projects under Link Zambia 8000 to reduce the project cost from ZMW10billion to ZMW1.4billion. This meant converting bituminous road contracts to all weather gravel road contracts with the aim of transforming all rural areas to be accessible where more than two-thirds of the Zambian population resides.⁹⁹

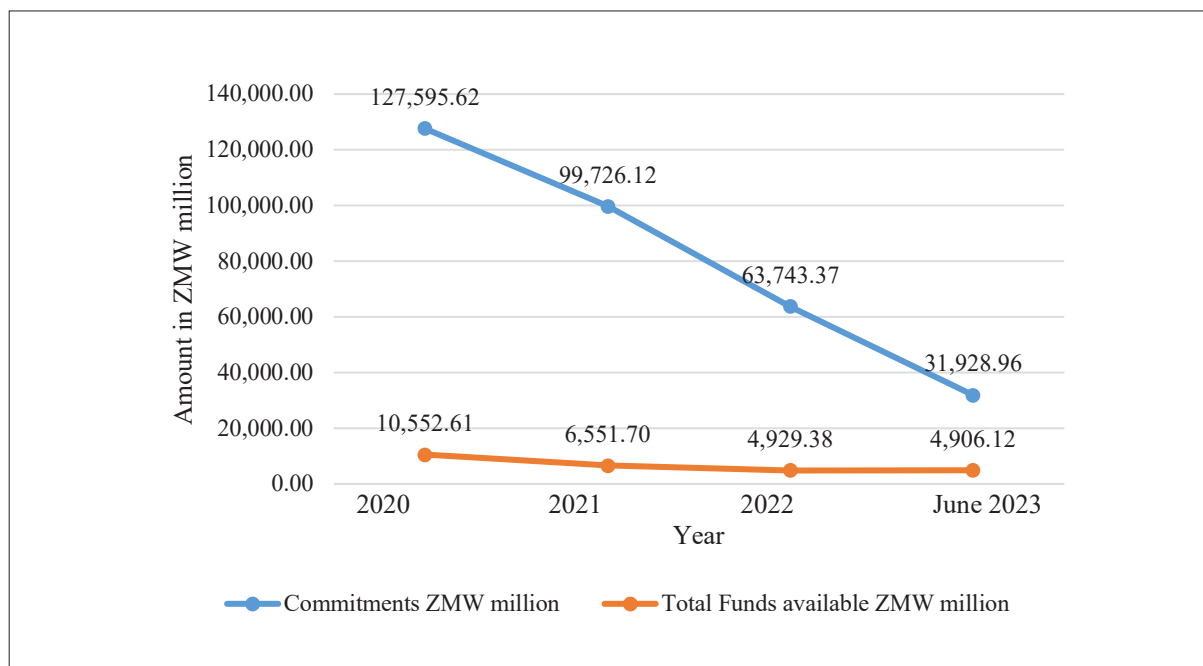
Interviews with NRFA management and a review of the Agency's contract commitments against available funds revealed that the value of ongoing signed contracts was more than the total funds available during the period under review. It was revealed that there were 3,132 on going signed contracts worth K322, 994.07 million against available funds totaling K26, 939.81

⁹⁹ National Road Fund Agency Debt Road Sector Debt Management Strategic Plan 2020



million between 2020 and June 2023. This resulted in a significant deficit of K296, 054.26 million representing 91.7% deficit. Figure 6.4 below shows commitments versus available funds.

Figure 6.4: Commitments versus Funds Available 2020 – June 2023



Source: Performance Audit Analysis 2023

As highlighted in Figure 6.4 above, commitments reduced from K127,595,000.62 to K31,928,000.96 representing 75% reduction during the period under review. The reduction in commitments was attributed to the reduction in number of road projects from 986 in 2020 to 195 as at 30th June 2023. The significant drop in number of projects and commitments between 2022 and 2023 was due to the following: 197 feeder road contracts under the Ministry of Local Government and Rural Development (MLGRD) were terminated; the lapse of the various routine maintenance contracts after a three (3) year implementation cycle; termination of sixty-one (61) selected upgrading projects under RDA; and re-scoping of thirty one (31) projects from an initial contract sum of K13,209,121,930.54 to K6,629,211,572.21. **Appendices 4, 5 and 6 refer.**

Similarly, total funds available also reduced from K10,522,000.61 to K4,906,000.12 representing a reduction of 53%. The reduction was due to allocations for projects funded by Cooperating Partners nearing completion requiring lesser cash flows or being completed and significant amounts being included in the 2020 RSAWP for anticipated Public Private Partnerships (PPPs) which gradually reduced in the years 2021, 2022 and 2023 that is K472,000,000 in 2020, K370,000,000 in 2021, K160,000,000 in 2022 and only K2,000,000.16 in 2023. The audit further established that in 2020, available funds were 8.2% of the commitments, 6.6% in 2021,

7.7% in 2022 and 15% as at 30th June 2023 which generally showed an increasing trend between 2020 and 2023. However, despite the percentage increment in available funds from 8.2% in 2020 to 15% as at 30th June 2023, commitments still exceeded available funds by up to 91.7%. The audit further revealed that in addition to funds that were allocated to settle the thirty one (31) re-scoped projects, there were older outstanding unpaid Interim Payment Certificates (IPCs) that were due to the same contractors valued at K1,795,233,561.52. **Appendix 7 refers.** It was also established that Chinese contractors were at liberty to decide the amounts that were to be allocated to the re-scoped projects and to the older unpaid IPCs which presented an anomaly as the allocated funds were meant to settle the re-scoped projects as part of debt management.

To lessen the negative effects of the increasing debt burden, the road sector proposed the transfer of road contractor arrears and local loans to MoFNP. Interviews with NRFA management and review of the Annual Economic Report 2022 revealed that road contracts worth K45,491,000.8 were included under domestic arrears from 4th Quarter 2021 to 4th Quarter 2022. Despite the implementation of the stated initiatives to reduce debt to sustainable levels, progress was relatively slow as the Agency still owed K31,928,000.96 as at 30th June 2023.

In view of this, the audit established that there was a risk that the re-scoping of projects exercise will be ineffective as it may not achieve its intended purpose to reduce the debt burden. There is also a risk that if contract commitments outweigh available funds, the Agency will not have enough funds to pay its debt on time leading to penalties and delayed completion of projects. Delayed completion of projects may further lead to increased project costs due to intangible claims, interest, time related costs and price adjustments.

This also has a spiral effect which can result in delayed benefit to the public of not having improved roads. In addition, the Agency's liabilities will continue to exceed its assets which may result in insolvency.

6.1.5.2 Externally Contracted Loans

An analysis of external funding revealed that the MoFNP contracted external debt from various Multilaterals and Bilaterals such as Exim China, European Investment Bank (EIB), Bank of China (BoC), Exim India, African Development Fund and International Development Association (IDA). It was noted that US\$2,168,281,845.49 was contracted in 2020, US\$2,249,677,985.92 in 2021 and US\$2,237,300,992.38 in 2022 resulting in a total contracted loan of US\$6,655,260,823.36 during the period under review as shown in Table 6.4.

Table 6.4: External Loans 2020 – 2022

Creditor	2020 US\$	2021 US\$	2022 US\$
AFD	34,356,679.58	42,070,941.61	33,867,079.24
Africa G. T. Fund	4,429,370.31	26,268,399.31	30,398,659.24
African Dev Bank	52,546,998.23	59,233,508.66	82,655,943.03
African Dev Fund	77,067,312.81	76,662,032.64	75,875,690.74
African Dev Fund	5,577,712.26	5,620,059.51	5,732,349.67



Creditor	2020 US\$	2021 US\$	2022 US\$
African Dev Fund		3,403,623.94	3,640,392.77
African Dev Fund	4,782,151.82	4,365,062.62	4,013,700.06
The Arab Bank for Economic Development in Africa (BADEA)	3,483,724.38		3,483,724.38
The Arab Bank for Economic Development in Africa (BADEA)	4,273,607.37	4,273,607.37	4,059,927.00
The Arab Bank for Economic Development in Africa (BADEA)	10,696,540.00	10,696,540.00	9,805,161.66
Bank of China (Zm)	34,601,928.50	34,601,928.50	35,486,895.39
China Development Bank			120,225,782.82
China Development Bank	133,920,449.82	133,920,450.12	13,694,667.30
China Minsheng Bank	18,088,500.00	18,088,500.00	18,088,500.00
Development Bank of Southern Africa (DBSA)	151,674,501.30	157,113,635.74	157,113,635.74
European Investment Bank (EIB)	74,293,602.47	68,123,905.83	60,643,260.35
Exim Bank India	206,730,971.79	232,806,133.01	232,806,133.01
Exim China	224,051,305.18	224,051,305.18	224,051,305.18
Exim China	69,888,074.40	69,888,074.40	69,888,074.40
Exim China	137,543,803.90	137,543,803.90	137,543,803.90
Exim China	197,877,928.00	197,877,928.00	197,877,928.00
Exim China	13,219,206.11	13,219,206.11	13,219,206.11
Exim China	213,519,174.62	236,638,589.62	236,638,589.62
Exim China	162,903,937.87	167,109,928.01	152,382,163.78
International Development Association (IDA)	79,280,933.66	89,235,301.35	89,564,958.34
International Development Association (IDA)	14,258,678.35	13,578,822.18	12,648,285.50
International Development Association (IDA)	21,966,658.29	20,882,160.51	19,415,116.19
International Development Association (IDA)	41,494,194.27	39,384,462.60	36,558,123.16
International Development Association (IDA)	68,173,765.76	64,896,189.12	60,422,712.34
International Development Association (IDA)	6,964,705.11	6,357,805.48	5,655,460.03
Jiangxi Bank	30,000,000.00	30,000,000.00	30,000,000.00
KFAED	108,914.79	7,324,258.25	
KFAED			8,387,092.24
KFAED	505,337.93	934,825.64	
Nordic Development Fund (NDF)	8,347,900.57	7,760,553.67	7,288,447.15

Creditor	2020 US\$	2021 US\$	2022 US\$
OPEC Fund for International Development (OFID)	1,599,692.38	1,399,742.38	799,892.38
OPEC Fund for International Development (OFID)	2,325,560.42	2,051,560.42	1,640,560.42
OPEC Fund for International Development (OFID)	792,912.03	693,799.03	396,460.03
OPEC Fund for International Development (OFID)	1,260,111.22	1,080,091.22	810,061.22
Polytech	22,000,000.00	22,000,000.00	22,000,000.00
Standard Chartered Bank – United Kingdom	33,675,000.00	18,521,250.00	18,521,250.00
Total loan contracted US\$	2,168,281,845.49	2,249,677,985.92	2,237,300,992.38
Total principal US\$	42,756,643.86	39,259,930.33	17,328,070.99
Total interest US\$	24,650,282.58	8,198,593.53	4,842,370.67
Total penalties US\$	3,874.80	336,641.02	0
Total principal, interest and penalties paid US\$	67,410,801.24	47,795,164.88	22,170,441.66

Source: MoFNP Data 2023

A further analysis of external debt on table 6.4 revealed that external loans increased by 4% from US\$2,168,281,845.49 in 2020 to US\$2,249,677,985.92 in 2021 and reduced by 0.55% to US\$2,237,300,992.38 in 2022. It was further observed that total penalties in the period under review were US\$340,515.82 and was as a result of delay in payments. The audit also established that following the debt servicing standstill in October 2020 regarding road sector loans, a decision was made to only pay multilateral and priority projects until the completion of the debt restructuring exercise. Therefore, interest and principal payments for bilateral and commercial creditors were not included in the figures reflected in table 6.4. This means that the actual principal and interest payments may be more than what is reflected in external debt, depending on the outcome of the restructuring exercise.

The risk of heightened foreign borrowing can have significant impacts on the local economy. Some of the key risks include: exchange rate risk which may result in NRFA paying more to service debt and severe depreciation which can lead to default in payment and increased credit risk.

In response, the MoFNP stated that the GRZ contracted seventeen (17) loans amounting to USD 2.9 billion between 2020 and 2022. Further, it was stated that Government had been borrowing concessional loans commencing in 2020 in light of a Cabinet directive. In that regard, it was submitted that the average grace period was five (5) years which allowed the Treasury to plan for dismantling debt service. The MoFNP also stated that in accordance with Zambian Law, debt service had the first call on revenues.



In addition, it was submitted that the GRZ was in the process of restructuring its external public debt to restore public debt sustainability and free up fiscal space.

6.1.6 Inclusivity in Road Sector Projects

The NRFA Monitoring and Evaluation Procedures Manual Revised Version No.2 of 2020 under Key Performance Indicators (KPIs) states that one of the objectives of the Agency is to monitor the employment levels of women on road projects.

In addition, the National Council for Construction (NCC) Strategic Plan 2019 to 2021 under core value No.3: Inclusiveness, provides that the desired economic growth from the construction industry must be inclusive in nature and must bring about empowerment without segregating anyone based on their tribe, education status, gender, physical ability or anything perceived to demean them. It further provides that NCC should seek to promote inclusiveness in all its operations in the construction industry.¹⁰⁰

Most World Bank and African Development Bank (AfDB) funded projects require a road contract to have at least 25% of its workforce as women.¹⁰¹

A review of various contracts between RDA and local contractors revealed that inclusivity was not embedded in most contracts, save for World Bank and AfDB funded projects. In addition, a review of NRFA Inspection Reports 2020 to 2022 revealed that the Agency did not prioritise monitoring employment levels of women despite it being one of their KPIs as no information was reported by the Agency in that regard. However, it was revealed that NCC monitored employment levels of women as they were charged with the responsibility of providing for the promotion, development, training and regulation of the construction industry in Zambia. Interviews with NCC management revealed that there were considerable differences between the number of males and females in the construction industry. For example, NCC provided capacity building training to 738 female students and 2,631 male students between 2020 and June 2023. Similarly, 1,927 female contractors were registered with NCC compared to 46,734 male contractors in the same period. Table 6.5 below shows details.

Table 6.5 Number of females versus males in the construction industry 2020 to June 2023

Year	Capacity Building Trainings		Registration of Contractors	
	Female	Male	Male	Female
2020	111	157	9,793	304
2021	102	399	9,965	280
2022	428	1,440	14,508	347
Jun-23	97	635	12,468	996
Total	738	2,631	46,734	1,927

Source: Performance Audit Analysis 2023

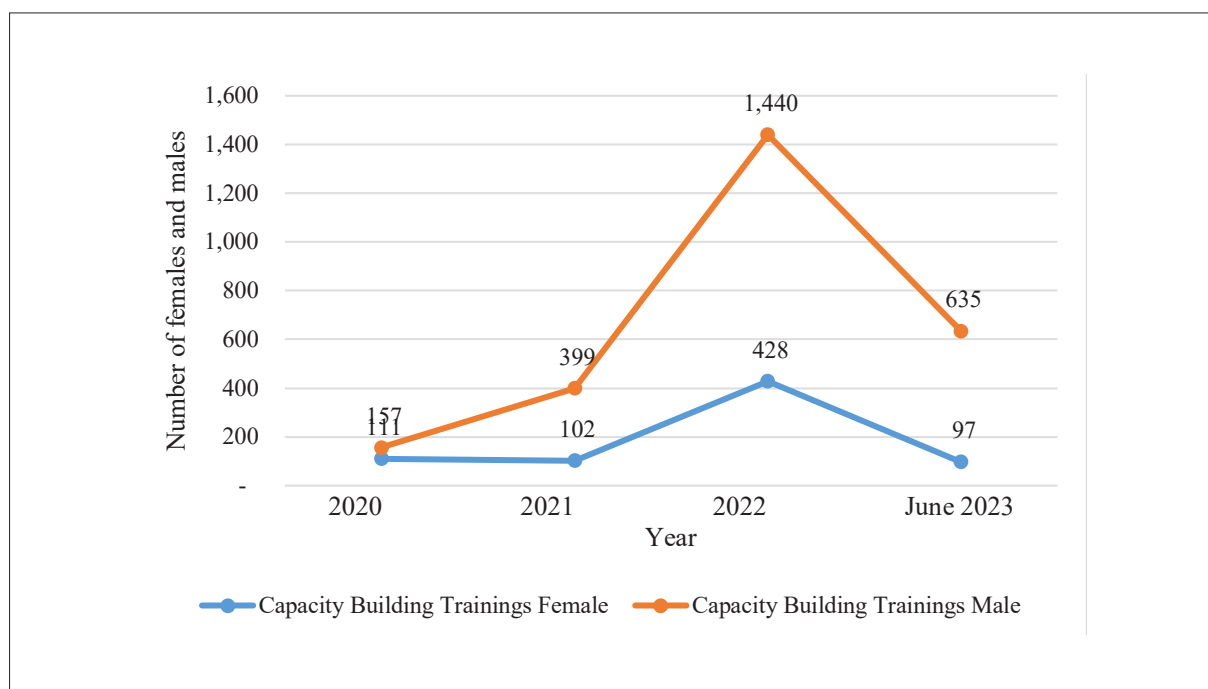
¹⁰⁰ NCC Strategic Plan 2019 to 2021

¹⁰¹ Selected contracts

A further analysis revealed that the number of males trained by NCC represented 78% while females represented 22% between 2020 and June 2023. Similarly, there were more male contractors registered in the same period representing 96% in comparison to 4% females. This was attributed to the widely held societal norm that the construction industry was male dominated.

An additional analysis of the annual number of females versus males in the construction industry revealed that there was an increase in the number of females trained between 2020 and 2022 from 111 in 2020 to 428 in 2022 representing an increase of 74%. Similarly, there was an increase in the number of female contractors registered from 304 in 2020 to 347 in 2022 representing an increase of 12.4%. The increase was attributed to NCC encouraging female students to enroll in capacity building programmes especially those sponsored by Cooperating Partners such as the World Bank and International Labour Organisation (ILO). It was further revealed that the courses offered were usually tailored to females and were highly subsidised to encourage female participation. Figures 6.5 and 6.6 shows the trend in female participation in the construction industry from 2020 to 2022.

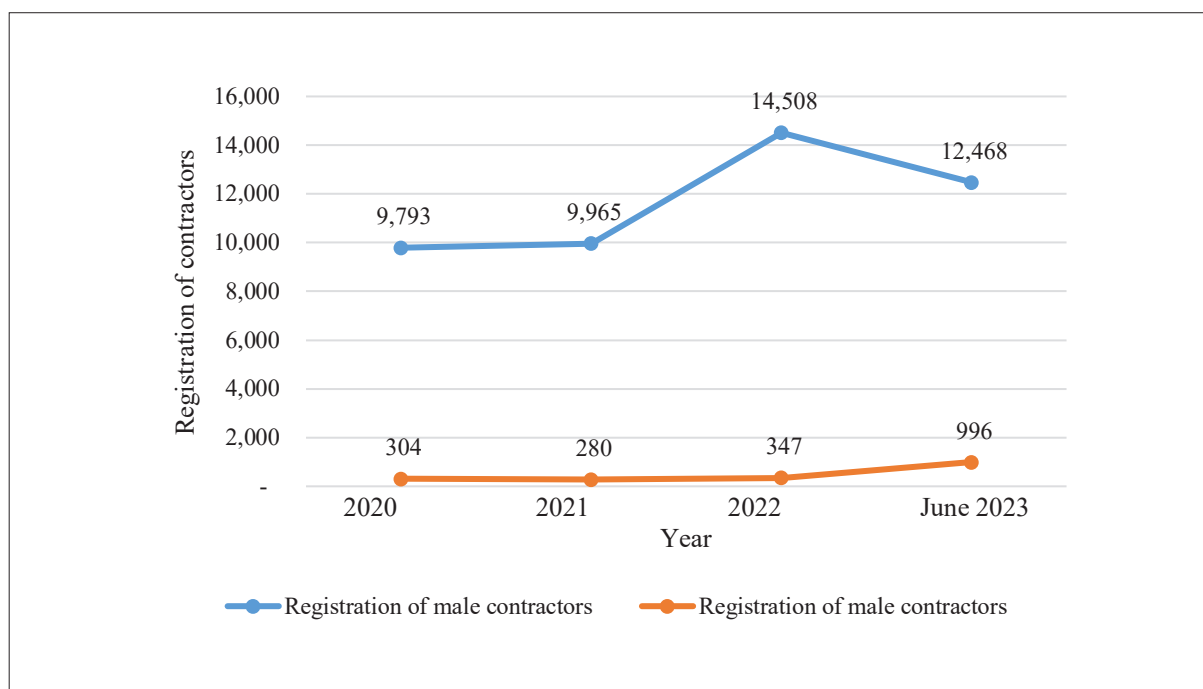
Figure 6.5: Capacity Building Training 2020 to June 2023



Source: Performance Audit Analysis 2023



Figure 6.6: Registration of Contractors 2020 to June 2023



Source: Performance Audit Analysis 2023

A further review of relevant documents revealed that forty-one (41) road projects drawn from the sample of inspected projects did not achieve their respective targets on the number of women employed. It was further revealed that female employment ranged between 0% and 52% of the targeted number. **Appendix 8 refers.** It was also observed that most females employed were in non-influential positions such as traffic controllers, cooks, office orderlies and general workers. Further enquiries revealed that most women shunned employment in the construction sector. The low participation of women in the construction industry may result in the non-achievement of SDG 5: Gender Equality which aims at bridging the gap and creating equal rights, safety, opportunities and representation for all genders. It may further delay the fulfilment of Governments pledge of leaving no one behind.

In response, the NRFA submitted that they would engage Implementing Agencies to include inclusivity clauses in local contracts, ensuring that a diverse workforce is considered on all projects and not only those funded by external partners. Additionally, they stated that they would prioritise monitoring employment levels of women as outlined in their Key Performance Indicators.

MLGRD added that though there was no prescribed percentage of women to be employed on Government projects, women were actively encouraged to participate. The Ministry further stated that despite this, Contractors usually reported the numbers of both males and females employed on projects.

6.2 Implementation of Maintenance Strategies

The specific objectives of the RDA RMS 2014 to 2024 are to ensure that: 100 percent of paved Trunk, Main and District (TMD) roads are in good condition by 2024; greater than 80 percent of the unpaved TMD roads are in good condition by 2024; greater than 90 percent of the paved urban roads are in good condition by 2024; greater than 80 percent of the unpaved urban roads are in good condition by 2024; greater than 80 percent of Primary Feeder Roads are in good condition by 2024; Road User Charges (RUCs) are dedicated to road maintenance by 2018; and the application of the Output and Performance Based Road Contract (OPRC) system for road maintenance is done by 2016.

The audit established that to address road maintenance needs in the country, RSA and MLGRD had partially implemented some road maintenance strategies and these are detailed below:

6.2.1 Introduction of Output and Performance Based Road Contracts

RDA with funding support from the World Bank rolled out the Output and Performance Based Road Contracts (OPRCs) system on the Primary Feeder Road (PFR) Network in 2015. Zambia Improved Rural Connectivity Project (ZIRCP) aims to improve accessibility by rehabilitating and maintaining Feeder Roads Countrywide using the Output and Performance- Based Road Contracts (OPRCs). The OPRCs were based on a five (5) year running contract in which the first two (2) years were for rehabilitation while the last three (3) years were for road maintenance.

The OPRC is a concept designed to increase the efficiency and effectiveness of road maintenance operations. It is designed to ensure that the physical condition of the roads under contract is adequate for the need of road users, over the entire period of the contract, which is normally five (5) years. This type of contract significantly expanded the role of the Contractor, from the simple execution of works to the management and conservation of the road assets. This approach avoided a premature deterioration of road assets in general, and ensured that road users were accorded a level of service, which was adequate for their needs and at the same time keeping costs down for providing those service levels.

The following summarises some of the benefits of the OPRC approach over the period of implementation: cost effective reduction in maintenance costs per year; more kilometers can be covered; consistency in road condition over a period of time; cut down on lengthy procurement process; and more traffic volumes. Figure 6.7, 6.8 and 6.9 below shows well-maintained unpaved roads in Mkushi, Magoye and Kawambwa under OPRCs.

Figure 6:7: Well-maintained unpaved road in Mkushi - U4 Nshinso



Source: Performance Audit Photographic Records 2023

Figure 6.8: Well- maintained unpaved road in Magoye - U001



Source: Performance Audit Photographic Records 2023

Figure 6.9: Well-maintained unpaved road in Kawambwa - R70



Source: Performance Audit Photographic Records 2023

6.2.2 Formulation of Road Sector Investment Plan I (1997 to 2002) and II (2004 to 2013)

The overall objective of RoadSIP I was to facilitate economic growth and diversification (particularly in the agricultural sector) through appropriate investments in road infrastructure. The medium term goals for the roads sector were: the creation of sustainable systems to finance and manage the road network with increased institutional capacity and reduced dependence on external funding for maintenance and rehabilitation; to bring a core network of about 33,500 kilometers into maintainable condition; to improve the quality of this network by reducing roads in poor condition to no more than 10% of total and increasing roads in good condition to no less than 50% of total thus reducing vehicle operating costs; to improve road safety and to provide an enabling environment for improved road transport services; and to address poor accessibility in rural areas in a sustainable fashion.¹⁰²

The RoadSIP II was a comprehensive ten (10) - year investment programme in the road sector. Its immediate objective was to bring a Core Road Network (CRN) of approximately 40,000kms into a maintainable condition by the end of the program period. It included all maintenance, rehabilitation and upgrading activities planned for the total road network consisting of approximately 60,000kms of roads. It also included a comprehensive road reform initiative that implemented the recommendations of the 2002 Transport Policy.¹⁰³

¹⁰² Zambia -Road Sector Investment Program Project (ROADSIP) (English). Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/360311532465571461/Zambia-Road-Sector-Investment-Program-Project-ROADSIP>

¹⁰³ World Bank Project Information Document (PID) on the essential bridge rehabilitation project 2005



6.2.3 Appointment of Zambia National Service

RDA appointed Zambia National Service (ZNS) as a Road Authority in 2015 to address the immediate maintenance needs requirements on the PFR network. This was intended for purposes of carrying out road rehabilitation and maintenance works on at least 9,430km of the PFR network. According to the MoU, the role of RDA included: the development and establishment of standards and specifications of targeted roads under the MoU; the receipt consideration and approval of annual workplans, procurement plans and target cashflows from ZNS; and overall project oversight. The role of NFRA was to recommend to the Minister of Finance funding of projects which ZNS was earmarked to undertake, ensure that standards and specifications of targeted roads under the MoU were upheld through the monitoring of projects and undertake periodic technical and financial evaluations of the targeted projects to ensure value for money while among the roles of ZNS was to receive and implement standards and specifications of targeted roads from RDA administer projects under the MoU and submit payment certificates to RDA and prepare progress reports for submission to RDA.

6.2.4 Road Tolling Maintenance Programme

The Road Tolling Maintenance Programme (RoToMaP) was introduced in 2017 to sustain the National Road Tolling Programme as an innovation intended to facilitate the maintenance of roads in various towns where road tolling was conducted. The programme required that the Agency and Local Authorities (LAs) partner closely in implementing RoToMaP and ensuring that money was used for maintenance so that the public see the impact of the National Road Tolling Programme. RoToMaP is also enshrined under the NRFA Monitoring and Evaluation Value for Money Report¹⁰⁴ and RDA maintenance strategy to support Local Authorities in carrying out pothole patching, road markings, signage and construction of speed humps.

6.2.5 Other Strategies

- i. Award of routine and periodic maintenance contracts;
- ii. Use of the RDA Force Account to carry out some maintenance works;
- iii. Construction of weighbridges and enforcement of the Axle Load Control Programme in selected areas;
- iv. Capacity building of Local Road Authorities (LRAs) on various aspects of road maintenance; and
- v. Implementation of a Bridge Maintenance Programme supported by Japan International Cooperation Agency (JICA) through the provision of technical staff.

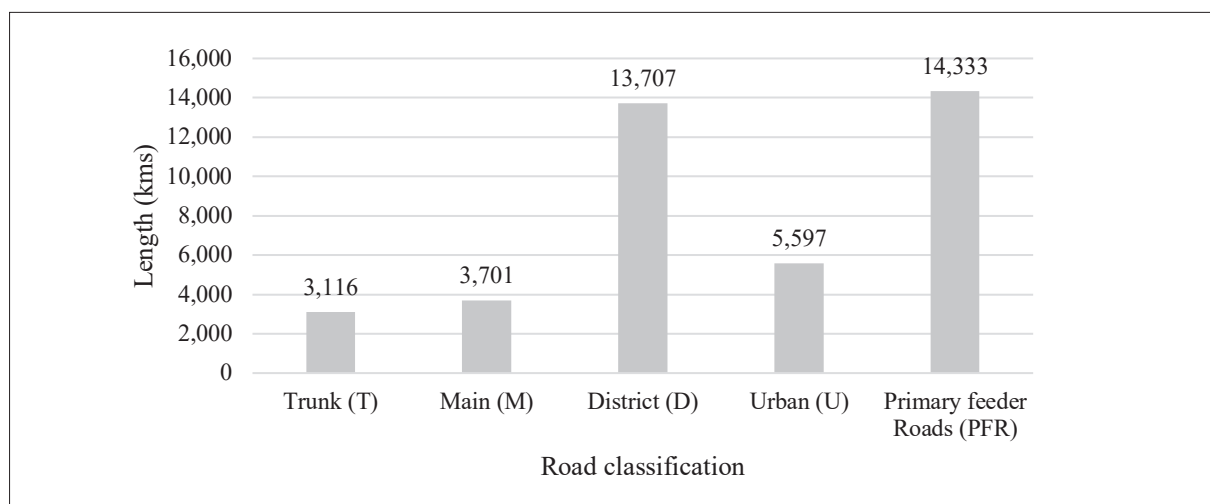
While the audit noted the efforts of RDA to improve road maintenance, there remained significant work to effectively implement the strategies. Sections 6.3 to 6.5 below describe how the current classification of the Core Road Network (CRN) has affected the prioritisation of road maintenance, the timeliness factor of road maintenance, the selection of maintenance projects, funding for the sector and coordination between Implementing Agencies.

¹⁰⁴ NRFA Monitoring and Evaluation Value for Money Report for Quarter Three (3) 2021

6.3 Maintenance of the Core Road Network

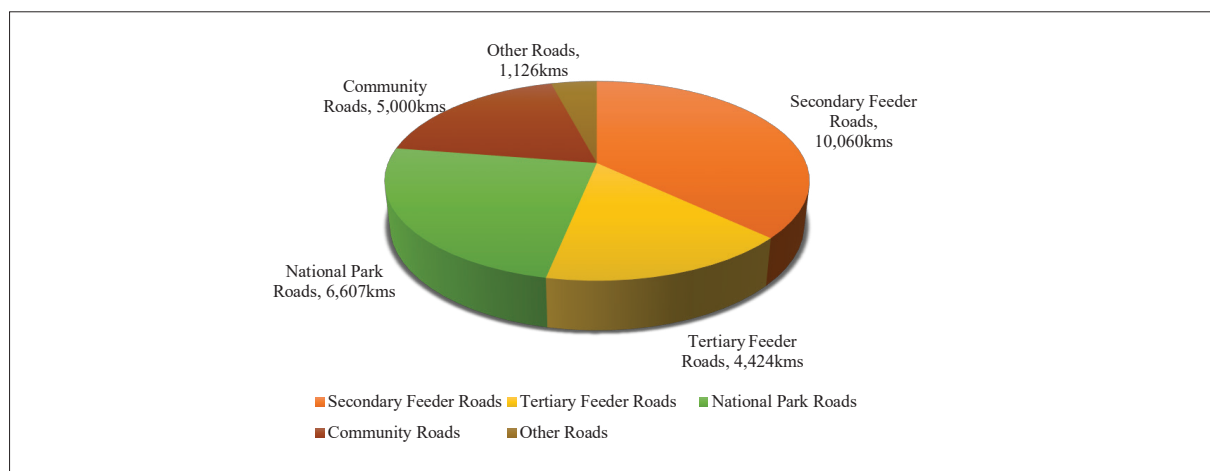
The RDA Road Maintenance Strategy provides that routine maintenance activities on the CRN should be prioritised followed by periodic maintenance and finally rehabilitation and upgrading works. Accordingly, prioritisation would be based on traffic volumes; road classification and other socio-economic factors such as access to schools, hospitals and other public facilities.¹⁰⁵ The Core Road Network (CRN) refers to the barest minimum network which when improved will spur socio-economic development and contribute to poverty reduction.¹⁰⁶ Out of a road network of 67,671kms countrywide, the CRN was estimated at 40,454kms leaving a Non-CRN of 27,217kms. Out of 40,454kms, 27% of the roads were paved, 73% unpaved while the entire Non-CRN was unpaved. Figures 6.10 and 6.11 show the length and classification of the CRN and Non-CRN respectively.

Figure 6.10: Core Road Network



Source: RDA Annual Report 2022

Figure 6.11: Non – Core Road Network



Source: RDA Annual Report 2022

¹⁰⁵ RDA Road Maintenance Strategy 2015-2024

¹⁰⁶ RoadSIP III October 2020



In addition to the CRN and Non-CRN, the estimated Unclassified (UC) Road Network ranges between 7,000kms and 10,000kms.

The CRN includes all Trunk (T), Main (M), District (D), Urban (U) and Primary Feeder Roads (PFR), regardless of their relative importance. The audit noted that the CRN concept did not allow for further prioritisation within the different road classes such as priority and non-priority roads. As a result, a 4-lane trunk road carrying over 10,000 vehicles per day and connecting two major cities is a core road, but so is an earthen Primary Feeder Road (PFR) connecting a village and carrying fewer than 10 vehicles per day.¹⁰⁷ In light of this, both classifications were considered core roads by virtue of the definition of a core road network. Consequently, from a theoretical point of view, all roads on the CRN were subject to the allocation of funds for road maintenance. This scenario would not be the case if non-priority roads were distinguished from priority roads which would result in more funds being available to maintain priority roads on the CRN. As a result of not distinguishing priority from non-priority roads, it was established that RDA was unable to effectively maintain significant sections of the CRN which resulted in a “poor” classification of some sections. Further investigations also revealed that the CRN would cost USD\$721 million to bring it to maintainable condition¹⁰⁸.

A further analysis comparing the core road length and road maintenance budget of Road Agencies of South Africa, Namibia, Kenya and Zambia revealed that Zambia’s CRN was twice the road networks of South Africa and Kenya while the maintenance budget of South Africa National Roads Agency Limited (SANRAL) was ten (10) times, Namibia Roads Authority (NRA) twice and Kenya National Highways Authority (KeNHA) six (6) times the budget of RSA. The analysis further showed that SANRALs maintenance budget per kilometer was approximately twenty (20) times the budget per kilometer of RDA while KeNHAs budget per kilometer was thirteen (13) times RDAs budget. Table 6.6 below shows a comparison of four (4) Road Sector Agencies in Africa.

Table 6.6: Comparison of Road Sector Agencies in Africa 2015 – 2019

Comparison of RDA with SANRAL, NRA and KeNHA Aspect	South Africa National Roads Agency Limited (SANRAL)	Namibia Roads Authority (NRA)	Kenya National Highways Authority (KeNHA)	Zambia Road Development Agency (RDA)
Road length managed	21,490 km	48,875 km	18,549 km	40,454 km (core)
Road maintenance budget	\$432 million (2015)	\$85 million (2018/19)	\$250 million (2017/18)	\$43 million (2018)
Maintenance budget per km	\$20,100/km	\$1,734/km	\$13,501/km	\$1,062/km

*The statistics in table 6.8 were the latest available statistics as at 31st December 2023

Source: RoadSIP III, October 2020

¹⁰⁷ Road SIP III, 2020

¹⁰⁸ RDA 2012 Maintenance Needs Report on the CRN

From the comparison, it was apparent that SANRAL, NRA and KeNHA prioritised road maintenance as evidenced from the resource allocation. Furthermore, the controlled size of the CRN allowed SANRAL, NRA and KeNHA to allocate reasonable funding for road maintenance activities save for NRA whose road network was slightly wider but in any case, had almost twice the funding allocation as RDA.

While a wide CRN can provide better access to services and stimulate economic development, it also requires adequate maintenance to prevent deterioration. Consequently, a wider CRN may result in inefficiencies in that there may be a backlog of roads that are due for maintenance. Outstanding maintenance can cause irreversible deterioration of the road network which can result in soaring costs and major financial impact on the economy and citizens.

6.4 Required Funding for Road Maintenance

According to the RDA 2012 Maintenance Needs Report on the CRN, an annual minimum of US\$721 million should be allocated for maintenance activities to bring the road network into a maintainable condition.¹⁰⁹

The revised RDA Maintenance Strategy 2019-2024 and RoadSIP (Road Sector Investment Plan) III 2020-2030 provides for a target of at least 30% of Road User Charges (RUC) to be channeled towards road maintenance.¹¹⁰

An analysis of the RSAWPs for the period 2020 to 2022 revealed that there was a considerable funding gap between funds allocated towards maintenance and the required annual maintenance budget. Table 6.7 below shows the variance between the required maintenance budget and amounts allocated towards maintenance.

Table 6.7: Road Maintenance Funding Gap 2020 to 2022

Year	Allocated Amount K'000	Dollar rate as at 31st December per year	Required Amount for Road Maintenance (USD)	Required Amount K'000	Variance K'000
2020	315,905.48	21.17	721,000,000	15,260,686	-14,944,780.52
2021	442,903.48	16.66	721,000,000	12,014,023	-11,571,119.52
2022	468,139.79	17.83	721,000,000	12,856,151	-12,388,011.21
Total	1,289,948.77		2,163,000,000	40,130,860	-38,903,911.25

Source: Performance Audit Analysis 2023

Table 6.7 above shows that there was a large variance totaling K38.9 billion between the amount required for road maintenance and the amounts allocated in 2020, 2021 and 2022. A

¹⁰⁹ RDA Road Maintenance Strategy 2014 - 2024

¹¹⁰ National Road Fund Agency Road Sector Debt Management Strategic Plan 2020



further analysis showed that total funds allocated during the period under review represented only 3.2% of the required budget. The audit further revealed that the maintenance budget was insignificant because a large proportion of RUCs were used to fund capital projects such as upgrades, rehabilitation and construction, and debt servicing. Table 6.8 below shows the road maintenance budget from RUC during the period under review.

Table 6.8: Road maintenance budget from Road User Charges 2020 - 2022

Year	Road User Charges (ZMW)	Required maintenance allocation based on 30% required allocation(ZMW)	Road maintenance budget in RSAWP ZMW'000	Percentage of RUCs allocated to maintenance (%)	Required maintenance allocation (%)
2020	3,156,287,987.60	946,886,396.28	315,905,000.48	10	30
2021	3,157,843,990.43	947,353,197.13	442,903,000.48	14	30
2022	3,658,382,641.00	1,097,514,792.30	468,139,000.80	13	30
Total	9,972,514,619.03	2,991,754,385.71	1,226,947,001.76		

Source: Performance Audit Analysis 2023

Table 6.8 above showed that the maintenance allocation from RUC was between 10% and 13% which fell short of the required allocation of 30%. In 2020, 10% of RUC were allocated to road maintenance, 14% in 2021 and 13% in 2022.

From the foregoing, RSA were unable to meet the required road maintenance annual budget and the required percentage allocation of maintenance from RUC. As a result of low budgets, maintenance projects were not carried out timely and effectively, especially periodic maintenance. The maintenance philosophy states that “delayed maintenance is 4 to 5 times costly in future”.¹¹¹ Without timely interventions, the cost of maintenance increases while the lifespan of the road asset reduces.

6.4.1 Road Maintenance Funding

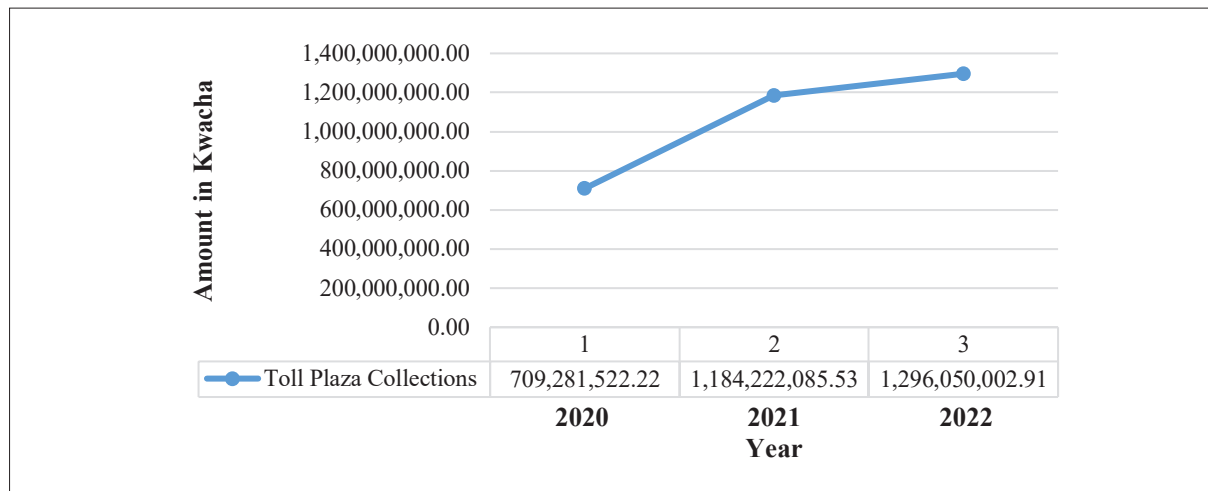
According to best practice, it is recommended that all moneys received as toll or otherwise in connection with toll roads and of the interest earned on the investment of those moneys be kept separate. Those moneys may be used only for: the maintenance and operation of toll roads and toll plazas and any facilities connected with toll roads and toll plazas. For instance, SANRAL of South Africa subscribes to this best practice.

A review of NRFA road tolling revenue collections from 2020 to 2022 revealed that a total of K709,281,522.22, K1,184,222,085.53 and K1,296,050,002.91 was collected from twenty-seven (27) toll plazas in 2020, 2021 and 2022 respectively.

Refer to **Appendix 9** for detailed inland toll plaza collections. Figure 6.12 below shows the trend in toll stations revenue collections.

¹¹¹ National Road Fund Agency Debt Road Sector Debt Management Strategic Plan 2020

Figure 6.12: Toll Plaza Revenue Collections 2020 to 2022



Source: Performance Audit Analysis 2023

As seen in figure 6.12 above, there was an increase in revenue collections by 45.3% from K709, 281,522.22 in 2020 to K1, 296,050,002.91 in 2022 due to an increase in the number of vehicles passages processed, from 23.01 million vehicle passages in 2021 to 24.3 million vehicle passages in 2022.¹¹²

Further, the audit established that Michael Chilufya Sata Toll Plaza on the Copperbelt Province collected the highest revenue in 2020, 2021 and 2023 followed by Katuba Toll Plaza in Central Province. Table 6.9 is an extract of the detailed Appendix 9 and shows only the two (2) highest revenue generating inland toll plazas in each year.

Table 6.9: Toll Plaza revenue collection 2020 to 2022

Year	Name of Toll Plaza	Province	Revenue collected (ZMW)
2020	Michael Chilufya Sata	Copperbelt	108,049,387.39
	Katuba	Lusaka	96,345,308.64
2021	Michael Chilufya Sata	Copperbelt	147,996,532.34
	Katuba	Lusaka	131,134,162.47
2022	Michael Chilufya Sata	Copperbelt	160,314,538.17
	Katuba	Lusaka	138,983,480.00

Source: Performance Audit Analysis 2023

Despite Toll Plazas on the Copperbelt and Lusaka Provinces collecting the highest revenue between 2020 and 2022, the respective tolled roads were generally in a bad state. For example, Lusaka-Ndola, Mpika-Kasama and Great East Road from Lusaka to Nyimba had potholes; alligator, transverse and edge cracks; loss of shoulder width and materials; road rutting; and

¹¹² NRFA Road Sector Annual Report 2022

premature failure of speed humps. Figures 6.13 and 6.14 show some of the defects observed during joint inspections.

Figure 6.13: Road rutting between Nyimba and Luangwa bridge



Source: Performance Audit Photographic Records 2023

Figure 6.14: Lusaka-Ndola Road riddled with potholes.



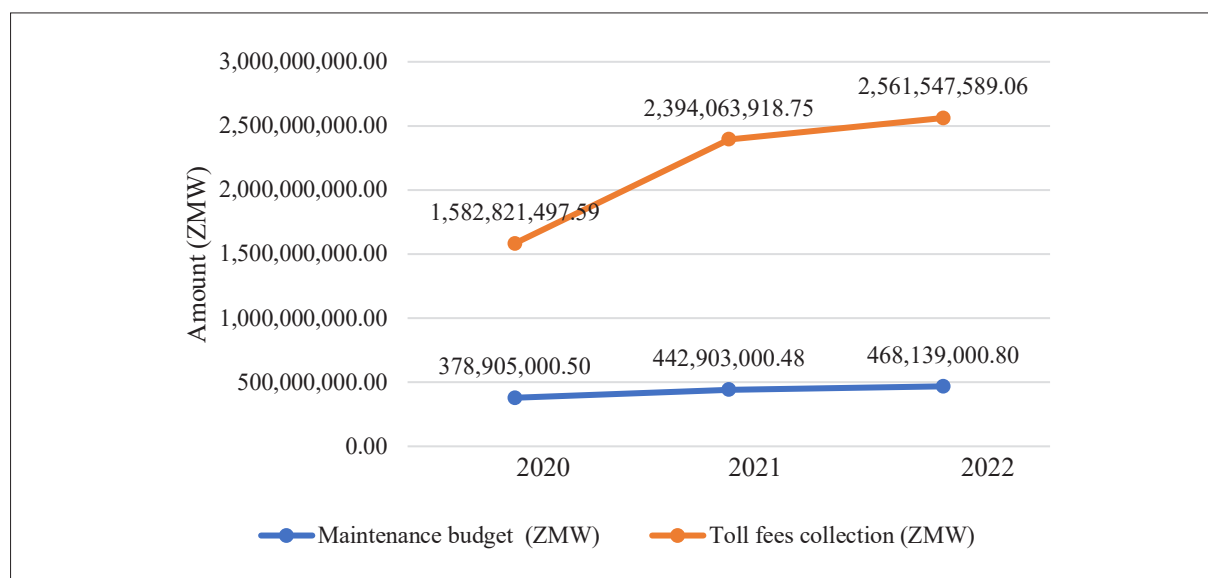
Source: Performance Audit Photographic Records 2023

Additional interviews with NRFA management and documentary review revealed that to mitigate against loss of road infrastructure investment, the Government introduced the National Road Tolling Programme (NRTP) which was initially based on the principle of using funds collected from toll plazas towards road maintenance. It was however established that toll fees were not ring fenced to maintain the tolled and other roads as the Tolls Act No. 14 of 2011 did not provide for toll fees to be exclusively applied for maintenance.

6.4.2 Maintenance Budget versus Toll Fees Collection

An analysis of various records revealed that even though the road sector had recorded an increase in revenue from toll fees during the period under review, the maintenance allocation in the RSAWP did not increase at the same rate proportionate as the toll fees collection as indicated in Figure 6.15.

Figure 6.15: Road Maintenance Budget versus Toll Fees Collection 2020 to 2022



Source: Performance Audit Analysis 2023

As seen in figure 6.15 above, there was a marked increase in revenue collected from toll fees from K1,582,821,497.59 in 2020 to K2,394,063,918.75 in 2021 representing 33.9% and a slight increase from K2,394,063,918.75 in 2021 to K2,561,547,589.06 in 2022 representing 6.5%. In comparison to the revenue collections from the same period, the road maintenance budget was only slightly increased from K378,905,000.50 in 2020 to K442,903,000.48 in 2021 representing 14.4% and a further slight increase from K442,903,000.48 in 2021 to K468,139,000.80 in 2022 representing 5.39%. This implied that the RoToMaP, which was an initiative to improve the condition of tolled roads may not have been effectively executed.

There is a risk that low allocations to road maintenance will not only compromise the state of the road network but also the tolled roads from which toll revenue is collected.

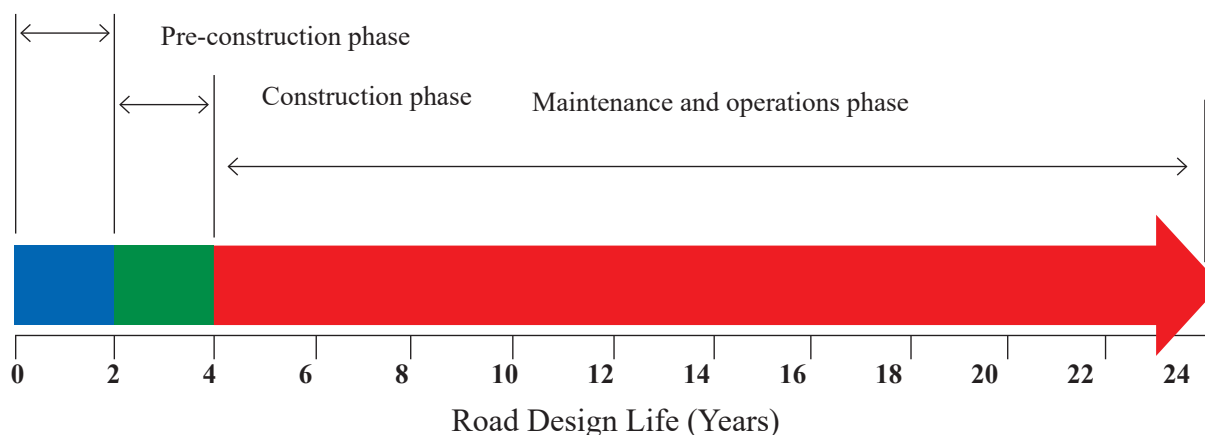
Consequently, citizens may not appreciate the benefits of paying toll fees as they may incur rising vehicle operating costs and time delays in navigating a bad road network. A poorly maintained road may result in negative economic impacts as more funds have to be allocated towards rehabilitation and construction. A bad road network also has the potential to reduce trade activities both in and outside the country.

6.4.3 Rehabilitation and Upgrading of Roads

Roads are designed to last a long period, typically 15 – 30 years. To reach that design life, a series of maintenance activities should be undertaken to ensure the features of the road perform according to the original design and construction, and for the safety of users.¹¹³ While rehabilitation is important as it improves the condition of the road network, it must be delayed as much as possible by carrying out regular road maintenance. It is said that delaying maintenance for up to three (3) years increases the maintenance cost six (6) times and eighteen (18) times after five (5) years¹¹⁴.

Figure 6.16 below illustrates that by far, the maintenance and operations phases of a typical road project occupy the largest proportion of a project cycle.

Figure 6.16: Road Project Cycle



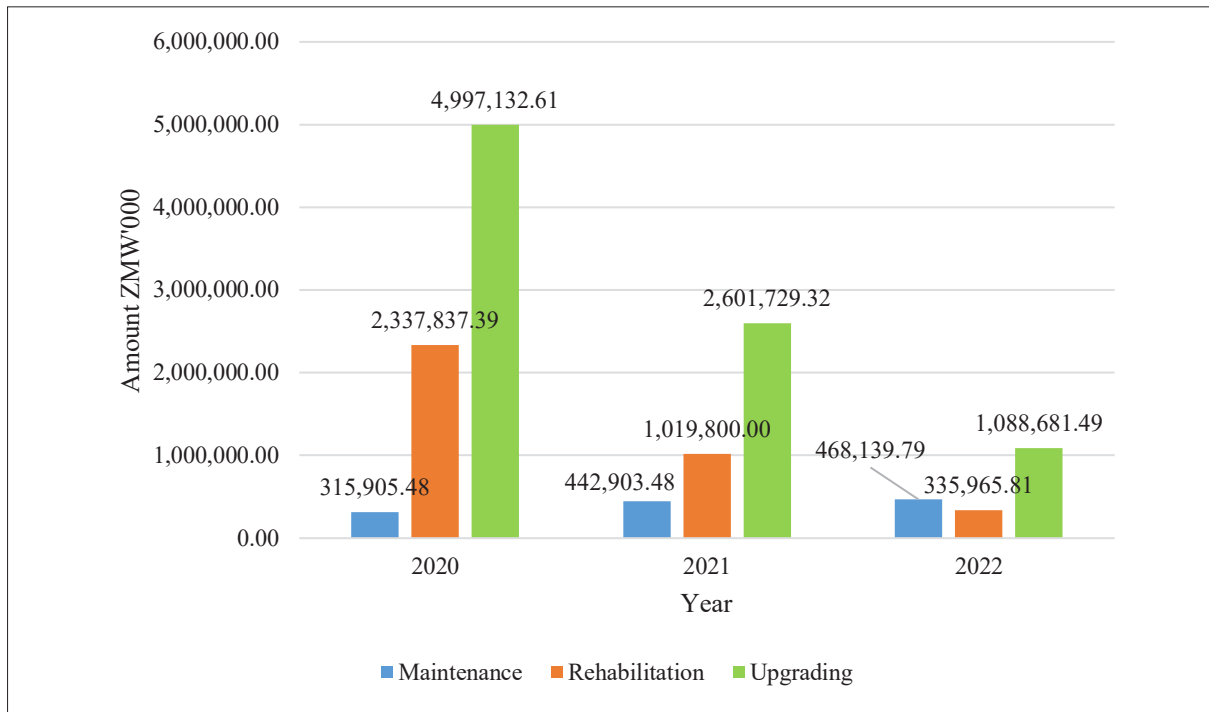
Source: RDA Report on the Review of the Road Maintenance Strategy (2015–2024)

A review of the RDA RMS 2014 to 2024 revealed that the road sector was preoccupied with the construction and upgrading of roads with little emphasis on maintenance. Similarly, a review of the Road Sector Annual Work Plan (RSAWP) 2020 to 2022 showed that road maintenance was not prioritised during planning which resulted in the allocation of more resources to rehabilitation and upgrading at the expense of road maintenance. Further analytical review of the road project cycle and other relevant documents revealed that most roads in Zambia moved from the construction phase back to construction phase with little or no periodic maintenance during the design life. Figure 6.17 below illustrates the budget allocation of funds between maintenance, upgrade and rehabilitation for the period 2020, 2021 and 2022.

¹¹³ Report on the Review of the Road Maintenance Strategy (2015–2024)

¹¹⁴ Report on the Review of the Road Maintenance Strategy (2015–2024)

Figure 6.17: Maintenance, Upgrading and Rehabilitation Budgetary Allocations 2020 to 2022.



Source: Performance Audit Data Analysis 2023

A computation of the maintenance budgetary allocation as a fraction of maintenance, rehabilitation and upgrading revealed that the maintenance budget allocation was 4% in 2020, 11% in 2021 and 25% in 2022. Although there was an increase of 21% in the budget allocation towards maintenance during the period under review, maintenance continued to compete unfavorably with rehabilitation and upgrading. Figure 6.18 shows a rehabilitation project underway on the Chinsali – Nakonde Road.

Figure 6.18: Rehabilitation of the Chinsali - Nakonde Road



Source: Performance Audit Photographic Records 2023



A further review of documents and interviews with NRFA and RDA management also revealed that the low budgetary allocation to maintenance was due to: inadequate resources; a focus on the Link Zambia 8000 project and ineffective planning by RSA among other reasons.

The audit further established that RDA explored Public-Private Partnerships (PPP) financing options for key roads, and to this effect, the Chingola-Kasumbalesa Road Concession Agreement was signed in 2022 while the Lusaka-Ndola dual carriageway Concession Agreement was signed on 28th February 2023.

Additionally, in 2022, the Agency floated ten (10) tenders of viability studies to undertake PPP projects on various sections of the road network. The PPP model was premised on the contractor collecting road tolls for a pre-determined length of time, usually several years, to recoup their investment in the road sector. In as much as the model provided a viable financing option, there was a risk that funding towards road maintenance would reduce further which may have undesired consequences on the road asset.

There is a risk that the focus on rehabilitation and upgrading of roads in comparison to maintenance, will result in the deterioration and premature failure of roads. In addition, newly constructed roads may also be at risk of not being maintained. This may eventually result in higher Vehicle Operating Costs (VOCs) which may further impose financial costs on the economy and citizens. This was confirmed by a study which revealed that for every dollar that a country fails to spend on maintenance, a road user spends three dollars in increased VOCs as a result of the poor road conditions (Gwilliam and Shalizi, 1996).¹¹⁵

6.5 Coordination between Implementing Agencies

The Urban Roads Maintenance activities will be managed and coordinated by Local Road Authorities in collaboration with the RDA.¹¹⁶

The NRFA will enhance collaboration with other public bodies for reliable and cost-effective connectivity for improved service delivery. It will also enhance collaboration with Local Authorities on construction, maintenance, and care for road infrastructure.¹¹⁷

One of the objectives of the National Transport Policy is to ensure that systemic and operational challenges associated with mandate overlaps, centralism, financing as well as structural irregularities are appropriately addressed. Likewise, another policy objective is the harmonisation of all pieces of legislation governing the road sector to minimise overlap of mandates and adherence to core mandates. This will be done by harmonising the Public Roads Act No. 12 of 2002 and the Local Government Act Cap 281.¹¹⁸

¹¹⁵ Road Maintenance Strategy 2014-2024

¹¹⁶ RDA Road Maintenance Strategy 2014 - 2024

¹¹⁷ NRFA Strategic Plan 2022 - 2026

¹¹⁸ National Transport Policy -2019

The RDA coordinates with MLGRD at provincial level through Principal Engineers under the Department of Housing and Infrastructure Development (DHID). Senior Engineers-Local Road Authority (LRA) at RDA Regional offices work in liaison with Principal Engineers- DHID and all District Directors of Works in the Councils on matters pertaining to planning and implementation of road projects. The RDA supervises Local Road Authorities (LRAs) to the extent of providing technical support/advice during maintenance or construction activities and assists in the preparation of Bill of Quantities (BoQs) for projects.

A review of relevant Acts¹¹⁹ and Government Gazette No. 1123 of 2021 revealed that there was ineffective coordination between RDA and LRAs in that the distinction of roles was unclear in relation to the rehabilitation, construction and maintenance of roads. For instance, the Local Government Act No. 2 of 2019 mandated LRAs to establish and maintain roads, exercise general control, care and maintenance of all public roads, streets, avenues, lanes, sanitary lanes, foot walks, and bridges in relation to a public street and street.¹²⁰ Similarly, the Public Roads Act No. 12 of 2002 mandated the RDA to plan, manage and coordinate the road network in the country. Other prescribed functions of RDA included: carrying out routine and emergency maintenance of public roads through its employees or independent contractors; advising road authorities regarding the construction, rehabilitation and maintenance of roads under their jurisdictions and; providing guidance and technical assistance to road authorities.¹²¹ Government Gazette No. 1123 of 2021 also gave Local Authorities the mandate on feeder and township roads. In the same vain, the RDA planned and managed the road network which also included public streets and avenues which also fell under the ambit of LRAs. The Public Roads Act No.12 of 2002 gave the RDA overall responsibility for all the public roads in Zambia while at the same time recognising Local Authorities as authorities for rural and urban roads. Further, the Local Government Act Cap 281 empowered Local Authorities to manage all urban and rural roads. The audit further noted that there was no distinction on the definition of a public road in both Acts. It was established that arising from the above, there were coordination challenges that emanated from the overlapping mandates in the management of the CRN.

In spite of the ambiguity, the RDA and LRAs collaborated to some extent and carried out joint activities such as pothole patching and capacity building. Through interviews with RDA, it was further revealed that challenges were experienced by LRAs such as absence of engineers with specific experience in road works which reportedly resulted in substandard road maintenance works being carried out in some instances. Examples were cited where some LRAs used cement/stone concrete to patch potholes as opposed to widely recommended cement stabilised gravel and bitumen premix for patching.

It was also revealed that despite the RDA delegating authority of urban roads to LRAs through the Public Roads Act No. 12 of 2002, the RDA also maintained urban roads due to inadequate institutional capacity of LRAs. Interviews with MLGRD also revealed that the staff establishment of Local Authorities did not provide for adequate positions of relevant road sector personnel.

¹¹⁹ Local Government Act No. 2 of 2019 and Public Roads Act No. 12 of 2002

¹²⁰ The Local Government Act No. 2 of 2019

¹²¹ Public Roads Act No. 12 of 2002 Part II Sec (4) (1)(2)



The above scenario has resulted in coordination and financing challenges for urban and rural roads which may in turn lead to unbalanced development.¹²² There is a risk of uncoordinated planning which may lead to duplication of roles between RDA and LRAs.

In response, the MLGRD submitted that more funding to LRA/MLGRD was required as the absorption capacity of funds of Local Authorities had greatly improved. In addition, it was reported that there was less staff movement (staff turnover) in Local Authorities which could help with stabilising the technical capacity in Councils. The Ministry further stated that harmonised legislation on roles and responsibilities would help improve coordination among the various Road Sector Agencies.

6.5.1 Frequency of Road Maintenance

The RDA Strategic Plan 2022 to 2026 provides that there should be zero roads failing within their design life. In addition, programming and prioritisation of periodic maintenance interventions on the TMD Network will be achieved through the use of the Zambia Highway Management System, (ZHMS) and the Highway Development and Management tool (HDM-4). A Maintenance Needs Assessment Report indicating a priority list of roads and associated investments required to bring the network into a maintainable condition will be generated annually. Through a systematic method of road and bridge data inventory and data collection, the RDA will have up-to-date information for decision making on maintenance priorities for both roads and bridges including minor and major culverts.¹²³

Routine and periodic road maintenance are both undertaken to preserve the road or drainage structure asset by keeping them in a maintainable condition which will allow the roads to reach or exceed their design life.¹²⁴

The audit established that routine maintenance was generally carried out as planned with a particular focus on vegetation control and limited pothole patching activities. It was further noted that there were 60 awarded routine maintenance contracts out of 467 lots that were advertised as of 31st December 2023 in Central, Lusaka, Muchinga, Western and Northern provinces. However, Lots for Northwestern Province were yet to be advertised while Lots for Eastern province had been advertised and were yet to be awarded. RDA therefore relied on the Force Account to carry out limited routine works on high traffic volume roads for areas that did not have running routine contracts. **Appendix 10 refers.**

In contrast, periodic maintenance activities were not prioritised, with the exception of limited line markings due to inadequate allocation of funding. As a result, some roads deteriorated before the end of their useful life without undergoing periodic maintenance.

A sample of fourteen (14) roads that were constructed between 1967 and 2016 revealed that periodic maintenance had not been carried out on three (3) roads while eleven (11) roads were

¹²² National Transport Policy -2019

¹²³ RDA Road Maintenance Strategy 2015-2024

¹²⁴ RDA Annual Report (2020 – 2022)

not periodically maintained in accordance with the periodic maintenance ideal schedule of at least once every five (5) to seven (7) years. It was further revealed that roads which should have ideally been periodically maintained at least eight (8) times from construction had only been maintained a maximum of two (2) times while more recent constructions between 2011 and 2016 had not been periodically maintained at all. **Appendix 11 refers.**

A further analysis revealed that, on average, roads from the chosen sample were periodically maintained only once during their design life except Mpongwe-Luansobe, Chipata-Mfuwe and Mongu-Kalabo which had not reached their design life. The audit also noted that the Kapiri-Mposhi – Mkushi road and the Mongu-Kalabo road were outlier roads in the sample as they were rated “good”. Despite the Kapiri-Mposhi – Mkushi road being constructed in 1969, it had outlived its design life with only one (1) periodic maintenance activity. It was reported that the road was in good condition as it was constructed using high quality materials while the Mongu-Kalabo road was in good condition as it was constructed in 2016. It was further revealed that the less a road was periodically maintained, the more likely it was to have defects which would result in higher costs.

Additional interviews with RDA management further revealed that the performance of the Highway Management System (HMS), which was designed to provide data on the condition of TMD roads, was ineffective as it did not provide updated data. The System which was intended to facilitate the prioritisation of roads in need of maintenance was not updated as the last Road Condition Survey, which provided input into the HMS, was undertaken in 2015. It was further revealed that RDA was unable to update the Road Condition Survey annually due to financial constraints and under-staffing in the Planning and Design Department. However, RDA management stated that the AfDB was in the process of providing financial support in the form of a loan for the collection of data to update the Road Condition Survey.

A further probe revealed that the HMS was dormant between 2015 and 2021 due to the absence of updated data to input into the system. The HMS operations resumed in-house in 2022 although to a limited extent for reasons alluded to above. The audit further unveiled that despite the system signaling that a particular road that appeared to be in good condition required maintenance, RDA did not usually act upon the prompt. This was due to the perception that a road in seemingly good condition did not require periodic maintenance compared to a road in visibly bad condition. In addition, it was established that road maintenance was generally not seen as ‘economically and politically attractive’ as newly constructed/upgraded roads were preferred by the public. Similarly, it was reported that the public also viewed periodic maintenance of roads that were in seemingly good condition as wasteful expenditure.

Consequently, RDA prioritised the maintenance of roads in obvious bad condition. However, this action resulted in the continued deterioration of roads which may ultimately result in higher costs to rehabilitate rather than maintain the road. Delay in updating the HMS with current data on the condition of roads may result in failure by RSA to make appropriate and timely decisions on maintenance.



To verify the state of roads and road infrastructure, the audit undertook a physical inspection of seventy (70) road projects and the results are as depicted in 6.5.2 below:

6.5.2 Results of Physical Inspections

Physical inspection of seventy (70) road projects also revealed that forty-eight (48) roads were in poor to fair condition partly due to irregular and ineffective road maintenance. It was noted that most roads had potholes, road rutting, alligator cracks, gullies, eroded shoulders, and corrugations. **Appendix 12** refers. Table 6.110 shows defects noted on inspected roads.

Table 6.10: Road defects observed during the field visit 2023.

Region	Type of defects								
	No. of roads in-spected	Rut-ting	Potholes	Alligator cracks	Longi-tudinal cracks	Eroded shoul-ders	Gul-lies	Corru-gations	Over-grown vegetation
Number of roads affected									
Lusaka	9	1	0	0	0	1	1	1	0
Central	9	1	1	0	0	1	3	4	3
Copperbelt	6	1	1	0	0	1	0	1	0
Luapula	13	1	6	1	0	4	2	2	1
Northern	2	0	2	1	0	8	6	4	1
Muchinga	4	0	1	0	0	1	2	1	1
Eastern	8	1	1	2	1	1	0	1	1
Southern	17	1	6	2	1	5	3	3	3
Total	70	6	18	6	2	22	17	17	10

Source: Performance Audit Data Analysis 2023

Out of seventy (70) road projects inspected, the following road defects were observed: six (6) had road rutting; eighteen (18) had potholes; six (6) had alligator cracks; two (2) had longitudinal cracks; twenty-two (22) had eroded shoulders; seventeen (17) had gullies; seventeen (17) had corrugations; and ten (10) had overgrown vegetation off the carriageway. The photographic records below show the defects noted during joint inspections with RDA, NRFA and relevant Project Consultants.

Figure 6.19: Potholes and eroded shoulders on Livingstone-Sesheke Road and Kawambwa to Mwanabombwe road respectively



Figure 6.20: Road rutting on Kafue and Luangwa bridge – Nyimba road



Figure 6.21: Longitudinal cracks and alligator cracks on Luangwa-Nyimba Road

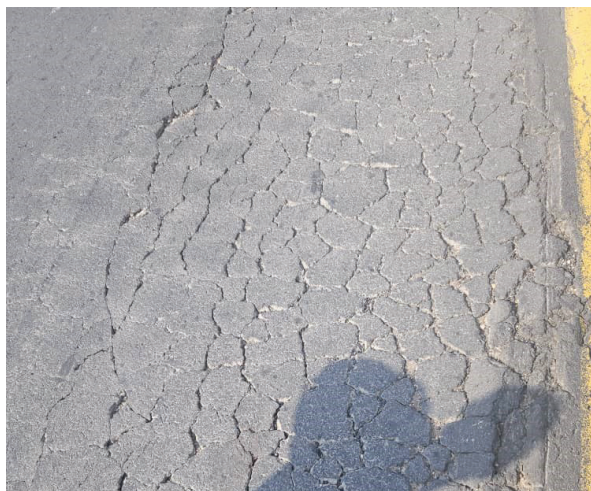


Figure 6.22: Alligator cracks on Sinda to Petauke and Livingstone – Kazungula Road respectively



Figure 6.23: Serenje - Mpika with overgrown grass off carriageway.



Figure 6.24: Deteriorated road in Karoma and Nyamphande areas in Rufunsa respectively.

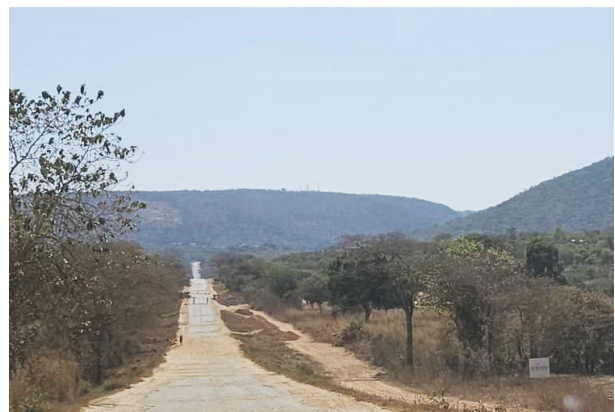


Figure 6.25: Embankment of bridge/culvert in poor state in Petauke (Mwanjabantu area)



Figure 6.26: Livingstone – Kazungula road with large potholes



Figure 6.27: Gwembe to Bottom road with corrugations and in general poor condition.





The audit established that 68% of the inspected roads were in unmaintainable condition partly due to neglect of maintenance. This was supported by an analysis of the state of roads on the CRN in the country which revealed that between 78% and 96% of unpaved TMD roads were in unmaintainable condition while between 1% and 35% of paved roads were in fair to poor condition¹²⁵.

The audit further established that OPRCs offered dual benefits of both construction and maintenance for unpaved roads only. While this system was intended to keep roads in maintainable condition for at least three (3) years after construction/rehabilitation, there was no documented plan for maintenance after the three (3) year period elapsed. There is therefore a high risk that the roads may degenerate to rehabilitation levels after the three (3) year maintenance period.

Continued deferred maintenance may result in more funds being allocated towards rehabilitation which may further reduce the maintenance budget in subsequent years. There is a further risk that the poor condition of roads which play a critical role to farming communities in rural areas, will hamper the transportation of farm produce and receipt of farming inputs which may render Government programmes such as the Farmer Support Input Programme (FISP) ineffective.

6.5.3 Axle Load Control

One of the functions of the RDA is to regulate maximum weights permissible for transmission on roads through axle load control.¹²⁶ To enforce axle load control, the RDA Board set compliance to axle loading to 98%.¹²⁷

Statutory Instrument No. 76 of 2015, Regulation 3 compels all Heavy Goods Vehicles (HGVs) with Gross Vehicle Mass (GVM) of 6.5 tons and above to pass through every weighbridge where they are checked for compliance with the allowable dimensional and load limits in terms of GVM, axle load distribution, vehicle width, length and height.

Axle load control is essential for preserving road infrastructure. It is enforced through the use of fixed and mobile weighbridges. Its objective is twofold: To protect public roads from damage caused by overloaded vehicles and to reduce the risks of accidents on public roads caused by over-dimensional vehicles.¹²⁸ Through load control, road and bridge assets are preserved which allows them to reach their design life¹²⁹.

The mining and production sectors are especially dependent on a predictable and timely supply of machinery and concrete structures that form greater part of their capital investment. Most of this machinery and equipment are heavy and their dimensions exceed legal limits. Due to their critical role in the construction of the productive economic base, they are allowed to use public roads under special conditions.

¹²⁵ Road Condition Report 2015

¹²⁶ Public Road Act No. 12 of 2002

¹²⁷ RDA Board Minutes 2020 to 2022

¹²⁸ RDA 2021 Annual Report

¹²⁹ RDA Submission to auditors dated 07.06.2023.

Some of the conditions are aimed at safeguarding road assets as well as ensuring safety of other road users. Some of this machinery have to be moved under supervision of RDA staff to ensure compliance to road safety in addition to protecting the roads and bridges.

The audit established that there were thirteen (13) weighbridges on the CRN out of which nine (9) were operational, two (2) were under procurement, one (1) was under construction and one (1) was closed for rehabilitation as shown in Table 6.11.

Table 6.11: Weighbridges on Core Road Network

No	Weighbridge Name	Location -Road section	Province	Status	Type of weighbridge
1	Katete	T4-Chipata - Katete	Eastern	Operational: Semi-permanent	Multi deck static scale
2	New Katete	T4-Chipata - Katete	Eastern	Under procurement	Multi deck static scale
3	Nyimba	T4-Nyimba – Petauke	Eastern	Operational: Semi-permanent	Mobile weighbridge-
4	Kafue	T2 Kafue - Lusaka	Lusaka	Operational	Multi deck static scale
5	Kapiri Mposhi	T2/T3 Junction Kapiri Mposhi	Central	Operational	Multi deck static scale
6	Kafulafuta	T3- Ndola - Kapiri Mposhi	Copperbelt	Operational	Single deck static scale
7	Livingstone	T1- Livingstone – Zimba	Southern	Operational	Single deck static scale
8	Solwezi	T5-Solwezi -Chingola	North-western	Operational	Single deck static scale
9	Mpika	T2- Mpika -Serenje	Muchinga	Operational	Single deck static scale
10	Mumbwa	M9 Mumbwa -Lusaka	Central	Operational- Opened in 2021 (Q4)	Multi deck static scale
11	Kazungula	M10- Livingstone – Kazungula	Southern	Closed for rehabilitation	Single deck static scale
12	Chongwe	T4-Lusaka - Chongwe	Lusaka	Under Construction	Multi deck static scale
13	Mwami	T4-Chipata - Mwami Border	Eastern	Under procurement	Multi deck static scale

Source: RDA Data 2023

It was revealed that a total of 1,972,994 Heavy Goods Vehicles (HGVs) with a total tonnage (T) of 79,691,577,897 were weighed at various stations during the period under review out of which 43,356 were overloaded representing an overloading rate of approximately 2%. In 2020, 11,537 out of 627,856 HGVs were overloaded out of which 6,750 were abnormal loads, representing 1.8% overloading while in 2021, 14,367 out of 575,195 HGVs were overweight out of which 7,053 were abnormal loads representing 2.5% overloading. In 2022, 17,452 out of 769,943 HGVs were overloaded out of which 9,633 were abnormal loads representing 2.3%



overloading. Out of 23,436 abnormal loads recorded during the period under review, sixteen (16) were escorted by the RDA while the rest were permitted to move without RDA escort. Table 6.12 below shows details.

Table 6.12: Summary of HGVs, overloaded HGVs and abnormal loads

Year	No. of HGVs	No. of overloaded vehicles	No. of abnormal loads
2020	627,856	11,537	6,750
2021	575,195	14,367	7,053
2022	769,943	17,452	9,633
Total	1,972,994	43,356	23,436

Source: Performance Audit Analysis 2023

It was further noted that there was a 9% reduction in the number of HGVs recorded in 2021 compared to 2020 because of travel and other restrictions necessitated by the COVID-19 pandemic while an increase of 7% was recorded in 2022 in comparison to 2021. At provincial level, Copperbelt (Kafulafuta weighbridge) recorded the highest tonnage in HGVs and abnormal loads at 23,801,549,285T followed by Lusaka (Kafue) at 22,189,944,878T while the least number was recorded in Eastern province (Mwami) at 650,877,500T during the period under review.

Interviews with RDA and NRFA management revealed that the high number of HGVs and abnormal loads on the Lusaka – Ndola Road (Kafulafuta and Kapiri Mposhi weighbridge) partially contributed to the poor state of the road especially given that the Copperbelt was the mining hub of the country. Although Kafue recorded the second highest number of HGVs and abnormal loads, the road was rehabilitated in 2012 hence the fair state of the road as at 31st October 2023. Table 6.13 shows the summation of HGVs and abnormal loads during the period under review.

Table 6.13: Heavy Goods Vehicles and Abnormal Loads (Tonnage)

Station	2020	2021	2022	Jun-23	Total
Livingstone	2,037,940,915	2,678,152,909	3,543,132,800	1,771,566,400	10,030,793,024
Katete	604,890,980	1,399,042,720	1,431,653,440	715,826,720	4,151,413,860
Mpika	2,644,576,000	Closed for rehab	2,550,198,100	1,275,099,050	6,469,873,150
Kafulafuta	6,414,563,685	7,195,349,300	6,794,424,200	3,397,212,100	23,801,549,285
Kafue	3,095,989,358	6,341,930,460	8,501,350,040	4,250,675,020	22,189,944,878
KapiriMposhi	1,194,976,880	2,924,188,120	5,518,640,800	2,759,320,400	12,397,126,200
Mwami	167,667,600	260,831,900	148,252,000	74,126,000	650,877,500
Solwezi	0	0	0	0	0
Mumbwa	0	0	0	0	0
Total	16,160,605,418	20,799,495,409	28,487,651,380	14,243,825,690	79,691,577,897

Source: RDA Data 2023

It was established that despite the highest overloading rate of 2.5% during the period under review, implying that there was up to 97.5% axle load compliance, the state of roads in areas that recorded the highest number of HGVs and abnormal vehicles was in poor condition particularly the Copperbelt route where it was noted that periodic maintenance was not regularly undertaken.

In this regard the audit established that only the following sections were periodically maintained between 2006 and 2015: 50.9 kms of Lusaka - Kabwe road between Makombe to Kabwe Warriors complex and Mukobeko road in 2006; 42kms of Lusaka - Kabwe road between Chisamba and Mukoboto junction in 2006; 65.5kms of Kabwe to Kapiri Mposhi in 2013 and 30kms of Kabwe - Chibombo road in 2015. Despite the maintenance works, the roads were in poor state as only small sections were subjected to maintenance. The audit further noted that despite the high axle load compliance rate, the Lusaka - Ndola road was still in a poor state due to frequent usage, especially given that road transport accounted for 90% of most frequently used transport mode in the country.

In addition, it was reported that parking on road shoulders by HGVs also contributed to disintegration of road shoulders particularly in HGV prone areas such as border posts and highways that lead to areas of high economic activity. Figure 6.28 below shows eroded shoulders at Mchinji Border Post.

Figure 6:28: Eroded road shoulder due to HGVs - Mchinji Border Station in Chipata



Source: Performance Audit Photographic Records 2023

There was overwhelming evidence that the use of rail transport for the movement of heavy goods/bulk cargo was beneficial for the road sector in terms of road preservation. However, it was revealed that railway transport had lost its market share of freight to road transport even in market segments that could be better served by railway transport¹³⁰.

¹³⁰ National Transport Policy 2019



For example, in 2020 1,422,091T were shipped by rail while 16,160,605,418T were shipped by road, 1,355,504T were shipped by rail in 2021 while 20,799,495,409T were shipped by road and 894,117T were shipped by rail in 2022 while 28,487,651,380T were shipped by road. This implied that 99.9% of cargo was transported by road.

It was further revealed that railway transport in Zambia was ineffective in that it did not fully meet the demand by the industry with respect to capacity, lead times and reliability which also propelled the continued usage of road transport by HGVs.¹³¹

HGVs and abnormal loads pose the following risks: premature failure to the road pavement, bridges and culverts due to excessive weight; damage to road furniture and service lines, such as curb - stones, streetlights, traffic lights, barriers, toll plaza infrastructure, overhead lines and bridges due to their dimensions that exceed legal limits; increased probability of accidents; high Vehicle Operating Costs (VOCs); and higher costs of road maintenance.

¹³¹ National Transport Policy 2019



Chapter Seven **CONCLUSION**



CONCLUSION

7.0 Introduction

The chapter presents the conclusion of the audit and is presented in two (2) main parts: overall and specific audit conclusions.

7.1 Overall Conclusion

Zambia has integrated SDGs related to the road sub-sector through the 8NDP and has committed to invest in critical infrastructure through improvements to the maintenance and development of road and rail infrastructure. While Zambia has made progress in achieving the SDGs, several challenges remain that need to be addressed within the next seven (7) years in order to attain the 2030 Agenda.

The improvement and maintenance of road infrastructure is important as it contributes to economic development and growth and brings important social benefits. The Link Zambia 8000, Improved Rural Connectivity Project (IRCP), Pave Zambia 2000, Lusaka 400 and other initiatives all demonstrate Governments commitment to improve connectivity in both urban and rural areas.

Despite strides made by various stakeholders, to a great extent, the Road Fund has not been managed effectively to guarantee its sustainability. The audit also concludes that road maintenance has been treated more like an “after thought” than a priority by the NRFA, Implementing Agencies and other stakeholders. Overall, there is still room for improvement in the management of road maintenance.

7.2 Specific Conclusions

7.2.1 Sustainability of the Road Fund

NRFA is technically insolvent as their liabilities exceed their current assets which is an indicator that the Agency may default on its obligations and be headed for bankruptcy. NRFA’s accountability mechanisms and transparency are ineffective: RUC’s cannot be traced to their specific usage owing to the Treasury Single Account (TSA). While the TSA system comes with advantages not limited to the elimination of idle balances in commercial banks and reduction in costs related to the maintenance of several bank accounts, limitations have arisen regarding the effective tracking of toll fees along with other RUCs.

While loans provide necessary funding for construction, rehabilitation and maintenance, they have been obtained without careful planning to ensure that funds will be available to meet liabilities as they fall due. Local loans have not matched resources secured under the RSAWP which has resulted in increased commitments. The current approach of obtaining loans to clear arrears is unsustainable because it leads to a cycle of debt that is difficult to break. Similarly, using RUC as security to obtain loans implies that RUC are not being used effectively for their purpose of rehabilitation, construction and maintenance.

Even though local contractors are more in number than Chinese and other foreign contractors, an average of 62% of the value of contracts is for foreign contractors. This means that most of the money is externalised and has further contributed to the debt burden.

Despite a high road sector debt that has been supposedly used to maintain, construct and rehabilitate roads, the public has failed to appreciate the benefits of the Road Fund and the National Road Tolling Programme as both tolled and un-tolled roads, especially high volume roads that collect the most tolls revenue, continue to be in unmaintainable condition.

7.2.2 Road Maintenance

Road Sector Agencies and Ministry of Local Government Rural Development recognise the need for and importance of timely execution of maintenance activities on the public road network to prevent roads from deteriorating to rehabilitation levels earlier than expected. Despite this, there is more focus on rehabilitation and construction of roads. The current state of roads also shows that road maintenance is not a priority as many roads have significant defects.

Road tolling was originally introduced as a strategy to improve funding towards road maintenance in order to mitigate against the loss of road infrastructure investment. Despite this, the law did not provide that toll fees be applied specifically for road maintenance. On the contrary, a considerable amount of the road fund has been applied towards construction, rehabilitation and upgrading of roads. NRFA and the Implementing Agencies have also failed to devise a suitable mechanism that will allow tolled roads to benefit from toll fees. Case in point is the Ndola-Lusaka road which records the highest revenue from toll fees yet is in deplorable condition.

The absence of an updated Road Condition Survey has derailed long term planning for maintenance activities as there is no updated comprehensive data on the state of roads to base decisions on. Because of this, the Highway Management System (HMS) is an ineffective tool for decision making.

The approach towards periodic road maintenance has been reactive in that a road is only worked upon when it degenerates to rehabilitation/reconstruction levels. Even though funding for maintenance has improved slightly from 3% of the RSAWP to 9% during the period under review, it is largely inadequate to meet the maintenance needs of the country. The low allocation of funds towards road maintenance also demonstrates a flaw in the planning process in that the RSAWP is a reflection of the priority areas of RSA and MLGRD.

There has also been over reliance on roads as a means of transportation and as a result HGVs continue to reduce the design life of economic roads. Roads such as the Lusaka-Ndola road are in a deplorable state due to inadequate maintenance and frequent usage by HGVs. Generally, HGVs comply to axle load limits by as much as 98%. However, this compliance has not prevented the deterioration of the road network due to frequent use of the road network in transporting heavy goods.



Coordination between MLGRD and RDA has not been effective. The overlapping mandates have the potential to lead to unbalanced development on the CRN. RDA's continued participation in the management of rural and urban roads which are under the jurisdiction of Local Authorities compromises the constitutional mandate of MLGRD and may lead to an ineffective working relationship. Although responsibility for primary feeder roads has been delegated to Local Authorities, RDA continues to be involved in their management which effectively means both players are managing the same roads.

In conclusion, road maintenance is crucial for Zambia's economic development and the well-being of its citizens. The Government, communities and road users must work together to ensure that roads are well-maintained and sustainable.

A photograph of a paved road with a yellow center line and a person in a high-visibility vest standing on the shoulder. The road is dark asphalt with a lighter, cracked section in the foreground. The background shows dry vegetation and a clear sky.

Chapter Eight

RECOMMENDATIONS



RECOMMENDATIONS

The chapter includes the OAGs recommended practical improvements in operations and/or performance of the audited entity and stakeholders based on root causes of the audit findings.¹³²

- i. NRFA through the MoFNP should consider revising the Tolls Act No. 14 of 2011 to ensure that toll fees are exclusively ring fenced for maintenance of tolled and other roads. This will increase the pool of funds available for road maintenance and facilitate timely maintenance. It will also increase public confidence as the benefit of paying toll fees will be visible. In addition, this measure will contribute to the maintenance of transparency, accountability, and the cultivation of public trust.
- ii. NRFA and RDA should have joint technical audits to collectively enforce recommendations that arise from the audits. This may result in an improved road network.
- iii. RSA, MLGRD and NCC should promote the engagement of local contractors within the road sector. Furthermore, they should explore the implementation of programmes aimed at improving technical skills and equipment capabilities of local contractors, among other areas. Such initiatives have the potential to invigorate the economy, as funds disbursed to local contractors will circulate within the country ultimately benefiting diverse sectors of the economy through a trickle-down effect.
- iv. RSA should devise practical ways of reducing the debt burden to sustainable levels including settling of arrears to contractors. This will improve the financial position of the sector and allow the payment of loans as they fall due. This will also free up finances for road maintenance.
- v. RSA and MLGRD should scale up evidence-based policies that will guarantee gender equality. The policies will enable the country achieve SDG 5-Gender Equality which aims at bridging the gap and creating equal rights, safety, opportunities and representation for all genders. To combat stereotypes and misconceptions on the role of women in the construction industry, the Government through RSA and MLGRD should launch outreach programs to schools, universities, and career fairs focused on dispelling stereotypes about construction work and showcasing the diverse range of roles available.
- vi. RSA should categorise the CRN further to prioritise higher traffic roads. This may reduce the backlog of road maintenance as there may be less roads due for road maintenance.
- vii. RDA in conjunction with relevant stakeholders should conduct annual road condition surveys and update the Road Maintenance Needs Assessment 2012. This will in turn provide accurate and valid data to input into the Highway Management System (HMS) which will help facilitate the prioritisation of roads in need of maintenance and other decisions. This will aid decision making in the selection of road projects in the RSAWP.
- viii. MTL, RSA and MLGRD should coordinate to prioritise the use of rail transport for bulk cargo to preserve roads. This will slow the deterioration of roads, reduce maintenance costs and in so doing roads may reach or exceed their structural design lives.

¹³² ISSAI 300:40



- ix. RSA and MLGRD should prioritise road maintenance in the RSAWP to ensure that sufficient resources are allocated for this purpose. This will increase the lifespan of roads and may further reduce VOCs for citizens.
- x. Collaboration between RDA and LRAs should be improved by ensuring that they have clearly defined and streamlined roles and responsibilities in their legal framework by revising their respective Acts to avoid duplication of roles. This will help to harmonise the various pieces of legislation in the road sector and address institutional overlaps among key players in the road sector thus aiding efficiency.



APPENDICES

Appendix 1: Regional Distribution of the Sampled Road Projects

No.	Province	District	Contract Name	Type of contract
1	Lusaka	Lusaka	The Upgrading to Bituminous Standard of D153 from Great East Road at Moono Police Check Point via Palabana to D151 at Chilyabale Basic School (54 Km) Road in Lusaka Province of Zambia	Upgrading
2	Lusaka	Lusaka	The Upgrading to Bituminous Standard of Approximately 55Km roads in Chongwe District, Lusaka Province of Zambia	Upgrading
3	Lusaka	Chongwe	Chongwe Weigh Bridge	Construction
4	Lusaka	Lusaka	Great North Road from Shimabala Toll Gate to Kafue Bridge	Did not fall under any category
5	Lusaka	Lusaka	Kafue Shantumbu Road	Did not fall under any category
6	Lusaka	Lusaka	Periodic Maintenance of 51 Km of D162 (Linda – Kafue Estate Road) Including U8 (Chanyanya Road)	Maintenance
7	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 -2022Lot 11B	Maintenance
8	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 - 2022 Lot 16	Maintenance
9	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 - 2022 Lot 20	Maintenance
10	Copperbelt	Mufulira	Contract for periodic maintenance of feeder roads in Mufulira District of Copperbelt province Feeder Lot 1 – 9.4km Muya West	Maintenance
11	Copperbelt	Ndola	Contract for periodic maintenance of feeder roads in Mufulira District of Copperbelt province – 25km of Creso to Graveyard Road (Ndola)	Maintenance
12	Copperbelt	Ndola	Contract for periodic maintenance of selected feeder roads in Ndola District of Copperbelt Province – 18km of Kavu Road (Ndola)	Maintenance
13	Copperbelt	Masaiti	Rehabilitation of (D315) and upgrading of Muoyo road to bituminous standard 61.8km St. Marys - Chinemu Road- Lot 1 (Masaiti)	Upgrade
14	Copperbelt	Masaiti	Rehabilitation of (D315) and upgrading of Muoyo road to bituminous standard 61.8km St. Marys - Chinemu Road- Lot 1 (Lufwanyama)	Rehabilitation



No.	Province	District	Contract Name	Type of contract
15	Copperbelt	Masaiti	Contract for periodic maintenance of selected feeder roads in Masaiti District of Copperbelt Province - 30 kms Kamifungo Road	Maintenance
16	Western	Sioma	The Construction/Upgrading of 38 Km of Sioma-Nangweshi Road M10 in the Western Province	Upgrade
17	Western	Mongu	22.7 km rehabilitation of Mongu Limulunga (D315) and upgrading of Muoyo road to bituminous standard in Western Province	Rehabilitation
18	Southern	Kazungula	Kazungula Bridge Project Procurement of OSBP Equipment	Construction
19	Southern	Livingstone to Sesheke	Livingstone To Sesheke (M10) Road In	Rehabilitation
20	Southern	Mazabuka	Rehabilitation of Road T1, section between Chikankata Turn Off to Mazabuka General Hospital (km33.5), Lot 2 (Package 4) - North - South Corridor	Rehabilitation
21	Southern	Mazabuka	Consultancy services for the design review and construction supervision of the rehabilitation of the Kafue Mazabuka Road (T1) in Southern Province - Lot 2	Rehabilitation
22	Southern	Mazabuka	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 11 Southern Province Mazabuka district U0001	Rehabilitation
23	Southern	Mazabuka	Mazabuka General Hospital to Magoye	Did not fall under any category
24	Southern	Monze	Upgrading of the Monze - Niko (D365) to bituminous standard in Southern province of Zambia	Upgrading
25	Southern	Monze	Routine maintenance of Main and District roads on the Southern Province Lot No. 9,	Maintenance
26	Southern	Choma	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 20,	Maintenance
27	Southern	Choma	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 48,	Maintenance
28	Southern	Namwala	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 52 (Niko-Choma)	Maintenance
29	Southern	Gwembe	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 94, (Hanyimbo to Buyeta)	Maintenance



No.	Province	District	Contract Name	Type of contract
30	Southern	Gwembe	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 54, (Mukunyu Munungwe to Chamwe)	Maintenance
31	Southern	Gwembe	Chisekesi to Gwembe	Did not fall under any category
32	Southern	Kalomo	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 3,	Maintenance
33	Southern	Kalomo	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 3,	Maintenance
34	Southern	Zimba	Output and Performance Based Road Contract (OPRC) AssetManagement Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 12 Southern Province Zimba district U4K 155km authorised 40km	Rehabilitation
35	Eastern	Chipata	WCD Mwami Mchinji - One Stop Border Post (OSBP) - Works package 2	Construction
36	Eastern	Chipata	Rehabilitation of the Great East Road (T4) Civil Works - Lot 3 Mtenguleni - Chipata - Mwami Border	Rehabilitation
37	Eastern	Katete	Routine maintenance of Trunk, Main and District roads on the Eastern Province Lot No. 19A, from Katete to Msoro	Maintenance
38	Eastern	Katete	Routine maintenance of Trunk, Main and district roads on the Eastern Province Lot 19A, from Katete to Msoro	Maintenance
39	Eastern	Petauke	Output and Performance Based Road Contract (OPRC) AssetManagement Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts)	Maintenance
40	Eastern	Petauke	Routine maintenance of Trunk, Main and District roads on the Eastern Province Lot No. 4, from Petauke to Sinda	Maintenance
41	Eastern	Nyimba	Rehabilitation of the Great East Road (T4) Civil Works - Lot 1: Luangwa Bridge to Nyimba	Rehabilitation
42	Eastern	Nyimba	Output and Performance Based Road Contract (OPRC) AssetManagement Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts) - RD418 38KM	Maintenance



No.	Province	District	Contract Name	Type of contract
43	Central	Chisamba	Routine Maintenance of Trunk, Main and District roads in Central Province from Mwachisompola Chisamba (34km) to Lot 34	Maintenance
44	Central	Chisamba	Routine maintenance of TMD roads in central province from km 30+000 to Chisamba (27) km - lot 55	Maintenance
45	Central	Kabwe	Routine maintenance of TMD roads in central province from Kabwe Mine to km30 +000 (30km) - lot 42	Maintenance
46	Central	Kabwe	Routine maintenance of TMD roads in central province from Kabwe to km36 +000 Mukonchi (30km) - lot 30	Maintenance
47	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U4	Maintenance
48	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U5	Maintenance
49	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U6	Maintenance
50	Central		Serenje to Mpika	Did not fall under any category
51	Muchinga		Mpika to Chinsali	Did not fall under any category
52	Central	Mkushi	Routine maintenance of TMD roads in central province from T2/D219, Mkushi junction to km37 +000 towards Serenje (37km) - lot 9	Maintenance
53	Muchinga	Nakonde	Construction of the Chinsali-Nakonde Road Rehabilitation Project: (North-South Corridor) Lot 2 Isoka - Nakonde Road Section (Km103 - km210)	Rehabilitation
54	Muchinga	Chinsali	Chinsali Nakonde Rehabilitation, Lot 1, Chinsali Isoka Volume 1 of 2, 103km (Not opening)	Rehabilitation
55	Muchinga	Nakonde to Mbala Road	N/A	Did not fall under any category



No.	Province	District	Contract Name	Type of contract
56	Northern	Mbala to Kasama	N/A	Did not fall under any category
57	Northern	Kasama to Luwingu road	N/A	Did not fall under any category
58	Luapula	Kawamb-wa to Mwansabombwe	N/A	Did not fall under any category
59	Luapula	Mwansabombwe to Mansa	N/A	Did not fall under any category
60	Luapula	Mansa	Routine maintenance of Main and District roads in Luapula Province Lot No. 24, RD93, Km42-Mansa	Maintenance
61	Luapula	Mansa	Routine maintenance of Main and District roads in Luapula Province Lot No. 40, M3, Mansa Cathedral - Airport - Mbaso	Maintenance
62	Luapula	Kawamb-wa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U15	Maintenance
63	Luapula	Kawamb-wa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U16	Maintenance
64	Luapula	Kawamb-wa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U10-2	Maintenance
65	Luapula	Mwansabombwe	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province Mwansabombwe - R70 16km	Maintenance
66	Luapula	Samfya	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 10 Luapula Province Samfya Districts - U11	Rehabilitation



No.	Province	District	Contract Name	Type of contract
67	Luapula	Samfya	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 10 Luapula Province Samfya Districts -U12	Rehabilitation
68	Luapula	Samfya	Routine maintenance of Main and District roads in Luapula Province Lot No. 04, D94, - Km 40 Samfya	Maintenance
69	Luapula	Milenge	Routine maintenance of Main and District roads in Luapula Province Lot No. 34, D100, km37 - Milenge	Maintenance
70	Luapula	Milenge to Serenje	N/A	Did not fall under any category



Appendix 2 – Stakeholders Interviewed

No.	Name of Institution	Position of Interviewee	Location
1	Ministry of Finance and National Planning	1. Chief Accountant 2. Director Revenue 3. Accountant x 2	Lusaka
2	National Road Fund Agency	1. Director Road Tolling 2. Manager Road Tolling 3. Manager ICT 4. Manager Finance 5. Manager M&E 6. Acting Manager M&E 7. Road Technician	Lusaka
		8. Station Manager	Livingstone
3	Road Development Agency	1. Acting Director Construction and Rehabilitation 2. Principal Engineer Maintenance 3. Senior Manager Local Contractors 4. Acting Director Commercial Technical Services 5. Acting Director Finance 6. Project Engineer (Principal Engineer Constructor) 7. Engineer contracts 8. Project Manager 9. Project Environmentalist 10. Regional Manager Western Region 11. Senior Manager- Urban and Rural Roads. 12. Principal Engineer - Urban and Rural Roads.	Lusaka, Chipata, Choma, Central
		13. Regional Manager Central Region 14. Engineer Planning and Design	Central – Chisamba, Kabwe and Mkushi
		15. Regional Manager Southern	Mazabuka, Monze, Choma, Kalomo, Zimba
		16. Regional Manager Eastern	Chipata, Katete, Petauke, Nyimba
		17. Acting Senior Engineer	Chinsali, Mpika and Nakonde



No.	Name of Institution	Position of Interviewee	Location
		18. Senior Engineer	Kawambwa, Mwansabombwe, Mansa, Samfya, Milenge
4	Road Transport and Safety Agency	1. Head Finance 2. Head Internal Audit and Assurance 3. Revenue Accountant	Lusaka
5	Ministry of Local Government and Rural Development	1. Director Finance 2. Acting Director Rural Development 3. Civil Engineer x 2 4. Principal Engineer 5. Senior Engineer 6. Civil Engineer Intern 7. Principal Engineer 8. Acting Principal Engineer 9. Senior Accountant	Lusaka
6	National Council for Construction	1. Monitoring and Compliance Specialist 2. Acting Regional Manager South 3. Acting Business Development Manager	Lusaka
7	Zambia Tax Platform	1. ZTP Chairperson 2. ZTP Coordinator 3. CTPD Researcher Legal	Lusaka
8	SCIROCCO Limited	1. Contract Manager SCIROCCO 2. Consulter – ZULU Burrow Consulting limited	Lusaka
9	LUVIAS	1. Resident Engineer 2. Site Engineer	Chongwe
9	Northrise Engineering	1. Civil Engineer	
10	Mufulira Municipal Council	1. Civil Engineer 2. Assistant Civil Engineer	Mufulira
11	CECIL CHAMS Limited	1. Director	Ndola
12	Masaiti Town Council	1. Director of Works	Kamifungo
13	Lufwanyama Town Council	1. Works Supervisor 2. Director of Works	Lufwanyama
14	Helmet Engineering and construction Limited	1. Site Agent	Livingstone/Kazungula



No.	Name of Institution	Position of Interviewee	Location
15	Ngandu Consulting Limited	1. Resident Engineer 2. Assistant Resident Engineer	Livingstone/Sesheke
16	China Geo Engineering	1. Personal Officer	Sioma
17	ETHIO Engineering ETHIO Engineering Plc in joint venture with Advanced Engineering Solutions Limited and in Sub-consultancy with TACT Engineering Group Plc	1. Measurement Engineer	Mazabuka
18	China Joun Xi	1. Road Manager 2. Quality Control Engineer - China JounXi 3. Contract team Leader 4. Inspector of Works – LEA/ ILISO	Monze
19	M&N Industrial Merchants Ltd	1. M&N Road Manager 2. ARE LEA 3. Inspector of works – LEA/ ILISO 4. Logistics Manager 5. Materials Technician – LEA/ ILISO	Zimba
20	Allione/ Mariswe Consulting Services	1. Civil Engineer	Petauke
21	SINOHYDRO Zambia Limited	1. Assistant Road Manager 2. Civil Engineer – Contractor 3. Safety Officer	Mkushi
22	Zulu Burrow	1. Materials Technician - Consultant	Mkushi
23	China State Construction Engineering Corporation Limited	1. Deputy Contract Manager 2. Site Manger	Chinsali, Nakonde
24	Civil and Planning Group	1. Resident Engineer 2. Surveyor	Chinsali, Nakonde
25	China Railway Seventh Group Company Limited	1. Resident Engineer	Nakonde
26	MESSRS LONGIAN Road and Bridge Company Limited	1. Road Manager	Samfya
TOTAL INTERVIEWED = 85			

Appendix 3: List of projects inspected

No	Province	District	Contract Name	Contractor
1	Lusaka	Lusaka	The Upgrading to Bituminous Standard of D153 from Great East Road at Moono Police Check Point via Palabana to D151 at Chilyabale Basic School (54 Km) Road in Lusaka Province of Zambia	Chetak Zambia Limited
2	Lusaka	Lusaka	The Upgrading to Bituminous Standard of Approximately 55Km roads in Chongwe District, Lusaka Province of Zambia	Luvias Investments Limited
3	Lusaka	Chongwe	Chongwe Weigh Bridge	SCIRROCO Limited
4	Lusaka	Lusaka	Great North Road from Shimabala Toll Gate to Kafue Bridge	Not provided
5	Lusaka	Lusaka	Kafue Shantumbu Road	TEEDOT
6	Lusaka	Lusaka	Periodic Maintenance of 51 Km of D162 (Linda – Kafue Estate Road) Including U8 (Chanyanya Road	ACHUKA Investment Limited
7	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 -2022 Lot 11B	MLGRD Feeder Roads (Luvias)
8	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 - 2022 Lot 16	MLGRD Feeder Roads (STAAM)
9	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 - 2022 Lot 20	MLGRD Feeder Roads (Tenacity)
10	Copperbelt	Mufulira	Contract for periodic maintenance of feeder roads in Mufulira District of Copperbelt province Feeder Lot 1 – 9.4km Muya West	CHIBE CHINU Investments construction company Limited
11	Copperbelt	Ndola	Contract for periodic maintenance of feeder roads in Mufulira District of Copperbelt province – 25km of Creso to Graveyard Road (Ndola	CECIL CHAMS Limited
12	Copperbelt	Ndola	Contract for periodic maintenance of selected feeder roads in Ndola District of Copperbelt Province – 18km of Kavu Road (Ndola)	CECIL CHAMS Limited



No	Province	District	Contract Name	Contractor
13	Copper-belt	Masaiti	Rehabilitation of (D315) and upgrading of Muoyo road to bituminous standard 61.8km St. Marys - Chinemu Road- Lot 1 (Masaiti)	KDW Engineering
14	Copper-belt	Masaiti	Rehabilitation of (D315) and upgrading of Muoyo road to bituminous standard 61.8km St. Marys - Chinemu Road- Lot 1 (Lufwanyama)	KDW Engineering
15	Copper-belt	Masaiti	Contract for periodic maintenance of selected feeder roads in Masaiti District of Copperbelt Province - 30 kms Kamifungo Road	VISHA Suppliers Limited
16	Western	Sioma	The Construction/Upgrading of 38 Km of Sioma-Nangweshi Road M10 in the Western Province	China Geo-Engineering
17	Western	Mongu	22.7 km rehabilitation of Mongu Limulunga (D315) and upgrading of Muoyo road to bituminous standard in Western Province	Avic International Holding Corporation
18	Southern	Kazungula	Kazungula Bridge Project Procurement of OSBP Equipment	Various contractors
19	Southern	Livingstone to Sesheke	Livingstone to Sesheke (M10) Road	Helmet Engineering and Construction Limited
20	Southern	Mazabuka	Rehabilitation of Road T1, section between Chikankata Turn Off to Mazabuka General Hospital (km33.5), Lot 2 (Package 4) - North - South Corridor	China State Construction Engineering Corporation Limited
21	Southern	Mazabuka	Consultancy services for the design review and construction supervision of the rehabilitation of the Kafue Mazabuka Road (T1) in Southern Province - Lot 2	ETHIO Engineering Plc in joint venture with Advanced Engineering Solutions Limited and in Sub-consultancy with TACT Engineering Group Plc
22	Southern	Mazabuka	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 11 Southern Province Mazabuka district U0001	China
23	Southern	Mazabuka	Mazabuka General Hospital to Magoye	Not provided

No	Province	District	Contract Name	Contractor
24	Southern	Monze	Upgrading of the Monze - Niko (D365) to bituminous standard in Southern province of Zambia	UNIK/BUILDCON Joint Venture
25	Southern	Monze	Routine maintenance of Main and District roads on the Southern Province Lot No. 9,	GEOMACENI Enterprises
26	Southern	Choma	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 20,	CHINOWACHA Investment Limited
27	Southern	Choma	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 48,	TUDE Constructions
28	Southern	Namwala	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 52 (Niko -Choma)	WISI Contractors
29	Southern	Gwembe	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 94, (Hanyimbo to Buyeta)	TACHIMA Enterprise
30	Southern	Gwembe	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 54, (Mukunyu Munungwe to Chamwe)	MOONCH Road Contractors and suppliers
31	Southern	Gwembe	Chiseke to Gwembe	Not provided
32	Southern	Kalomo	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 3,	NARITE Trading
33	Southern	Kalomo	Routine maintenance of Trunk, Main and District roads in Southern Province Lot No. 3,	KABU General Dealers
34	Southern	Zimba	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 12 Southern Province Zimba district U4K 155km authorised 40km	M & N Industrial Merchants
35	Eastern	Chipata	WCD Mwami Mchinji - One Stop Border Post (OSBP) - Works package 2	China State Construction Engineering Corporation Limited
36	Eastern	Chipata	Rehabilitation of the Great East Road (T4) Civil Works - Lot 3 Mtenguleni - Chipata - Mwami Border	MOTA - ENGIL, Engenharia Construção, SA



No	Province	District	Contract Name	Contractor
37	Eastern	Katete	Routine maintenance of Trunk, Main and District roads on the Eastern Province Lot No. 19A, from Katete to Msoro	SHELMET Limited
38	Eastern	Katete	Routine maintenance of Trunk, Main and district roads on the Eastern Province Lot 19A, from Katete to Msoro	FANTIP Enterprises
39	Eastern	Petauke	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts)	MESSRS. CHINA GEO Engineering Corporation Limited
40	Eastern	Petauke	Routine maintenance of Trunk, Main and District roads on the Eastern Province Lot No. 4, from Petauke to Sinda	BUTOCHU Enterprise
41	Eastern	Nyimba	Rehabilitation of the Great East Road (T4) Civil Works - Lot 1: Luangwa Bridge to Nyimba	MOTA - ENGIL, Engenharia Construção, SA
42	Eastern	Nyimba	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts) - RD418 38KM	MESSRS. CHINA GEO Engineering Corporation Limited
43	Central	Chisamba	Routine Maintenance of Trunk, Main and District roads in Central Province from Mwachisompola Chisamba (34km) to Lot 34	Sontus Clearing and Forwarding
44	Central	Chisamba	Routine maintenance of TMD roads in central province from km 30+000 to Chisamba (27) km - lot 55	SAHARA Commercial Services Limited
45	Central	Kabwe	Routine maintenance of TMD roads in central province from Kabwe Mine to km30 +000 (30km) - lot 42	AGKAS General Dealers Limited
46	Central	Kabwe	Routine maintenance of TMD roads in central province from Kabwe to km36 +000 Mukonchi (30km) - lot 30	KODON Construction Limited
47	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U4	SINOHYDRO Zambia Limited



No	Province	District	Contract Name	Contractor
48	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U5	SINOHYDRO Zambia Limited
49	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U6	SINOHYDRO Zambia Limited
50	Central		Serenje to Mpika	Not provided
51	Muchinga		Mpika to Chinsali	Not provided
52	Central	Mkushi	Routine maintenance of TMD roads in central province from T2/D219, Mkushi junction to km37 +000 towards Serenje (37km) - lot 9	TAGENOGHA Enterprises Limited
53	Muchinga	Nakonde	Construction of the Chinsali-Nakonde Road Rehabilitation Project: (North-South Corridor) Lot 2 Isok - Nakonde Road Section (Km103 - km210)	China Railway Seventh Group Co. Limited
54	Muchinga	Chinsali	Chinsali Nakonde Rehabilitation, Lot 1, Chinsali Isoka Volume 1 of 2, 103km (Not opening)	China State Construction Engineering Corporation Limited
55	Muchinga	Nakonde to Mbala Road	Not provided	Not provided
56	Northern	Mbala to Kasama	Not provided	Not provided
57	Northern	Kasama to Luwingu road	Not provided	Not provided
58	Luapula	Kawambwa to Mwansa bombwe	Not provided	Not provided
59	Luapula	Mwansa-bombwe to Mansa	Not provided	Not provided
60	Luapula	Mansa	Routine maintenance of Main and District roads in Luapula Province Lot No. 24, RD93, Km42- Mansa	OTEX Investment Limited



No	Province	District	Contract Name	Contractor
61	Luapula	Mansa	Routine maintenance of Main and District roads in Luapula Province Lot No. 40, M3, Mansa Cathedral - Airport - Mbaso	VINSANJO Investment Limited
62	Luapula	Kawambwa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U15	MESSRS. CHINA JINGXI International Economic and Technical Cooperation Co. Limited
63	Luapula	Kawambwa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U16	MESSRS. CHINA JINGXI International Economic and Technical Cooperation Co. Limited
64	Luapula	Kawambwa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U10-2	MESSRS. CHINA JINGXI International Economic and Technical Cooperation Co. Limited
65	Luapula	Mwansabombwe	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province Mwansabombwe - R70 16km	MESSRS. CHINA JINGXI International Economic and Technical Cooperation Co. Limited
66	Luapula	Samfya	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 10 Luapula Province Samfya Districts - U11	MESSRS. LONGJIAN, Road and Bridge Company Limited
67	Luapula	Samfya	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 10 Luapula Province Samfya Districts -U12	MESSRS. LONGJIAN, Road and Bridge Company Limited
68	Luapula	Samfya	Routine maintenance of Main and District roads in Luapula Province Lot No. 04, D94, - Km 40 Samfya	MABNECK Enterprises Limited
69	Luapula	Milenge	Routine maintenance of Main and District roads in Luapula Province Lot No. 34, D100, km37 - Milenge	CHABU CHIME Investment Limited
70	Luapula	Milenge to Serenje		Not provided

Appendix 4: Terminated Road Projects under Ministry of Local Government and Rural Development

No.	District	Project Name
1	Chipata	Periodic Maintenance of 43.6km of Mchelile Kamlaza Road
2	Chipata	Periodic Maintenance of 27km of Maduchi to Chimubobo Road
3	Chipata	Periodic Maintenance of 32km of Mwami Boarder to Mwami Mission Hospital
4	Chadiza	Periodic Maintenance of Yalumba Road
5	Nyimba	Periodic Maintenance of Chipembe to Utotwe
6	Petauke	Petauke Boma to Chikowa Rural Health Centre
7	Petauke	Matonje to Nyantalo
8	Petauke	Kalasau to Kalonga via Zumaire
9	Chipata	Spot Improvement of 12.3km of Vizenge to Kaleza Road
10	Chipata	Periodic Maintenance of Mushekela-Nyamayao Road
11	Chipata	Periodic Maintenance of Chaola Mberenje Road
12	Chipata	Periodic Maintenance of Chamakanga to Rukuzwe Road
13	Chipata	Periodic Maintenance of Chamasongwe School Road
14	Kasenengwa	Rehabilitation of Chipata to Msoro Road
15	Kasenengwa	Rehabilitation of Chong to Chifumbo via Chinuda to Msoro Road
16	Lumezi	Rehabilitation of Lumamba Turn off via Kasinde to Katube Turn off Road
17	Lumezi	Periodic maintenance of 26 km of Lupampani M12 turnoff to Changu-lube and Swaswa school
18	Lumezi	Periodic maintenance of Chitungu road
19	Lumezi	Periodic maintenance of Ngabu ngabu to Katumba to Katumula turnoff road
20	Lumezi	Periodic maintenance of Chitungulu Road Lot 2
21	Lumezi	Chipika to Mbuzi Road
22	Lumezi	Mwasempangwe M12 Turnoff to Kabulinde via Mlandabantu to Ngabu Ngabu Road
23	Mambwe	Rehabilitation of Chikowa via Ncheka to Katemo School Road
24	Katete	D125(Tikondane)-T4 via Umodzi Road
25	Katete	T6 to D583 (Chinzule School via Mzime Road)
26	Chadiza	Rehabilitation of Taferansoni via Namwela via Kasiya School to Chanida Road
27	Chadiza	Rehabilitation of Musokosela via Kapachi Road
28	Chadiza	Rehabilitation of Katanda to Zemba via Nsadzu Road
29	Chadiza	Kamuchacha to Kazimule Old Stores Road



No.	District	Project Name
30	Chadiza	15km of Chamandala Road
31	Chadiza	Chadiza to Mwangala Road
32	Chadiza	Nunda kabvumbo Loop Road
33	Chasefu	Rehabilitation of Hoya School via Mbenje Egichicken to Musa Road
34	Vubwi	Rehabilitation of Chakota to Chigwe Road
35	Vubwi	Mwami Hospital to Chaoleka Village Road
36	Petauke	Rehabilitation of Minga Kasonde Road
37	Petauke	Rehabilitation of Kamujoma via Manyane Road
38	Sinda	Rehabilitation of Chinzule to Mzime via Kathumba Road
39	Sinda	Rehabilitation of Chimusi Road
40	Sinda	Nthongole to Mung'omba Road
41	Sinda	Kasamba Road
42	Sinda	Rehabilitation of Kalole Petulo via Chataika Turn off Road
43	Sinda	Rehabilitation of Zeweka to Chikalawa Road
44	Lusangazi	Rehabilitation of Mwanyika Road
45	Lusangazi	Rehabilitation of Chibale to Malama Road
46	Nyimba	Rehabilitation of Nyalungwe Road
47	Nyimba	T4 Ndake via Musima Njalazi Road
48	Lundazi	M12-Mwase Road
49	Lundazi	RD109-Mwase Road
50	Lundazi	Mwase to Kaviskeske Road
51	Shiwang'andu	Periodic Maintenance of 45 Km Yosamu Mufolo Road
52	Mpika	Periodic Maintenance of 44 Km Old Nabwalya Road
53	Mpika	Chobela Chilyamba T2 Lufwanya Chilimabankonde Road Lot 1
54	Mpika	Chobela Chilyamba T2 Lufwanya Chilimabankonde Road Lot 2
55	Chama	Periodic Maintenance of 58km Chama Chifunda Road
56	Chama	Spot Improvement of 40km Luwalize-Chibale Road
57	Chama	Periodic Maintenance of 95km Chama-Chikwa Road
58	Chama	Periodic Maintenance of 54km Chikwa to Mphamba
59	Mafinga	Rehabilitation Thendele Wiya Chipakama Mwandiya Road
60	Mafinga	Kaseya Buluma Mwalazi Chakosamoto Mbumbwe Sanga Misazi Lot 3
61	Chinsali	Rehabilitation of Chifuta Munzamanzi Road
62	Chama	Rehabilitation of Chansa Chibale Road
63	Isoka	Rehabilitation of Kateshya Londamaka Chinungu Road



No.	District	Project Name
64	Isoka	Kapililonga Ndande Minikombe Road
65	Isoka	Muyombe Malale Road Lot 3
66	Mpika	Chobela Chilyamba T2 Lufwanya-Chilimankonde Road
67	Mpika	Rehabilitation of Kasenga T-2 Road
68	Chama	Rehabilitation of Musa Chikwa Road
69	Shiwang'andu	Rehabilitation of Chitundu MphandeMasongo Chumbu Road
70	Nakonde	Rehabilitation of Katukaushi Road
71	Chibombo	M20 to Kabangalala to Kabimba School to Kapalu Mission Road
72	Chibombo	Namayani to Mungwi Road
73	Chibombo	CCF Clinic to Kabangalala Road
74	Serenje	Rehabilitation of 84km Serenje to Chisomo Road
75	Serenje	Rehabilitation of 83km of Ndabala Chibale Road in Serenje District of Central Province
76	Serenje	Muzumani to Masese Primary School
77	Serenje	Masese Primary School to Lisuwasi Road
78	Serenje	Off T2-Nambo-Kunda Lumwasha Road
79	Kabwe Rural	Rehabilitation of Bwacha School Muwowo Mpunde Road
80	Kabwe	Kalima Munyama Road
81	Kabwe	Kasavasa Chifukwa Road
82	Ngabwe	Rehabilitation of Mukubwe Ngabwe Road
83	Ngabwe	Nsenga Chishimu Road
84	Chitambo	Rehabilitation of Chansa via Chitambo Mission Hospital to Kasuko Road
85	Chitambo	Chaliro to Chipundu
86	Mumbwa	Rehabilitation of Kaindu Road
87	Mumbwa	Consultancy for the design of 150km Kaindu Road in Mumbwa and various bridges in Easter and Muchinga Province
88	Mumbwa	Nangoma to Muchabi Road
89	Mumbwa	Rehabilitation of Chibuluma Road
90	Chisamba	Rehabilitation of ZNS Kasavasa Hamududu to Chipembi Chaminuka Road
91	Mkushi	Rehabilitation of Kaundula Farm Road
92	Kapiri Mposhi	Lunchu Depot Road- Lot 2
93	Kapiri Mposhi	Kabwale Road
94	Kapiri Mposhi	Nansanga to Lukanga Road Lot 3



No.	District	Project Name
95	Kapiri Mposhi	Mpunde Kato Junction Road
96	Kapiri Mposhi	Ntasa Twafwane Road
97	Kapiri Mposhi	Kaunga Sunguls Road
98	Kapiri Mposhi	Kapandwe Kasalya Road
99	Kapiri Mposhi	Kasalya waya Road
100	Kapiri Mposhi	Masansa Road
101	Kapiri Mposhi	Depot Chankomo Road- Lot 3
102	Kapiri Mposhi	Mangola Lunchu Road
103	Kapiri Mposhi	Chilumba to Nansanga Road- Lot 2
104	Kapiri Mposhi	Kabowa Road
105	Kapiri Mposhi	Kawama Yongwe Road
106	Kapiri Mposhi	Nkole Road
107	Itezhi-tezhi	Basanga to Makunku Road
108	Itezhi-tezhi	Basanga to Mbila Road
109	Luwingu	Rehabilitation of 52km of Mueseekatuta-Sobing Road in luwingu District in Northern Province
110	Mporokoso	Periodic Maintenance of Kamboke-Malunda Chilando Road in Mporokoso District in Northern Province
111	Kaputa	Rehabilitation of 10km of the Luntomfwa-Chonganya Road in Kaputa District of Northern Province
112	Luwingu	Periodic Maintenance of 42km of Mupepa Njoko Road in Luwingu District of Northern Province
113	Luwingu	Njoko-Nyemba Road
114	Luwingu	Chibofwe Kasakalabwe Nkalasasa Fikonkota Road
115	Mbala	Periodic Maintenance of 80km of Mwamba Chisenga Road in Mbala District of Northern Province
116	Kaputa	Periodic Maintenance of 110km Nhoshya Nsama Road in Kaputa District of Northern Province



No.	District	Project Name
117	Mungwi	Periodic Maintenance of Chanda Weyaya via Peleti to Mbesuma Road in Mungwi District of Northern Province
118	Mungwi	Katongo-Chibwe Mabula
119	Mungwi	Henry Kapata M1-Katilungu Road
120	Mungwi	Chonya-Mwamba Mulilo Road
121	Mungwi	Chimba School-Chimbola Village Road
122	Lupososhi	Rehabilitation of Chimbwi Kalaba Ikamonga Road
123	Lupososhi	Chaba Katatu Nshindala Chungu Road
124	Lupososhi	Chibofwe Chilinda Michelo Lundu Lubwa & Chanika Lufubu Chisole Road
125	Lupososhi	Chimbwi Kalaba Ikamonga Road
126	Lupososhi	Lukolongo Chita Bulaya Road
127	Lupososhi	Chambo Nsapila Chibaye Chibusa Road
128	Lupososhi	Lwenge Katangelele Matafwali Chushi Musebobusaka Road
129	Mpulungu	Rehabilitation of Kaongola Musakanya Road
130	Mpulungu	Vyamba-Mululwe Road
131	Mporokoso	Rehabilitation of Chalabesa Mole Road
132	Mporokoso	Chipanta Kasakalabwe Mulubwa Road
133	Senga	Rehabilitation of Moses Menje Mause Road
134	Kasama Central	Rehabilitation of Chilekwa Mwamba Road
135	Kasama Central	Rehabilitation of Lukupa via Chief Mwamba Kalense Road
136	Kasama Lukashya	Rehabilitation of Chumba Musowa Road
137	Kasama	Nkole Mfumu Mulobola-Ntumpa Road
138	Kasama	Bulanda Kabila Road
139	Kasama	Chafwa Munkalala Road
140	Chilubi	Matipa Mubili Road
141	Chilubi	Chaba Mwenge Mpupo Road
142	Chilubi	Mwape Kalungu Mayuka Road
143	Lunte	Chitoshi Nkandabana
144	Lunte	Rehabilitation of Chewa Yohane Road
145	Rufunsa	Rehabilitation of Great East to Munyeta Road
146	Chongwe	Rehabilitation of Kasisi-Kanakantapa Road
147	Chongwe	Silverest-Airport to Chinkuli



No.	District	Project Name
148	Chongwe	Malumina-Lwimba Katoba Road
149	Chongwe	Mwanawasa - Palabana-Njolwe
150	Chongwe	Kanakantapa-Ngwerere
151	Chongwe	Ngwerere Kasenga Road
152	Chongwe	Chongwe Molenje
153	Chilanga	Mapepe cemetery Watchtower Chibulumina Musokotwane Road
154	Chilanga	Tubalange Mini Hospital to Gommora ZNS Road
155	Chilanga	Acacia Bangala Mt Makulu Old Kafue Road
156	Chilanga	Selected Roads Lot 1
157	Chilanga	Sipalo Chrispin Bob ZNS Buchetekelo Mtonga Dolomite Road
158	Rufunsa	T4 to Chipeketi Road
159	Rufunsa	Chaola Road
160	Kafue	C7 Mungu-Chikupi and Chanyanya Road
161	Kafue	Shantumbu Road
162	Kafue	Mungu Kaweza Road
163	Luangwa	Janero Road
164	Luangwa	Kavalamanja R220 Road
165	Kafue	Chippa Road
166	Chirundu	Ibbwemunyama Road
167	Chirundu	M15 Pambazana Road
168	Chirundu	Shangwemu (U9) Road
169	Ndola	Kavu Road
170	Lufwanyama	16km of St Joseph Mukutuma Road - Lot 3
171	Lufwanyama	21.6km of Kambilombilo Road - Lot 4
172	Lufwanyama	24.6km of Chananda Road - Lot
173	Masaiti	Munkulungwe Road
174	Lufwanyama	St Marys Chinemu Road
175	Lufwanyama	Kasanta Road Lot 2
176	Chililabombwe	Fipimpili and Tshinsenda Road
177	Chingola	Luano Fisangwa Muntimpa Ipafu Fipuya Kakalo Roads
178	Masaiti	Mteteshe Road
179	Mpongwe	St Anthony to Mulela Road
180	Mpongwe	Kwilimuna Butikili
181	Mpongwe	38km of Mushiwe Road- Lot 2 in Machiya Area



No.	District	Project Name
182	Mpongwe	Chowa Road
183	Senanga	Rehabilitation of Senanga to Muswema Road
184	Sioma	Sikandi to Kabula
185	Samfya	Periodic Maintenance of 40km of Mano Tuta- Chinweshiba- Chilupula Tuta- Njipa Kafwesa Road in Samfya District
186	Chiipili	Chishinki to Chipili, Milulu to Chikubi Roads
187	Chiipili	Chimbalanga to Kasamba Stream to Chisheta Village Road
188	Mwansab-ombwe	Kashita(D79) to Mumbolo Roads
189	Mwansab-ombwe	Chipepe Bus Stop Kapweshi Road
190	Chembe	Kasomalwela Road
191	Chembe	Chipite Road
192	Kawambwa	Chabanya Farm Block to Buyaka to Habour to M13 Roads
193	Nchelenge	Munkombwe and Mutono to Kalilanshindo to Chilongo
194	Mwense	Chibondo to Chiba to M3
195	Mansa	Kale zone 4 to Kabende School Road
196	Chifunabuli	Nsombwela D96 to Cholansenga D96 Road
197	Chiyengi	Kasembe Mukonta via Mukunku



Appendix 5: Termination of Upgrading Projects under Road Development Agency

No.	Project Name	Contractor	Province
1	Contract No. RDA/CE/029/012: The Upgrading To Bituminous Standard Of Approximately 94km Of The Safwa To Chinsali Road From Km 0+000(M1/D56 Junction) To Km 94 +000 In Muchinga Province Of Zambia-Lot 1	Raubex Construction (Pty) Ltd	Muchinga
2	Contract No. RDA/CE/029/012: The Upgrading to Bituminous Standard of and Re-alignment of Approximately 100 Km of Road from Mulilansolo to Chinsali to Safwa in Muchinga Province of Zambia-Lot 2	Sinohydro (Z) Ltd	Muchinga
3	Contract No. TB/CE/013/12: The Upgrading And Re-Alignment of R231 from Great North Road At Matumbo to Luangwa Bridge (115 Km) Road in Muchinga Province of Zambia- Lot 2	China Jiangxi Corporation for International Economic and Technical Cooperation	Muchinga
4	Contract No. ZPPA/CE/011/12: The Rehabilitation of the Kawambwa-Mushota-Luwingu Road and the Chisembe-Chibote- Chief Chama Road in Luapula Province	Unik Construction Engineering Zambia Limited	Luapula
5	Contract No. RDA/TB/CE/020/012: The Construction Of A Dual Carriageway Between Kitwe And Chingola– 45.5 Km On The Copperbelt Province.	Sinohydro (Z) Ltd	Copperbelt
6	Contract No. ZPPA/CE/023/012: The upgrading of Approximately 105 Km of the Chipata-Vubwi-Chadiza Roads, 5Km of Mpezeni Palace Road, 21 Km of Mwami Hospital Road and 8 Km of Vubwi Township Roads to Bituminous Standard in Eastern Province of Zambia.	China Jiangxi Corporation for International Economic and Technical cooperation	Eastern
7	Contract No. ZPPA/CE/021/12: The upgrading of approximately 90 Km of the Chipata-Chadiza-Katete (Chanida) Roads to Bituminous Standard in the Eastern province of Zambia	China State Construction Engineering Corporation Limited	Eastern
8	Contract No RDA/CE/030/012: The Upgrading of RD149 and D151 from Great East Road at Chongwe District Hospital to Katoba Basic School (48.5 km) Including D150 From Great East Road at CC Farms To RD149 (12.5 Km) Road – Lot 1 in Lusaka	Zhongmei Engineering Group Ltd (Jiangxi Zhongmei)	Lusaka



No.	Project Name	Contractor	Province
9	Contract No.RDA/CE/027/013: The Upgrading To Bituminous Standard of D153 from Great East Road at Moono Police Check Point via Palabana to D151 at Chilyabale Basic School (54 Km) Road in Lusaka Province of Zambia	Chetak Zambia Limited	Lusaka
10	Contact No. RDA/CE/028/012/L1: The Upgrading of the Mpika–Nabwalya - Mfuwe Road (RD 49) Mpika Km 0+000 (T2/RD49 Junction) – Nabwalya Km 118+000 (118km) in Muchinga Province Lot 1	China Henan International Cooperation Group Company	Muchinga
11	Contact No. RDA/CE/028/012: The Upgrading of the Mpika–Nabwalya -Mfuwe Road (RD 49): Lot 2: Nabwalya (Km118+000) – Mfuwe (Km 235+000) {Approximately 117km} in Muchinga Province	Raubex Construction (Pty) Ltd	Muchinga
12	Contract No.RDA/CE/028/013: The Upgrading Of 113 Km Of Samfya to Kasaba Via Lubwe (D096) Road In Luapula Province – Lot 1	BSBK Joint Venture	Luapula
13	Contact No. RDA/CE/25/013: The Upgrading of Road D769 from Mumbwa/Itezhi Tezhi Junction on M009 to Itezhi Tezhi (109 Km) including 2.2 Km of the Inkonkaile to Itezhi Tezhi Boma Access Road in Central Province	Build Trust Construction Limited in Joint Venture with Powerflex (Z) Limited	Central Province
14	Contact No. RDA/CE/52/013: The Upgrading Of Approximately 74 Km of the Monze-Niko (D365) Road to Bituminous Standard in the Southern Province Of Zambia.	Unik Construction Engineering (Z) Ltd/Buildcon Investments Limited Joint Venture	Southern
15	Contact No. RDA/CE/33/013The upgrading of Chiengi Kaputa 78.1 road (U2) and Luchinda 27.6 Km D77 with 10 Km urban Roads in Kaputa Luapula Province	Copperfield Mining Services in JV with China Henan International Cooperation Group Company	Luapula
16	Contact No.RDA/CE/029/013: The Upgrading of the Isoka-Muyombe-Chama-Lundazi Road: Lot-2: D790 (Km 90+000)-M14 (Chire River) -(93 km) In Muchinga Province	China Civil Engineering Construction Corporation (Zambia) Limited	Muchinga



No.	Project Name	Contractor	Province
17	Contract No. RDA/CE/030/013: The Upgrading Of The Isoka- Muyombe-Chama-Lundazi Road: Lot-3: M14 (Chire River)- Chama (D103 Junction) -(90km) In Muchinga Province	AVIC International Project Engineering Company	Muchinga
18	Contact No. RDA/CE/023/013: The Upgrading of 107.5 Km of the Bottom Road (Lot 2-RS19, RS7 & RS5) from Chaboboma via Sinazeze to Sinazongwe in Southern Province Lot 2: Bottom Road (107.5 Km)	Stefanutti Stocks Construction Zambia Limited	Southern
19	Contract No. RDA/CE/SP/005/015: The Upgrading of the Isoka- Muyombe-Chama-Lundazi to Bituminous Standard in Eastern Province of Zambia-Lot 4: Chama (Muyombe Road Junction)- Lundazi (Km 40+000 on D103) – (84 Km)	China Civil Engineering Construction Corporation (Zambia) Limited	Muchinga
20	Contract No. RDA/CE/SP/004/015: The Upgrading of the Isoka- Muyombe-Chama-Lundazi to Bituminous Standard in Eastern Province of Zambia-Lot 5: Lundazi (D103/D109 Junction to Km 40 on D103) and 16 Km of Lusuntha Border Road (D109)-56 Km	Sable Transport Limited	Eastern
21	Contract No. RDA/CE/007/014: Contract for the Upgrading of 78km of Kasaba to Luwingu via Chungu (RD429) Road to Bituminous Standard in Northern Province of Zambia	Mota-Engil Engenharia e Construcao Africa SA	Northern
22	Contract No. RDA/CE/014/14: The Construction and Upgrading to Bituminous Standard and Re-Alignment of approximately 78 Km of RD54 Road from Chief Mukungule's Area (Mwaleshi River)-Lufile Kakoko to Kalalantekwe-Lot 2	Muchinga	China State Construction Engineering Corporation Limited
23	Contract No. RDA/CE/009/14: The Construction and Upgrading of Approximately 80 Km of Mpika via Katibunga through Chief Mukungule (Mwaleshi River) (RD 54) Road in Muchinga Province-Lot 1	Muchinga	Anhui Shui'an Construction Group Corporation Limited
24	Upgrading and Realignment of the Nakonde-Kanyala-Sansamwenje Road (M14/RD69) in Muchinga Province	Muchinga	China State Construction Engineering Corporation Limited
25	Upgrading to Bituminous Standard of 100km of TOO5 Road from Mwinilunga to Jimbe Including 6km of Urban roads in Northwestern Province	Northwestern	Freca Mining Ltd



No.	Project Name	Contractor	Province
26	The Upgrading of Approximately 172km of Nseluka Chozi to Junction D3/D1 (D3) Road, 18km of Chimba to Chitimukulu (RD21) and Mungwi Township Roads – Section 2 From Nseluka (0+000) to Makasa Village (82+000) in Northern Province	China Geo-Engineering Corporation	Northern
27	Contract No.RDA/CE/011/15: The Upgrading of M18 Road to Bituminous Standard between Lufwanyama and Kankolonkolo in Copperbelt and Northwestern Provinces Lot 1- 97.87 Km	Shire Construction Company (Zambia) Limited JV with Buildtrust Limited	Copperbelt & North- Western
28	Contract No. RDA/OIB/CE/007/15: The Design and Construction of approximately 190Km of the Kalabo-Kalongola- Sitoti in Western Province of Zambia	China State Construction Engineering Corporation Limited	Western
29	Upgrading to Bituminous Standard of 57km of the D301 Road from Kasempa to the starting point of the Game Management Area and 5Km of Kasempa Urban Roads in Northwestern & Western Province	China State Construction Engineering Corporation Limited	Northwestern & Western
30	Contract No. RDA/CE/ 010/15: Tender for the upgrading to bituminous standard of 73 Km of the Kasempa to Kaoma (D301) Road from LalafutaBridge to Kaoma Lot # 3 in Northwestern Province	China State Construction Engineering Corporation Limited	Northwestern
31	The Upgrading of Approximately 69.9km of Luwingu to Chaba Lot 1 in Northern Province	Buildcon	Northern
32	Upgrading of the Luwingu to Chilubi Island (D043, RD044 and RD 045) Roads in Northern Province Lot 2	Mota-Engil Engenharia e Construcao Africa SA	Northern
33	Upgrading of the Luwingu to Chilubi Island (D043, RD044 and RD 045) Roads in Northern Province Lot 3	Mota-Engil Engenharia e Construcao Africa SA	Northern
34	The Upgrading of the 122Km of the Kawambwa-Mporokoso (D019) Road in Luapula and Northern Province	China Harbour Engineering Company Ltd	Luapula/Northern



No.	Project Name	Contractor	Province
35	Contract No. RDA/CE/DB/002/019 – Construction and Upgrading Of Approximately 132Km Of The Mpongwe To Machiya Road In Copperbelt And Central Provinces Of Zambia	KPMM Roads and Earthwrks	Central
36	Upgrading of the road between Nchelenge and Chiengi D76/D77 (96Km) with 10Km Urban Roads in Nchelenge Luapula: Contract No. RDA/CE/024/014.	Sinohydro (Z) Ltd	Luapula
37	Contract No. RDA/CE/DB/012/2017: Upgrading of 47KM of Mansa Matanda, 194KM of Chembe via Chipete to Katunta (Security Road) and 17KM of Access Roads to Chembe District And Two Concrete Bridges across Mansa and Luamfumu Rivers in Luapula Province	China Geo Engineering Corporation	Luapula
38	Contract No. RDA/DB/CE/LB/003/17: Upgrading to Bituminous Standard of 292Km of the Kabwe to Picadilly Circus to Mkushi (D200/D207/D214) including the Mpula to Masansa (D208/D209) and 20Km of Mkushi and Kabwe Urban Roads in Central Province	CMC Di Ravenna	Central
39	Contract No. RDA/DB/CE/010/16: Upgrading too Bituminous. Standard of approximately 275Km of D169/D534/RD536 from M09 at Napundwe Junction to M09 at Situmbeko to Chabota and Kasalo to Keezwa in Shibuyunji District, Lusaka Province	Rotary Construction Zambia	Lusaka
40	Contract No: RDA/DB/CE/011/017B: The Design and Upgrading to Dual Carriageway of the Kenneth Kaunda International Airport (KKIA) Road (9KMS), Upgrading to Dual Carriageway of 35KMS section of T004 from Lusaka (Junction to the KKIA) to Chongwe, rehabilitation and widening of remaining section of T004 from Chongwe to the Luangwa Bridge (Approximately 220KMS)	AVIC International Project Engineering Company	Lusaka
41	Contract No. RDA/CE/DB/009/17: Construction of approximalety 321Km of the Lusaka to Ndola Dual Carriageway (T002/T003) including bypass roads in Kabwe and Kapiiri- Mposhi and 45Km of the Luanshya-Fisenge-Masangano Road.	China Jiangxi Corporation for International Economic and Technical Cooperation	Lusaka, Central and Copperbelt



No.	Project Name	Contractor	Province
42	Contract No. RDA/SP/014/013: Consulting Services for the Design and Construction Supervision of the upgrading to Bituminous standard of approximately 235 Km of the Mpika to Nabwalya to Mfuwe Road (RD 49) in Muchinga Province.	Bari Zambia Limited in Association with Beza Consulting Inc. of the USA	Muchinga
43	RDA/SP/040/013: Consulting Services for the Design Review and Construction Supervision of the Upgrading to Bituminous Standard of the Isoka-Muyombe-Chama-Lundazi Road: Lot 2: D790 (Km 90+000)- M14 (Chire River) - (93 Km) and Lot 3: M14 (Chire River)-Chama (D103 Junction) (90 Km) in Muchinga Province	Bari Zambia Limited in Association with Beza Consulting Inc. of the USA	Muchinga
44	Contract for the Consulting Services for the Design and Supervision of the Upgrading and Re-Alignment of R231 from Great North Road at Matumbo to Luangwa Bridge (115 Km) Road in Muchinga Province of Zambia- Lot 2	Zulu Burrow Development Consultants Limited	Muchinga
45	Consultancy Services for the Detailed Engineering Design and Construction Supervision of the Upgrading of the 172Km of Nseluka (D3/M1 Junction) to Kayambi D3/D1 Junction (D3) Road in Northern Province	Leo Consulting Zambia Limited	Northern
46	Supervision of the Construction/Upgrading of approximately 45.5km Dual Carriageway between Kitwe and Chingola in Copperbelt Province	Brian Colquhoun Hugh O'Donnell	Copperbelt
47	Consulting Services for Construction Supervision of Chipata Vubwi and Chipata Chadiza	Ngáandu Consulting Limited	Eastern
48	Contract No.RDA/SP/011/012/L25: Consulting Services For The Techno Economic Study, detailed Engineering design and Tender Document Preparation for the upgrading to bituminous standard of 216 Km of the Leopards Hill Road through chiawa to Chirundu (D152, D481, D482) including. Palabana/Silverest/Chalimbana (D153, D566, D151, RD149, D150 and D156) Roads in Lusaka Province.	Bicon (Z) Limited in Association with Grontmij	Lusaka
49	The Consulting Services for the Techno—Economic Studies, Detailed Engineering Designs and Tender Document Preparation for the Upgrading of 63.2 Km of the Pemba to Mapanza Road (D361) and 74 Km of the Monze to Niko Road (D365) in Southern Province	EastConsult Limited	Southern



No.	Project Name	Contractor	Province
50	Contract No.RDA/SP/039/013: Consultancy services for the Detailed Engineering Design and Tender Document Preparation for the Upgrading to Bituminous Standard of 100 Km of the Katoba to Chirundu Via Chiawa (RD 481 and RD 482) Roads in Lusaka Province	Iliso Consulting Limited	Lusaka
51	Contract No.RDA/SP/013/013: Consultancy Services for the Design and Construction Supervision of the Upgrading to Bituminous Standard of 194 Km of the Safwa to Chinsali to Mulilansolo Road (M1/D56) in Muchinga Province	Bari Zambia Limited in Association with Beza Consulting Inc.	Muchinga
52	Contract No. ZPPA/CE/011/12: The Rehabilitation of the Kawambwa-Mushota-Luwingu Road and the Chisembe-Chibote- Chief Chama Road in Luapula Province	Brian Colquhoun Hugh O'Donnell & Partners	Luapula/Northern
53	Contract No.RDA/CS/LS/007/015: Consultancy Services for the Design and Construction Supervision of the Upgrading of Isoka- Muyombe-Chama-Lundazi Road to Bituminous Standard in Eastern Province: Lot 5-Lundazi (D103/D109 Junction to Km 40 on D103) and 16 Km of the Lusuntha Border Road (D109)) – 56 Km; and Lot 4 – Chama (Muyombe Road Junction) - Lundazi (Km 40+000 on D103) - (84 Km) in Muchinga	Kiran & Musonda Associates Limited	Muchinga/Eastern
54	Contract No. RDA/CS/SSS/003/014: Consulting Services for the Design Review & Construction Supervision of the Upgrading Of 107.5km of the Bottom Road (Lot 2 – Rs19, Rs7 & Rs5) from Chaboboma via Sinazeze to Sinazongwe in South Province	Bicon (Z) Ltd	Southern
55	Consultancy Services for the Design Review and Construction Supervision for the Upgrading of the Nchelenge – Chiengi/Luchinda – Kaputa (D76/U2 – D440, 176km) Road in Luapula Province (Contract No: RDA/CS/ONS/009/015)	SATRA Infrastructure Management Services Pvt Ltd in JV with SATRA Infrastructure (Zambia) Limited	Luapula
56	Upgrading Of Approximately 158 Km (80km -Lot 1 and 78Km -Lot 2) of Mpika via Katibunga through Chief Mukungule (Mwaleshi River) (RD 54) Road in Muchinga Province	Iliso Consulting Limited	Muchinga



No.	Project Name	Contractor	Province
57	RDA/CS/LS/.3/015: Consultancy Services for the Design Review and Construction Supervision for the Upgrading of the Road between Lufwanyama and Kankolonkolo 194.03Km on the Copperbelt and Western Provinces - Lot 1& 2	SARI Consulting (Z) Ltd in Association with Consulting SRL & Hipro Ingeheria	Copperbelt/ Western
58	Consultancy Services for the Design Review of Approximately 321Km of the Lusaka to Ndola Dual Carriageway, (T002/T003) including Bypass Roads in Kabwe and Kapiri-Mposhi and 45Km. of the Luanshya-Fisenge-Masangano Road	Nicholas O'Dwyer	Lusaka, Central and Copperbelt
59	Design Review and Supervision for the Upgrading of the 122 Km Kawambwa - Mporokoso (D019) road in Luapula and Northern Provinces	China Harbour Engineering Co. Limited	Luapula/Northern
60	Contract No. RDA/CS/SSS/001/018: Consulting Services for the Techno-Economic Study, Detailed Engineering Design & Tender Document Preparation for the Upgrading Of 110km of Itzhi- Tezhi Mumbwa Road in Central & Southern Province	Zulu Burrow	Central/Southern
61	Consultancy Services for the Upgrading and Realignment of the Nakonde-Kanyala-Sansamwenje Road (M14/RD69) in Muchinga Province	Brian Colquhoun Hugh O'Donnell & Partners	Muchinga

Appendix 6: Re-Scoped Projects

Name of Project		Distance (km)	Province	Contractor	Supervising Consultant	Initial Contract Sum (ZMW)	Contract Sum Before Re-scoping (ZMW)	Contract Sum After Re-scoping(ZMW)
1	Contract No. TB/CE/013/12: The Upgrading And Re-Alignment of R231 from Great North Road At Matumbo to Luangwa Bridge (115 Km) Road in Muchinga Province of Zambia- Lot 2	115.00	Muchinga	China Jiangxi Corporation for International Economic and Technical Cooperation	Zulu Burrow Development Consultants Limited	399,215,646.07	550,032,655.75	80,371,199.22
2	Contract No. ZPPA/CE/023/012: The upgrading of Approximately 105 Km of the Chipata-Vubwi-Chadiza Roads,5 Km of Mpezeni Palace Road,21 Km of Mwami Hospital Road and 8 Km of Vubwi Township Roads to Bituminous Standard in Eastern Province of Zambia.	139.00	Eastern	China Jiangxi Corporation for International Economic and Technical cooperation	Ng'andu Consulting Limited	529,047,638.38	605,873,676.90	219,313,442.34
3	Contract No. ZPPA/CE/021/12: The upgrading of approximately 90 Km of the Chipata-Chadiza-Katete (Chanida) Roads to Bituminous Standard in the Eastern province of Zambia	140.00	Eastern	China State Construction Engineering Corporation Limited	Ng'andu Consulting Limited	541,263,221.03	856,110,428.14	281,604,319.19
4	Contact No. RDA/CE/028/012/L1: The Upgrading of the Mpika–Nabwalya - Mfuwe Road (RD 49) Mpika Km 0+000 (T2/RD49 Junction) – Nabwalya Km 118+000 (118km) in Muchinga Province Lot 1	117.00	Muchinga	China Henan International Cooperation Group Company	Bari Zambia Limited	429,962,248.76	624,108,935.04	312,628,189.60
5	Contact No. RDA/CE/028/012: The Upgrading of the Mpika–Nabwalya -Mfuwe Road (RD 49): Lot 2: Nabwalya (Km 118+000) – Mfuwe (Km 235+000) {Approximately 117km} in Muchinga Province	118.00	Muchinga	Raubex Construction (Pty) Ltd	Bari Zambia Limited	540,831,954.83	592,192,152.25	458,781,986.97



Name of Project		Distance (km)	Province	Contractor	Supervising Consultant	Initial Contract Sum (ZMW)	Contract Sum Before Re-scoping (ZMW)	Contract Sum After Re-scoping(ZMW)
6	The Upgrading of Approximately 172km of Nseluka Chozi to Junction D3/D1 (D3) Road, 18km of Chimba to Chitimukulu (RD21) and Mungwi Township Roads – Section 2 From Nseluka (0+000) to Makasa Village (82+000) in Northern Province	190.00	Northern	China Geo-Engineering Corporation	Leo Consulting Ltd	631,194,336.31	901,439,922.42	651,799,349.48
7	Upgrading of the road between Nchelenge and Chiengi D76/D77 (96Km) with 10Km Urban Roads in Nchelenge Luapula: Contract No. RDA/CE/024/014.	176.00	Luapula	Sinohydro (Z) Ltd	SATRA Infrastructure Management Services Pvt Ltd in JV with SATRA Infrastructure (Zambia) Limited	474,574,398.10	474,574,398.10	229,415,986.61
8	Solwezi Kipushi	109.00	North-Western	China State Construction Engineering Corporation Limited	TBA/Regional Manager	1,324,795,607.96	1,324,795,607.96	412,435,576.08
9	Petauke Chilongozi Lot 1	118.00	Eastern	China Civil Engineering Construction Corporation (Zambia) Limited	Zulu Burrow Development Consultants Limited	899,877,484.09	899,877,484.09	289,773,984.32
10	Petauke Chilongozi Lot 2	125.00	Eastern	China Railway Seventh Group	Zulu Burrow Development Consultants Limited	686,329,975.06	686,329,975.06	284,233,809.24

Name of Project		Distance (km)	Province	Contractor	Supervising Consultant	Initial Contract Sum (ZMW)	Contract Sum Before Re-scoping (ZMW)	Contract Sum After Re-scoping(ZMW)
11	Contract No. RDA/CE/029/012: The Upgrading To Bituminous Standard Of Approximately 94km Of The Safwa To Chinsali Road From Km 0+000(M1/D56 Junction) To Km 94 +000 In Muchinga Province Of Zambia-Lot 1	94.00	Muchinga	Raubex Construction (Pty) Ltd	Bari Zambia Ltd	264,798,761.04	292,842,689.04	105,141,348.58
12	Contract No. RDA/CE/029/012: The Upgrading to Bituminous Standard of and Re-alignment of Approximately 100 Km of Road from Mulilansolo to Chinsali to Safwa in Muchinga Province of Zambia-Lot 2	100.00	Muchinga	Sinohydro (Z) Ltd	Bari Zambia Ltd	295,906,766.36	352,350,160.89	85,215,877.59
13	Contract No. ZPPA/CE/011/12: The Rehabilitation of the Kawambwa-Mushota-Luwingu Road and the Chisembe-Chibote-Chief Chama Road in Luapula Province	158.00	Luapula	Unik Construction Engineering Zambia Limited	Brian Colquhoun Hugh O'Donnell & Partners	258,773,699.00	799,831,656.68	398,975,592.38
14	Contract Nora/CE/030/012: The Upgrading of RD149 and D151 from Great East Road at Chongwe District Hospital to Katoba Basic School (48.5 km) Including D150 From Great East Road at CC Farms To RD149 (12.5 Km) Road – Lot 1 in Lusaka Province.	61.00	Lusaka	Zhongmei Engineering Group Ltd (Jiangxi Zhongmei)	Bicon (Z) Limited	205,807,776.28	261,632,244.14	78,592,421.80
15	Contract No.RDA/CE/027/013: The Upgrading To Bituminous Standard of D153 from Great East Road at Moono Police Check Point via Palabana to D151 at Chilyabale Basic School (54 Km) Road in Lusaka Province of Zambia	54.00	Lusaka	Chetak Zambia Limited	Bicon (Z) Limited	221,121,397.40	315,439,076.14	61,466,512.02



Name of Project		Distance (km)	Province	Contractor	Supervising Consultant	Initial Contract Sum (ZMW)	Contract Sum Before Re-scoping (ZMW)	Contract Sum After Re-scoping(ZMW)
16	Contract No.RDA/CE/028/013: The Upgrading Of 113 Km Of Samfya to Kasaba Via Lubwe (D096) Road In Luapula Province – Lot 1	113.00	Luapula	BSBK Joint Venture	Regional Manager/TBA	439,062,226.85	578,339,787.94	371,650,970.45
17	Contact No. RDA/CE/25/013: The Upgrading of Road D769 from Mumbwa/Itezhi Tezhi Junction on M009 to Itezhi Tezhi (109 Km) including 2.2 Km of the Inkonkaile to Itezhi Tezhi Boma Access Road in Central Province.	111.20	Central	Build Trust Construction Limited in Joint Venture with Powerflex (Z) Limited	Zulu Burrow Development Consultants Limited	285,886,120.49	430,008,316.18	152,231,146.84
18	Contact No. RDA/CE/52/013: The Upgrading Of Approximately 74 Km of the Monze-Niko (D365) Road to Bituminous Standard in the Southern Province Of Zambia.	74.00	Southern	Unik Construction Engineering (Z) Ltd/Buildcon Investments Limited Joint Venture	EastConsult Ltd	229,969,699.96	339,251,456.41	134,141,409.92
19	Contact No. RDA/CE/33/013The upgrading of Chiengi Kaputa 78.1 road (U2) and Luchinda 27.6 Km D77 with 10 Km urban Roads in Kaputa Luapula Province	115.70	Luapula	Copperfield Mining Services in JV with China Henan International Cooperation Group Company	SATRA Infrastructure Management Services Pvt Ltd in JV with SATRA Infrastructure (Zambia) Limited	500,040,613.78	500,040,613.78	211,745,980.91
20	Contact No.RDA/CE/029/013: The Upgrading of the Isoka-Muyombe-Chama-Lundazi Road: Lot-2: D790 (Km 90+000)-M14 (Chire River) -(93 km) In Muchinga Province	93.00	Muchinga	China Civil Engineering Construction Corporation (Zambia) Limited	Bari Zambia Limited	396,624,924.02	592,648,561.21	262,908,056.81

Name of Project		Distance (km)	Province	Contractor	Supervising Consultant	Initial Contract Sum (ZMW)	Contract Sum Before Re-scoping (ZMW)	Contract Sum After Re-scoping(ZMW)
21	Contract No. RDA/CE/030/013: The Upgrading Of The Isoka-Muyombe-Chama-Lundazi Road: Lot-3: M14 (Chire River)- Chama (D103 Junction) -(90km) In Muchinga Province	90.00	Muchinga	AVIC International Project Engineering Company	Bari (Z) Ltd	332,824,438.95	335,057,573.08	151,042,548.46
22	Contact No. RDA/CE/023/013: The Upgrading of 107.5 Km of the Bottom Road (Lot 2-RS19, RS7 & RS5) from Chaboboma via Sinazeze to Sinazongwe in Southern Province Lot 2: Bottom Road (107.5 Km)	107.50	Southern	Stefanutti Stocks Construction Zambia Limited	Bicon (Z) Limited	592,500,000.00	592,500,000.00	155,073,014.56
23	Contract No.RDA/CE/SP/005/015: The Upgrading of the Isoka-Muyombe-Chama-Lundazi to Bituminous Standard in Eastern Province of Zambia-Lot 4: Chama (Muyombe Road Junction)-Lundazi (Km 40+000 on D103) – (84 Km)	84.00	Eastern	China Civil Engineering Construction Corporation (Zambia) Limited	Kiran Musonda & Associates	585,556,977.51	585,556,977.51	164,604,895.78
24	Contract No.RDA/CE/SP/004/015: The Upgrading of the Isoka-Muyombe-Chama-Lundazi to Bituminous Standard in Eastern Province of Zambia-Lot 5: Lundazi (D103/D109 Junction to Km 40 on D103) and 16 Km of Lusuntha Border Road (D109)-56 Km	56.00	Eastern	Sable Transport Limited	Kiran Musonda & Associates	417,108,471.29	417,108,471.29	132,762,024.95
25	Contract No. RDA/CE/014/14: The Construction and Upgrading to Bituminous Standard and Re-Alignment of approximately 78 Km of RD54 Road from Chief Mukungule's Area (Mwaleshi River)-Lufile Kakoko to Kalalantekwe-Lot 2	78.00	Muchinga	China State Construction Engineering Corporation Limited	Iliso Consulting Limited	236,732,419.09	253,060,892.07	193,817,949.03



Name of Project		Distance (km)	Province	Contractor	Supervising Consultant	Initial Contract Sum (ZMW)	Contract Sum Before Re-scoping (ZMW)	Contract Sum After Re-scoping(ZMW)
26	Contract No. RDA/CE/009/14: The Construction and Upgrading Of Approximately 80 Km of Mpika via Katibunga through Chief Mukungule (Mwaleshi River) (RD 54) Road in Muchinga Province-Lot 1	80.00	Muchinga	Anhui Shui'an Construction Group Corporation Limited	Iliso Consulting Limited	267,727,318.33	267,727,318.33	202,545,948.54
27	Upgrading and Realignment of the Nakonde-Kanyala-Sansamwende Road (M14/RD69) in Muchinga Province	84.00	Muchinga	China State Construction Engineering Corporation Limited	Brian Colquhoun Hugh O'Donnell & Partners	367,218,609.29	367,218,609.29	131,932,428.64
28	Contract No.RDA/CE/011/15: The Upgrading of M18 Road to Bituminous Standard between Lufwanyama and Kankolonkolo in Copperbelt and Northwestern Provinces Lot 1- 97.87 Km	128.00	North - Western	Shire Construction Company (Zambia) Limited JV with Buildtrust Limited	SARI Consulting Limited	432,798,056.63	432,798,056.63	141,417,005.33
29	RDA/CE/002/13: The upgrading to Bituminous Standard of Approximately 65 Km of Road M020 from Landless Corner to Mumbwa (115 Km) in Central Province - Lot 1.	65	Central	Jizan Construction Company Limited	Ngádu Consulting Engineers	Not provided	145,669,029.30	48,640,250.64
30	Upgrading of the Kasama to Mporokoso (D019/D020), (151km), Mporokoso to Kawambwa (D019) 10km and Mporokoso to Kaputa (D037) (10km) Roads in Northern Province	171	Northern	Sable Transport	Bicon Zambia Ltd	421,571,143.68	869,959,288.20	99,093,110.05
31	Upgrading of Approximately 61Km of the 201Km Mbala to Kasaba Bay Road in Northern Province	61	Northern	China Civil Engineering Construction Corporation (Z) Ltd	Regional Manager/TBA	Not provided	798,514,088.60	125,855,235.88
TOTAL						3,209,121,930.54	17,042,890,102.42	6,629,211,572.21

Appendix 7: Outstanding unpaid Interim Payment Certificates (IPCs)

No.	Contractor	Name of Project	Supervising consultant	Value of outstanding IPCs before re-scoping
1	China Jiangxi Corporation for International Economic and Technical Cooperation	Contract No. TB/CE/013/12: The Upgrading And Re-Alignment of R231 from Great North Road At Matumbo to Luangwa Bridge (115 Km) Road in Muchinga Province of Zambia- Lot 2	Zulu Burrow Development Consultants Limited	18,017,504.71
2	China Jiangxi Corporation for International Economic and Technical cooperation	Contract No. ZPPA/CE/023/012: The upgrading of Approximately 105 Km of the Chipata-Vubwi-Chadiza Roads, 5 Km of Mpezeni Palace Road, 21 Km of Mwami Hospital Road and 8 Km of Vubwi Township Roads to Bituminous Standard in Eastern Province of Zambia.	Ng'andu Consulting Limited	55,106,880.97
3	China State Construction Engineering Corporation Limited	Contract No. ZPPA/CE/021/12: The upgrading of approximately 90 Km of the Chipata-Chadiza-Katete (Chanida) Roads to Bituminous Standard in the Eastern province of Zambia	Ng'andu Consulting Limited	145,839,651.98
4	China Henan International Cooperation Group Company	Contact No. RDA/CE/028/012/L1: The Upgrading of the Mpika–Nabwalya - Mfuwe Road (RD 49) Mpika Km 0+000 (T2/RD49 Junction) – Nabwalya Km 118+000 (118km) in Muchinga Province Lot 1	Bari Zambia Limited	105,064,115.43
5	Raubex Construction (Pty) Ltd	Contact No. RDA/CE/028/012: The Upgrading of the Mpika–Nabwalya -Mfuwe Road (RD 49): Lot 2: Nabwalya (Km 118+000) – Mfuwe (Km 235+000) {Approximately 117km} in Muchinga Province	Bari Zambia Limited	81,699,284.27
6	China Geo-Engineering Corporation	The Upgrading of Approximately 172km of Nseluka Chozi to Junction D3/D1 (D3) Road, 18km of Chimba to Chitimukulu (RD21) and Mungwi Township Roads – Section 2 From Nseluka (0+000) to Makasa Village (82+000) in Northern Province	Leo Consulting Ltd	235,056,921.29
7	Sinohydro (Z) Ltd	Upgrading of the road between Nchelenge and Chiengi D76/D77 (96Km) with 10Km Urban Roads in Nchelenge Luapula: Contract No. RDA/CE/024/014.	SATRA Infrastructure Management Services Pvt Ltd in JV with SATRA Infrastructure (Zambia) Limited	161,720,936.52
8	China State Construction Engineering Corporation Limited	Solwezi Kipushi	TBA/Regional Manager	15,985,326.34



No.	Contractor	Name of Project	Supervising consultant	Value of outstanding IPCs before re-scoping
9	China Civil Engineering Construction Corporation (Zambia) Limited	Petauke Chilongozi Lot 1	Zulu Burrow Development Consultants Limited	54,773,216.81
10	China Railway Seventh Group	Petauke Chilongozi Lot 2	Zulu Burrow Development Consultants Limited	86,278,379.28
11	Raubex Construction (Pty) Ltd	Contract No. RDA/CE/029/012: The Upgrading To Bituminous Standard Of Approximately 94km Of The Safwa To Chinsali Road From Km 0+000(M1/D56 Junction) To Km 94 +000 In Muchinga Province Of Zambia-Lot 1	Bari Zambia Ltd	8,309,328.27
12	Sinohydro (Z) Ltd	Contract No. RDA/CE/029/012: The Upgrading to Bituminous Standard of and Re-alignment of Approximately 100 Km of Road from Mulilansolo to Chinsali to Safwa in Muchinga Province of Zambia-Lot 2	Bari Zambia Ltd	82,069,460.10
13	Unik Construction Engineering Zambia Limited	Contract No. ZPPA/CE/011/12: The Rehabilitation of the Kawambwa-Mushota-Luwingu Road and the Chisembe-Chibote-Chief Chama Road in Luapula Province	Brian Colquhoun Hugh O'Donnell & Partners	144,609,097.33
14	Zhongmei Engineering Group Ltd (Jiangxi Zhongmei)	Contract Nora/CE/030/012: The Upgrading of RD149 and D151 from Great East Road at Chongwe District Hospital to Katoba Basic School (48.5 km) Including D150 From Great East Road at CC Farms To RD149 (12.5 Km) Road – Lot 1 in Lusaka Province.	Bicon (Z) Limited	29,918,951.46
15	Chetak Zambia Limited	Contract No.RDA/CE/027/013: The Upgrading To Bituminous Standard of D153 from Great East Road at Moono Police Check Point via Palabana to D151 at Chilyabale Basic School (54 Km) Road in Lusaka Province of Zambia	Bicon (Z) Limited	56,200,362.06
16	BSBK Joint Venture	Contract No.RDA/CE/028/013: The Upgrading Of 113 Km Of Samfya to Kasaba Via Lubwe (D096) Road In Luapula Province – Lot 1	Regional Manager/TBA	-

No.	Contractor	Name of Project	Supervising consultant	Value of outstanding IPCs before re-scoping
17	Build Trust Construction Limited in Joint Venture with Powerflex (Z) Limited	Contact No. RDA/CE/25/013: The Upgrading of Road D769 from Mumbwa/Itezhi Tezhi Junction on M009 to Itezhi Tezhi (109 Km) including 2.2 Km of the Inkonkaile to Itezhi Tezhi	Zulu Burrow Development Consultants Limited	-
18	Unik Construction Engineering (Z) Ltd/ Buildcon Investments Limited Joint Venture	Contact No. RDA/CE/52/013: The Upgrading Of Approximately 74 Km of the Monze-Niko (D365) Road to Bituminous Standard in the Southern Province Of Zambia.	EastConsult Ltd	12,905,533.64
19	Copperfield Mining Services in JV with China Henan International Cooperation Group Company	Contact No. RDA/CE/33/013The upgrading of Chiengi Kaputa 78.1 road (U2) and Luchinda 27.6 Km D77 with 10 Km urban Roads in Kaputa Luapula Province	SATRA Infrastructure Management Services Pvt Ltd in JV with SATRA Infrastructure (Zambia) Limited	284,602,995.06
20	China Civil Engineering Construction Corporation (Zambia) Limited	Contract No.RDA/CE/SP/005/015: The Upgrading of the Isoka-Muyombe-Chama-Lundazi to Bituminous Standard in Eastern Province of Zambia-Lot 4: Chama (Muyombe Road Junction)-Lundazi (Km 40+000 on D103) – (84 Km)	Kiran Musonda & Associates	23,510,353.40
21	AVIC International Project Engineering Company	Contract No. RDA/CE/030/013: The Upgrading Of The Isoka-Muyombe-Chama-Lundazi Road: Lot-3: M14 (Chire River)- Chama (D103 Junction) -(90km) In Muchinga Province	Bari (Z) Ltd	15,042,378.49
22	Stefanutti Stocks Construction Zambia Limited	Contact No. RDA/CE/023/013: The Upgrading of 107.5 Km of the Bottom Road (Lot 2-RS19, RS7 & RS5) from Chaboboma via Sinazeze to Sinazongwe in Southern Province Lot 2: Bottom Road (107.5 Km)	Bicon (Z) Limited	47,438,712.80
23	China Civil Engineering Construction Corporation (Zambia) Limited	Contact No.RDA/CE/029/013: The Upgrading of the Isoka-Muyombe-Chama-Lundazi Road: Lot-2: D790 (Km 90+000)-M14 (Chire River) -(93 km) In Muchinga Province	Bari Zambia Limited	2,060,550.06
24	Sable Transport Limited	Contract No.RDA/CE/SP/004/015: The Upgrading of the Isoka-Muyombe-Chama-Lundazi to Bituminous Standard in Eastern Province of Zambia-Lot 5: Lundazi (D103/D109 Junction to Km 40 on D103) and 16 Km of Lusuntha Border Road (D109)-56 Km	Kiran Musonda & Associates	37,673,281.16



No.	Contractor	Name of Project	Supervising consultant	Value of outstanding IPCs before re-scoping
25	China State Construction Engineering Corporation Limited	Contract No. RDA/CE/014/14: The Construction and Upgrading to Bituminous Standard and Re-Alignment of approximately 78 Km of RD54 Road from Chief Mukungule's Area (Mwaleshi River)-Lufile Kakoko to Kalalantekwe-Lot 2	Iliso Consulting Limited	PROJECT NOT FOUND
26	Anhui Shui'an Construction Group Corporation Limited	Contract No. RDA/CE/009/14: The Construction and Upgrading Of Approximately 80 Km of Mpika via Katibunga through Chief Mukungule (Mwaleshi River) (RD 54) Road in Muchinga Province-Lot 1	Iliso Consulting Limited	20,365,483.86
27	China State Construction Engineering Corporation Limited	Upgrading and Realignment of the Nakonde-Kanyala-Sansamwende Road (M14/RD69) in Muchinga Province	Brian Colquhoun Hugh O'Donnell & Partners	8,889,864.19
28	Shire Construction Company (Zambia) Limited JV with Buildtrust Limited	Contract No.RDA/CE/011/15: The Upgrading of M18 Road to Bituminous Standard between Lufwanyama and Kankolonkolo in Copperbelt and Northwestern Provinces Lot 1- 97.87 Km	SARI Consulting Limited	24,543,009.81
29	Jizan Construction Company Limited	RDA/CE/002/13: The upgrading to Bituminous Standard of Approximately 65 Km of Road M020 from Landless Corner to Mumbwa (115 Km) in Central Province - Lot 1.	Ngandu Consulting Engineers	-
30	Sable Transport	Upgrading of the Kasama to Mporokoso (D019/D020), (151km), Mporokoso to Kawambwa (D019) 10km and Mporokoso to Kaputa (D037) (10km) Roads in Northern Province	Bicon Zambia Ltd	31,019,152.06
31	China Civil Engineering Construction Corporation (Z) Ltd	Upgrading of Approximately 61Km of the 201Km Mbala to Kasaba Bay Road in Northern Province	Regional Manager/TBA	6,532,830.17
TOTAL				1,795,233,561.52

Appendix 8: List of Projects showing Target versus Actual Number of Women Employed.

No.	Province	District	Project Name	Number of women		No. of women (%)
				Target	Actual	
1	Lusaka	Lusaka	The Upgrading to Bituminous Standard of D153 from Great East Road at Moono Police Check Point via Palabana to D151 at Chilyabale Basic School (54 Km) Road in Lusaka Province of Zambia	-	3	Incomplete information provided
2	Lusaka	Lusaka	The Upgrading to Bituminous Standard of Approximately 55Km roads in Chongwe District, Lusaka Province of Zambia	-	14	Incomplete information provided
3	Lusaka	Chongwe	Chongwe Weigh Bridge		2	Incomplete information provided
4	Southern	Livingstone to Sesheke	Livingstone to Sesheke (M10) Road	15	6	40
5	Southern	Monze	Routine maintenance of Main and District roads on the Southern Province Lot No. 9,		2	Incomplete information provided
6	Southern	Choma	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 20,	30	0	0
7	Southern	Choma	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 48,	-	8	Incomplete information provided
8	Southern	Namwala	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 52	15	3	20
9	Southern	Gwembe	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 94,	20	4	20
10	Southern	Gwembe	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 54,	20	4	20
11	Southern	Kalomo	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 3,	30	0	0



No.	Province	District	Project Name	Number of women		No. of women (%)
				Target	Actual	
12	Southern	Kalomo	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 3	20	2	10
13	Eastern	Chipata	WCD Mwami Mchinji - One Stop Border Post (OSBP) - Works package 2	Not provided	Not provided	Incomplete information provided
14	Eastern	Katete	Routine maintenance of Trunk, Main and District roads on the Eastern Province Lot No. 19A, from Katete to Msoro	15	2	13
15	Eastern	Katete	Routine maintenance of Trunk, Main and district roads on the Eastern Province Lot 19A, from Katete to Msoro	20	2	10
16	Eastern	Petauke	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts)	Not provided	Not provided	Incomplete information provided
17	Eastern	Petauke	Routine maintenance of Trunk, Main and District roads on the Eastern Province Lot No. 4, from Petauke to Sinda	24	6	25
18	Eastern	Petauke	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts)	Not provided	Not provided	Incomplete information provided
19	Eastern	Nyimba	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts) - RD418 38KM	40	10	25
20	Central	Chisamba	Routine Maintenance of Trunk, Main and District roads in Central Province from Mwachisompola Chisamba (34km) to Lot 34	40	10	25
21	Central	Chisamba	Routine maintenance of TMD roads in central province from km 30+000 to Chisamba (27) km - lot 55	40	0	0

No.	Province	District	Project Name	Number of women		No. of women (%)
				Target	Actual	
22	Central	Kabwe	Routine maintenance of TMD roads in central province from Kabwe Mine to km30 +000 (30km) - lot 42	55	5	9
23	Central	Kabwe	Routine maintenance of TMD roads in central province from Kabwe to km36 +000 Mukonchi (30km) - lot 30	25	5	20
24	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District)	40	10	25
25	Central	Mkushi	Routine maintenance of TMD roads in central province from T2/D219, Mkushi junction to km37 +000 towards Serenje (37km) - lot 9	40	10	25
26	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U4	Not provided	Not provided	Incomplete information provided
27	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U5	Not provided	Not provided	Incomplete information provided
28	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U6	-	27	Incomplete information provided
29	Muchinga	Nakonde	Construction of the Chinsali-Nakonde Road Rehabilitation Project: (North-South Corridor) Lot 2 Isoka - Nakonde Road Section (Km103 - km210)	-	44	Incomplete information provided
30	Muchinga	Chinsali	Chinsali Nakonde Rehabilitation, Lot 1, Chinsali Isoka Volume 1 of 2, 103km (Not opening)	255	133	52
31	Luapula	Milenge	Routine maintenance of Main and District roads in Luapula Province Lot No. 24, RD93, Km42- Mansa	10	0	0
32	Luapula	Milenge	Routine maintenance of Main and District roads in Luapula Province Lot No. 40, M3, Mansa Cathedral - Airport - Mbaso	14	0	0



No.	Province	District	Project Name	Number of women		No. of women (%)
				Target	Actual	
33	Luapula	Kawambwa	Routine maintenance of Main and District roads in Luapula Province Lot No. 34, D100, km37 - Milenge	11	0	0
34	Luapula	Mwansabombwe	Routine maintenance of Main and District roads in Luapula Province Lot No. 14, D19, - Kawambwa	15	0	0
35	Luapula	Mansa	Routine maintenance of Main and District roads in Luapula Province Lot No. 24, RD93, Km42- Mansa	10	0	0
36	Luapula	Mansa	Routine maintenance of Main and District roads in Luapula Province Lot No. 40, M3, Mansa Cathedral - Airport - Mbaso	14	0	0
37	Luapula	Samfya	Routine maintenance of Main and District roads in Luapula Province Lot No. 04, D94, - Km 40 Samfya	15	0	0
38	Muchinga	Nakonde	Construction of the Chinsali-Nakonde Road Rehabilitation Project: (North-South Corridor) Lot 2 Isoka - Nakonde Road Section (Km103 - km210)	-	27	Incomplete information provided
39	Muchinga	Chinsali	Chinsali Nakonde Rehabilitation, Lot 1, Chinsali Isoka Volume 1 of 2, 103km (Not opening)	-	44	Incomplete information provided
40	Western	Sioma	The Construction/Upgrading of 38 Km of Sioma-Nangweshi Road M10 in the Western Province	-	13	Incomplete information provided
41	Western	Mongu	22.7 km rehabilitation of Mongu Limulunga (D315) and upgrading of Muoyo road to bituminous standard in Western Province	-	3	Incomplete information provided

Appendix 9: Inland Toll Plaza Collections

S/N	Name of Toll Plaza	2020	2021	2022	Total (ZMW)
		ZMW	ZMW	ZMW	
1	Shimabala	72,352,411.11	115,414,164.72	126,546,139.60	314,312,715.43
2	Livingstone	9,077,998.45	Toll gate closed	Toll gate closed	9,077,998.45
3	Kazungula	3,080,678.32	Under rehabilitation	Under rehabilitation	3,080,678.32
4	Kafulafuta	63,551,659.50	110,895,802.50	127,060,509.50	301,507,971.50
5	Manyumbi	74,663,308.10	113,118,714.83	122,211,770.50	309,993,793.43
6	Chilonga	13,827,935.77	40,283,776.00	48,751,594.50	102,863,306.27
7	Kapiri Mposhi	9,672,189.21	Toll gate closed	Toll gate closed	9,672,189.21
8	Mumbwa	10,838,484.93	15,136,192.55	16,182,133.37	42,156,810.85
9	Katuba	96,345,308.64	131,134,162.47	138,983,480.00	366,462,951.11
10	Kateshi	7,284,429.44	14,189,692.06	14,119,594.50	35,593,716.00
11	Kalense	6,092,981.71	10,546,868.48	11,780,768.43	28,420,618.62
12	Chembe	7,208,919.07	18,715,242.52	17,821,819.61	43,745,981.20
13	Chongwe	37,518,587.52	47,338,205.59	46,803,316.19	131,660,109.30
14	Kakonde	3,704,471.25	10,366,011.97	10,119,908.92	24,190,392.14
15	Micheal Chilufya Sata	108,049,387.39	147,996,532.34	160,314,538.17	416,360,457.90
16	Humphrey Mulemba	28,952,612.21	29,819,809.96	30,930,054.50	89,702,476.67
17	Tapo	1,424,127.35	1,571,525.12	1,645,913.07	4,641,565.54
18	Mweeke	5,487,449.31	7,605,896.83	9,118,685.69	22,212,031.83



S/N	Name of Toll Plaza	2020	2021	2022	Total (ZMW)
		ZMW	ZMW	ZMW	
19	Lui	3,048,044.08	4,726,532.31	6,375,183.77	14,149,760.16
20	Daniel Mukombwe	21,236,723.88	32,986,160.50	40,158,281.00	94,381,165.38
21	Enock Kavindele	26,544,793.09	32,600,416.25	33,538,832.12	92,684,041.46
22	Mpongwe	5,864,277.40	5,711,342.50	5,034,776.00	16,610,395.90
23	Ntoposhi	3,765,188.21	8,060,865.49	9,161,566.18	20,987,619.88
24	Wilson Mofya Chakulya	64,212,448.00	87,551,391.60	91,303,745.93	243,067,585.53
25	Mibenge	3,531,138.44	6,776,487.67	6,856,896.80	17,164,522.91
26	Reuben Chitandika Kamanga	5,607,337.33	15,613,494.10	15,188,500.10	36,409,331.53
27	Alexander Grey Zulu	7,273,106.96	22,063,455.16	20,960,114.10	50,296,676.22
28	Kebby Musokotwane	2,641,558.94	26,644,280.25	34,284,267.13	63,570,106.32
29	George Kunda	5,885,766.61	54,474,446.74	61,686,288.00	122,046,501.35
30	Sabina	0	72,880,615.00	89,111,325.23	161,991,940.23
31	Etoll Cards	538,200.00			538,200.00
Toll collections from Toll Plaza's (ZMW)		709,281,522.22	1,184,222,085.53	1,296,050,002.91	3,189,553,610.66



Appendix 10: Status of the Award of Routine Maintenance Contracts Country Wide as at 31st December 2023

Item	Province	No. of Lots Advertised	Awarded	Status
1	Central	59	13	Bids Received. Consideration for award of all other lots on-going
2	Copperbelt	50	0	Bids Received. Consideration for award of all lots on-going
3	Southern	61	0	Bids Received. Consideration for award of all lots on-going
4	Lusaka	83	4	Bids Received. Consideration for award of all other lots on-going
5	Muchinga	33	20	Bids Received. Consideration for award of all other lots on-going
6	Luapula	71	0	Bids Received. Consideration for award of all lots on-going
7	Western	52	10	Bids Received. Consideration for award of all other lots on-going
8	Northern	58	13	Bids Received. Consideration for award of all other lots on-going
Totals		467	60	

Source: RDA data 2023

Appendix 11: Frequency of Periodic Maintenance

No.	Name of road/stretch	Date of construction	Prescribed number of times road needs to be periodically maintained	Number of times road has been periodically maintained	Current condition (Poor, fair, good)
1	Serenje - Mpika	1967	8	2	Fair to Poor
2	Samfya – Serenje	1984	6	1	Fair to Poor
3	Mazabuka - Choma	1984	6	1	Fair
4	Mpika-Kasama	1976	7	1	Fair
5	Mpongwe-Luansobe	2015	1	0	Not provided
6	Chipata - Mfuwe	2011	2	0	Fair to Poor
7	Chongwe - Rufunsa	1969	8	2	Fair
8	Great East from Lusaka CBD to Chongwe	1967	8	2	Fair
9	Sioma- Shangombo	1992	4	2	Poor
10	Kafue – Chirundu	1986	5	3	Fair
11	Mumbwa- Kaoma	1977	6	2	Fair to Poor
12	Kapiri-Mposhi – Mkushi	1969	8	1	Good
13	Lavushimanda – Chinsali	1969	8	2	Fair
14	Mongu – Kalabo	2016	1	0	Good

Source: RDA data 2023

Appendix 12: Results of Physical Inspections

No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
1	Lusaka	Lusaka	The Upgrading to Bituminous Standard of D153 from Great East Road at Moono Police Check Point via Palabana to D151 at Chilyabale Basic School (54 Km) Road in Lusaka Province of Zambia	Chetak Zambia Limited	GRZ	ZMW 221,121,397.40	ZMW 313,172,967.31	Poor	Suspended	The project was re-scoped from bituminous to gravel, the physical progress could be seen due to deterioration and earthworks, road was in poor condition before completion of project due to lack of priorities. There was wastage of resources as purchased equipment was not being used and was deteriorating.
2	Lusaka	Lusaka	The Upgrading to Bituminous Standard of Approximately 55Km roads in Chongwe District, Lusaka Province of Zambia	Luvias Investments Limited	GRZ	ZMW 579,066,336.46	ZMW 908,086,569.07	Fair	Suspended	The project was suspended in January 2022 because it was not in the Annual Work Plan. There may be a waste of public resources due to the closure of this project as funds were applied to purchase raw materials which are still on site. For example, 97 x 200 liters of bitumen were on site and unused as at 30 th March. The project was at 16.8 % completion. It was also reported that the project had over 48 subcontractors who were laid off due to cancellation of the project.
3	Lusaka	Chongwe	Chongwe Weigh Bridge	SCIRROCO Limited	GRZ	ZMW 37,137,129.63	ZMW 46,264,352.17	Under construction	On-going	Project was under construction as at 30 th March 2023 during joint inspections.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
4	Lusaka	Lusaka	Great North Road from Shimabala Toll Gate to Kafue Bridge	Not provided	Not provided	Not provided	Not provided	Fair	Completed	Road rutting in some places, presence of tall grass and road markings had faded in some places.
5	Lusaka	Lusaka	Kafue Shantumbu Road	TEEDOT	Not provided	Not provided	Not provided	Poor	Suspended	The project was re-scoped from bituminous to gravel, the physical progress could not be seen due to deterioration and earthworks, There was wastage of resources as purchased equipment was not being used and was deteriorating.
6	Lusaka	Lusaka	Periodic Maintenance of 51 Km of D162 (Linda – Kafue Estate Road) Including U8 (Chanyanya Road	ACHUKA Investment Limited	GRZ	ZMW 24,795,812.58	ZMW 21,775,908.83	Fair	Terminated	The project was terminated in December 2016 at 97% completion but has not been maintained since.
7	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 -2022Lot 11B	MLGRD Feeder Roads (Luvias)	NRFA	ZMW 7,674,261.30	ZMW 7,674,261.30	Poor	On- going	The road is due for rehabilitation. Project was on-going as at 30th March 2023 during joint inspections.
8	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 - 2022 Lot 16	MLGRD Feeder Roads (STAAM)	NRFA	ZMW6,769,393.15	ZMW6,769,393.15	Fair	On- going	The works were on-going at the time of inspection in March 2023. Works included garbage collection, unblocking of drainages and vegetation control.

No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
9	Lusaka	Lusaka	Performance-based Management and Maintenance of Roads in the City of Lusaka 2020 - 2022 Lot 20	MLGRD Feeder Roads (Tenacity)	NRFA	ZMW4,498,938.20	ZMW4,498,938.20	Fair	On- going	The works were on-going at the time of inspection in March 2023.
10	Copperbelt	Mufulira	Contract for periodic maintenance of feeder roads in Mufulira District of Copperbelt province Feeder Lot 1 – 9.4km Muya West	CHIBE CHINU Investments construction company Limited	GRZ	ZMW65,106,272.55	ZMW65,106,272.55	Fair	Terminated	The contract was terminated at 59.3% works completion. Machinery and material were still on site resulting into wasteful resources and deterioration of equipment.
11	Copperbelt	Ndola	Contract for periodic maintenance of feeder roads in Mufulira District of Copperbelt province – 25km of Creso to Graveyard Road (Ndola)	CECIL CHAMS Limited	GRZ	ZMW33,042,457.00	ZMW33,042,457.00	Fair	Terminated	Feeder road had a poor drainage system which caused water logging.
12	Copperbelt	Ndola	Contract for periodic maintenance of selected feeder roads in Ndola District of Copperbelt Province – 18km of Kavu Road (Ndola)	CECIL CHAMS Limited	GRZ	ZMW35,644,276.31	ZMW35,644,276.31	Fair	Terminated	The bridge was prone to vandalism despite there being security; there were no drainage works and road signs erected.
13	Copperbelt	Masaiti	Rehabilitation of (D315) and upgrading of Muoyo road to bituminous standard 61.8km St. Marys - Chinemu Road- Lot 1 (Masaiti)	KDW Engineering	GRZ	ZMW95,902,918.23	ZMW95,902,918.23	Poor	Terminated	The contract was terminated at 40% completion of works with 7-8kms of layer works. The road had no erected road signs.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
14	Copperbelt	Masaiti	Rehabilitation of (D315) and upgrading of Muoyo road to bituminous standard 61.8km St. Marys - Chinemu Road- Lot 1 (Lufwanyama)	KDW Engineering	GRZ	ZMW95,902,918.23	ZMW95,902,918.23	Poor	Terminated	The contract was terminated at 40% completion of works with 7-8kms of layer works. The road had no erected road signs.
15	Copperbelt	Masaiti	Contract for periodic maintenance of selected feeder roads in Masaiti District of Copperbelt Province - 30 kms Kamifungo Road	VISHA Suppliers Limited	GRZ	ZMW46,520,251.18	ZMW46,520,251.18	Poor	Expired	No road signs were erected and the road had gullies, corrugations and vegetation were not controlled.
16	Western	Sioma	The Construction/ Upgrading of 38 Km of Sioma-Nangweshi Road M10 in the Western Province	China Geo-Engineering	GRZ	ZMW 188,596,968.03	ZMW 188,596,968.03	Fair	Terminated	Provision of road markings, traffic signs and drainages were not done. Additionally, 30kms of the road had not been worked on due to termination of project leaving 8kms worked on.
17	Western	Mongu	22.7 km rehabilitation of Mongu Limulunga (D315) and upgrading of Muoyo road to bituminous standard in Western Province	Avic International Holding Corporation	GRZ	ZMW 362,840,660.00	ZMW 668,853,948.18	Good	On-going	No road signs and drainages constructed at the time of the audit in March 2023.
18	Southern	Kazungula	Kazungula Bridge Project Procurement of OSBP Equipment	Various contractors	GRZ/JICA	ZMW 150,903,864.63	ZMW 150,903,864.63	Good	Completed	As at March 2023 did not have a maintenance team on the ground.

No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road (Poor, good, fair)	Project status (On-going, Completed, terminated, suspended, expired)	Defects noted/comments
						Initial contract sum	Revised contract sum			
19	Southern	Livingstone to Sesheke	Livingstone to Sesheke (M10) Road	Helmet Engineering and Construction Limited	GRZ	ZMW 914,932,572.02	ZMW914,932,572.02	Poor	Lot 1 - completed, Lot 2 - On-going	<p>Works not done on Lot 2</p> <ul style="list-style-type: none"> • Clearing of bush and vegetation • Reshaping of side drains • Sealing of cracks, patching of the potholes, repair of the edge breaks surface with asphalt overlay. This cannot be done as the road is totally gone and need removal and rebuilding. • Bring in new sub-base and base material • Construction of shoulders and lined drainage • Construction of culverts. <p>However, materials for this were purchased and have not been used but are deteriorating.</p> <ul style="list-style-type: none"> • Erection of Road signs • Installing of guard rails
20	Southern	Mazabuka	Rehabilitation of Road T1, section between Chikankata Turn Off to Mazabuka General Hospital (km33.5), Lot 2 (Package 4) - North - South Corridor	China State Construction Engineering Corporation Limited	African Development Bank	ZMW 184,935,938.00	ZMW 219,314,510.13	Good	Completed	All works done and intact.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
21	Southern	Mazabuka	Consultancy services for the design review and construction supervision of the rehabilitation of the Kafue Mazabuka Road (T1) in Southern Province - Lot 2	ETHIO Engineering Plc in joint venture with Advanced Engineering Solutions Limited and in Sub-consultancy with TACT Engineering Group Plc	African Development Bank	USD\$606,710 (USD\$97,073.60 tax) and K2,271,000 (K363,360 tax)	US\$858,815.00 (Taxes US\$137,410.40) and ZMW2,847,000 (Taxes ZMW455,520)	Good	Completed	All works done and intact.
22	Southern	Mazabuka	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 11 Southern Province Mazabuka district U0001	China	Not provided	Not provided	Not provided	Under rehabilitation	On-going	Contract began in July 2023. Grubbing and clearing works mostly. Only 5km of work done
23	Southern	Mazabuka	Mazabuka General Hospital to Magoye	Not provided	Not provided	Not provided	Not provided	Poor	Completed	Road had potholes; corrugations; eaten shoulders; no line markings, alligator cracks and road rutting.

No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road (Poor, good, fair)	Project status (On-going, Completed, terminated, suspended, expired)	Defects noted/comments
						Initial contract sum	Revised contract sum			
24	Southern	Monze	Upgrading of the Monze - Niko (D365) to bituminous standard in Southern province of Zambia	UNIK/ BUILDCON Joint Venture	GRZ	ZMW 229,969,699.96	ZMW339,251,456.41	Fair	Terminated	Only 29.5km out of 71km of the road was done due to inadequate funds; potholes were seen in some areas; no road furniture in certain places; no drainages; longitudinal cracks on the road; and no road signs in certain place.
25	Southern	Monze	Routine maintenance of Main and District roads on the Southern Province Lot No. 9,	GEOMACENI Enterprises	GRZ	ZMW1,053,698.85	ZMW1,053,698.85	Fair	Expired	Road had uneven shoulders, potholes, and no road furniture in some areas.
26	Southern	Choma	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 20,	CHINOWA-CHA Investment Limited	GRZ	ZMW1,352,848.63	ZMW 4,565,052.42	Poor	Expired	The first 2km of the road is completely deteriorated. The first 41km of the road is gravel. Some areas had not been graded and were in bad state while graded areas were in a fair state. ZNS is expanding culverts which will be completed before 31st December 2023.
27	Southern	Choma	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 48,	TUDE Constructions	GRZ	ZMW 1,963,899.30	ZMW 6,626,981.80	Fair	Expired	Road had uneven shoulders and vegetation had been controlled.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road (Poor, good, fair)	Project status (On-going, Completed, terminated, suspended, expired)	Defects noted/comments
						Initial contract sum	Revised contract sum			
28	Southern	Namwala	Routine maintenance of Trunk, Main and District roads in Sothorn Province Lot No. 52 (Niko -Choma)	WISI Contractors	GRZ	ZMW 799,604.59	ZMW 2,698,185.73	Good	Expired	Pothole patching done and vegetation had been controlled.
29	Southern	Gwembe	Routine maintenance of Trunk, Main and District roads in Sothorn Province Lot No. 94, (Hanyimbo to Buyeta)	TACHIMA Enterprise	GRZ	ZMW 1,220,723.27	ZMW 4,119,208.60	Poor	Expired	No road in most places, broken culverts, no guard rails on bridges and rocks on the road. The road is a part of the CRN but has no traffic
30	Southern	Gwembe	Routine maintenance of Trunk, Main and District roads in Sothorn Province Lot No. 54, (Mukunyu Munungwe to Chamwe)	MOONCH Road Contractors and suppliers	GRZ	ZMW1,586,108.16	ZMW 5,352,163.38	Poor	Expired	Bridges have no guard rails, culverts are broken, gullies on the road.
31	Southern	Gwembe	Chiseke to Gwembe	Not provided	Not provided	Not provided	Not provided	Poor	Completed	Road has potholes, eaten shoulders, no road signs and no road markings.
32	Southern	Kalomo	Routine maintenance of Trunk, Main and District roads in Sothorn Province Lot No. 3,	NARITE Trading	GRZ	ZMW 1,693,441.20	ZMW 5,714,347.99	Good	Expired	Lot 1 - 20km - No road markings and road furniture in place due to inadequate funds as NRFA only provides funds for road maintenance.

No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
33	Southern	Kalomo	Routine maintenance of Trunk, Main and District roads in Sothern Province Lot No. 3,	KABU General Dealers	GRZ	ZMW 2,124,251.14	ZMW 7,168,073.05	Good	Expired	Lot 2 - 30km No road markings and road furniture in place due to inadequate funds as NRFA only provides funds for road maintenance.
34	Southern	Zimba	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/ Improvement, Routine and Periodic maintenance works of: Package 12 Southern Province Zimba district U4K 155km authorised 40km	M & N Industrial Merchants	Not provided	Not provided	Not provided	Fair	On-going	Only 40kms has been authorised and 10kms has been handed over to the Local Authorities. However, the contractors had to rectify certain areas of the road before maintenance activities could commence. Road signs and culverts have been installed. Area has critical water shortages hence the delays on the project.
35	Eastern	Chipata	WCD Mwami Mchinji - One Stop Border Post (OSBP) - Works package 2	China State Construction Engineering Corporation Limited	African Development Bank	USD 8,531,152.78	USD9,149,674.93	Fair	Completed	Eroded shoulder edges due to heavy goods vehicles parking on the road edges; road is due for periodic maintenance but funds unavailable and some parts of the roads with faded road signs or marks



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road (Poor, good, fair)	Project status (On-going, Completed, terminated, suspended, expired)	Defects noted/comments
						Initial contract sum	Revised contract sum			
36	Eastern	Chipata	Rehabilitation of the Great East Road (T4) Civil Works - Lot 3 Mtenguleni - Chipata - Mwami Border	MOTA - ENGIL, Engenharia Construção, SA	European Development Fund or European Restaurant	EUR 37,951,146.72	EUR 37,951,146.72	Fair	Completed	There were 15 disintegrated concrete road humps along the stretch with exposed iron bars. Road is due for periodic maintenance.
37	Eastern	Katete	Routine maintenance of Trunk, Main and District roads on the Eastern Province Lot No. 19A, from Katete to Msoro	SHELMET Limited	GRZ	ZMW2,411,352.04	ZMW 2,700,714.28	Poor	Terminated	Road is in a bad condition and there were no routine maintenance contracts at the time of audit as at 31st August 2023 due to termination of contracts.
38	Eastern	Katete	Routine maintenance of Trunk, Main and district roads on the Eastern Province Lot 19A, from Katete to Msoro	FANTIP Enterprises	GRZ	ZMW 2,484,806.57	ZMW 2,782,983.36	Poor	Terminated	Road is in a bad condition and there were no routine maintenance contracts at the time of audit as 31st August 2023 due to termination of contracts.
39	Eastern	Petauke	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts)	MESSRS. CHINA GEO Engineering Corporation Limited	World Bank	ZMW 178,467,322.32	ZMW 179,158,525.33	Good	on-going	Potential wash away of culverts and road signs were stolen on the bridge.

No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road (Poor, good, fair)	Project status (On-going, Completed, terminated, suspended, expired)	Defects noted/comments
						Initial contract sum	Revised contract sum			
40	Eastern	Petauke	Routine maintenance of Trunk, Main and District roads on the Eastern Province Lot No. 4, from Petauke to Sinda	BUTOCHU Enterprise	GRZ	ZMW 3,273,110.51	ZMW 4,105,789.82	Fair	Terminated	Road was constructed in 2017 and no periodic maintenance had taken place. Entire stretch was riddled with alligator cracks and had a high risk of water seepage into cracks which could eventually lead to road failure. The cracks were caused by poor compaction by the contractor. However, the cracks only appeared after the defect liability period completed. Several corrugations were observed on the road due to poor sub-base measuring almost 6-7 meters.
41	Eastern	Nyimba	Rehabilitation of the Great East Road (T4) Civil Works - Lot 1: Luangwa Bridge to Nyimba	MOTA - ENGIL, Engenharia Construção, SA	European Development Fund or European Restaurant	EUR 37,147,271.51	EUR65,925,324.03	Fair	completed	Alligator cracks were observed between Kacholola to Luangwa Bridge. The road was due for periodic maintenance as the road was pre-maturely failing despite loan still being paid. Road rutting was seen in some sections due to heavy goods vehicles.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
42	Eastern	Nyimba	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/ Improvement, Routine and Periodic maintenance works of: Package 3 Eastern Province (Petauke and Nyimba Districts) - RD418 38KM	MESSRS. CHINA GEO Engineering Corporation Limited	World Bank	ZMW 178,467,322.32	ZMW 179,158,525.33	Fair	On-going	Project was ongoing at the time of joint inspections in August 2023. However, it was seen that there was possible wash away of culverts.
43	Central	Chisamba	Routine Maintenance of Trunk, Main and District roads in Central Province from Mwachisompola Chisamba (34km) to Lot 34	Sontus Clearing and Forwarding	NRFA	ZMW 993,439.93	ZMW 1,112,652.73	Fair	Expired	Vegetation was not controlled due to expired contracts; the road had gullies and corrugations.
44	Central	Chisamba	Routine maintenance of TMD roads in central province from km 30+000 to Chisamba (27) km - lot 55	SAHARA Commercial Services Limited	NRFA	ZMW 936,183.40	ZMW 1,048,525.39	Fair	Expired	Vegetation was not controlled due to expired contracts; the road had gullies and corrugations.

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						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
45	Central	Kabwe	Routine maintenance of TMD roads in central province from Kabwe Mine to km30 +000 (30km) - lot 42	AGKAS General Dealers Limited	NRFA	ZMW 1,159,893.06	ZMW 1,299,080.23	Fair	Expired	Vegetation was not controlled in some areas due to expired contracts; road had gullies and corrugations in some areas and was deteriorating due to heavy goods vehicles caused by trucks as it was a mine area.
46	Central	Kabwe	Routine maintenance of TMD roads in central province from Kabwe to km36 +000 Mukonchi (30km) - lot 30	KODON Construction Limited	NRFA	ZMW 1,234,264.94	ZMW 1,382,376.73	Fair	Expired	ZNS was currently maintaining the road as the routine maintenance contracts expired in 2021. Road had corrugations on certain parts.
47	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U4	SINOHYDRO Zambia Limited	World Bank	ZMW 166,164,893.66	ZMW 144,307,941.90	Good	On-going	State of road was good, however few challenges were observed: Theft and vandalism of some road furniture, no line drainages in certain sections of the road, and few corrugations on some parts of the road.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
48	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U5	SINOHYDRO Zambia Limited	World Bank	ZMW 166,164,893.66	ZMW 144,307,941.90	Good	On-going	State of road was good, however few challenges were observed: Theft and vandalism of some road furniture, no line drainages in certain sections of the road, and few corrugations on some parts of the road.
49	Central	Mkushi	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 1 Central Province (Mkushi District) - U6	SINOHYDRO Zambia Limited	World Bank	ZMW 166,164,893.66	ZMW 144,307,941.90	Good	On-going	State of road was good, however few challenges were observed: Theft and vandalism of some road furniture, no line drainages in certain sections of the road, and few corrugations on some parts of the road.
50	Central		Serenje to Mpika	Not provided	Not provided	Not provided	Not provided	Poor	Completed	Road had the following: Potholes; rutting; gullies, corrugations, eaten shoulders, and no line markings on certain sections of the roads.

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						Initial contract sum	Revised contract sum			
51	Muchinga		Mpika to Chinsali	Not provided	Not provided	Not provided	Not provided	Poor	Completed	Road had the following: Potholes; rutting; gullies, corrugations, eaten shoulders, and no line markings on certain sections of the roads.
52	Central	Mkushi	Routine maintenance of TMD roads in central province from T2/D219, Mkushi junction to km37 +000 towards Serenje (37km) - lot 9	TAGENOGHA Enterprises Limited	NRFA	ZMW 1,422,727.81	ZMW 1,593,455.15	Good	Completed	Road had eaten shoulders and no periodic maintenance had taken place since construction of the road in 2000. In addition, few corrugations were also observed.
53	Muchinga	Nakonde	Construction of the Chinsali-Nakonde Road Rehabilitation Project: (North-South Corridor) Lot 2 Isok - Nakonde Road Section (Km103 - km210)	China Railway Seventh Group Co. Limited	African Development Bank	ZMW 713,866,768.53	ZMW 713,866,768.53	Good	On-going	Physical progress was at 93.19% with few works left such as road markings, road furniture, shoulders and drainages in some areas. Contract has delayed due to funds. Challenges experienced included: Diesel spillage on road which reacts with asphalt hence the road possibly deteriorating earlier than its anticipated design life of 15 to 20 years.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road (Poor, good, fair)	Project status (On-going, Completed, terminated, suspended, expired)	Defects noted/comments
						Initial contract sum	Revised contract sum			
54	Muchinga	Chinsali	Chinsali Nakonde Rehabilitation, Lot 1, Chinsali Isoka Volume 1 of 2, 103km (Not opening)	China State Construction Engineering Corporation Limited	African Development Bank	ZMW 785,773,382.49	ZMW 785,773,382.49	Good	on-going	Physical progress is at 89% with few works left such as road markings, road furniture, shoulders and drainages in some areas. Contract has delayed due to funds. Challenges experienced included: Diesel spillage on road which reacts with asphalt hence the road possibly deteriorating earlier than its anticipated design life of 15 to 20 years.
55	Muchinga	Nakonde to Mbala Road	Not provided	Not provided	Not provided	Not provided	Not provided	Fair	Completed	Road has potholes and presence of grass off carriageway.
56	Northern	Mbala to Kasama	Not provided	Not provided	Not provided	Not provided	Not provided	Fair	Completed	Road has eroded shoulders, potholes, gullies, no line markings in most parts of the road, no road signs, and vegetation has not been controlled with presence of grass off carriageway.
57	Northern	Kasama to Luwingu road	Not provided	Not provided	Not provided	Not provided	Not provided	Fair	Completed	Road has potholes, eaten shoulders on some sections, alligator cracks and gullies.
58	Luapula	Kawambwa to Mwansabombwe	Not provided	Not provided	Not provided	Not provided	Not provided	Fair	Completed	Road has potholes, eaten shoulders, gullies, no road markings and road signs on certain sections of the road. Road is due for periodic maintenance.

No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
59	Luapula	Mwans-abombwe to Mansa	Not provided	Not provided	Not provided	Not provided	Not provided	Fair	Completed	Road has potholes, eaten shoulders, gullies, no road markings and road signs. Road is due for periodic maintenance.
60	Luapula	Mansa	Routine maintenance of Main and District roads in Luapula Province Lot No. 24, RD93, Km42- Mansa	OTEX Investment Limited	NRFA	ZMW 2,063,255.04	ZMW 2,588,147.12	Fair	Completed	RDA is currently maintaining the road by patching potholes. Defects noted included: corrugations, eaten shoulders, alligator cracks and no line markings in certain sections of the road. Road is due for periodic maintenance.
61	Luapula	Mansa	Routine maintenance of Main and District roads in Luapula Province Lot No. 40, M3, Mansa Cathedral - Airport - Mbaso	VINSANJO Investment Limited	NRFA	ZMW 1,744,929.59	ZMW 2,188,839.69	Fair	Expired	RDA is currently carrying out routine maintenance specifically vegetation control. Road has eaten shoulders in some sections, potholes and faded line markings. Road is due for periodic maintenance.
62	Luapula	Kawamb-wa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/ Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U15	MESSRS. CHINA JINGXI International Economic and Technical Cooperation Co. Limited	World Bank	ZMW 89,553,356.38	ZMW 91,558,690.38	Good	On-going	Rehabilitation phase completed (2020 to 2022) and project is currently on the first year of maintenance which will be completed in 2024.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
63	Luapula	Kawamb-wa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/ Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U16	MESSRS. CHINA JINGXI International Economic and Technical Cooperation Co. Limited	World Bank	ZMW 89,553,356.38	ZMW 91,558,690.38	Good	On-going	Rehabilitation phase completed (2020 to 2022) and project is currently on the first year of maintenance which will be completed in 2024.
64	Luapula	Kawamb-wa	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/ Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province - U10-2	MESSRS. CHINA JINGXI International Economic and Technical Cooperation Co. Limited	World Bank	ZMW 89,553,356.38	ZMW 91,558,690.38	Good	On-going	Rehabilitation phase completed (2020 to 2022) and project is currently on the first year of maintenance which will be completed in 2024.

No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
65	Luapula	Mwansabombwe	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 9 Luapula Province Mwansabombwe - R70 16km	MESSRS. CHINA JINGXI International Economic and Technical Cooperation Co. Limited	World Bank	ZMW 89,553,356.38	ZMW 91,558,690.38	Good	On-going	Road well graveled and all road signs and culverts are intact.
66	Luapula	Samfya	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/Improvement, Routine and Periodic maintenance works of: Package 10 Luapula Province Samfya Districts - U11	MESSRS. LONGJIAN, Road and Bridge Company Limited	World Bank	ZMW 81,585,918.62	ZMW 85,759,181.12	Under rehabilitation	On-going	Road well graveled and all road signs and culverts are intact. Project currently under maintenance.



No	Province	District	Contract Name	Contractor	Financier	Contract sum		State of road	Project status	Defects noted/comments
						Initial contract sum	Revised contract sum	(Poor, good, fair)	(On-going, Completed, terminated, suspended, expired)	
67	Luapula	Samfya	Output and Performance Based Road Contract (OPRC) Asset Management Contract for Design, Rehabilitation/ Improvement, Routine and Periodic maintenance works of: Package 10 Luapula Province Samfya Districts -U12	MESSRS. LONGJIAN, Road and Bridge Company Limited	World Bank	ZMW 81,585,918.62	ZMW 85,759,181.12	Under rehabilitation	On-going	Project commenced in August 2023; hence the project is still under rehabilitation. Physical progress is at 80%. Project has delayed due to compensation issues with the locals.
68	Luapula	Samfya	Routine maintenance of Main and District roads in Luapula Province Lot No. 04, D94, - Km 40 Samfya	MABNECK Enterprises Limited	NRFA	ZMW 2,706,840.01	ZMW3,395,460.12	Fair	Completed	Road has eaten shoulders, faded line markings and no road signs on certain sections. RDA currently carrying out pothole patching.
69	Luapula	Milenge	Routine maintenance of Main and District roads in Luapula Province Lot No. 34, D100, km37 - Milenge	CHABU CHIME Investment Limited	NRFA	ZMW 1,817,730	ZMW 2,280,160.52	Fair	Expired	The road is unpaved despite it being a district road. It has corrugations, no road signs, gullies and vegetation was not controlled on certain sections.
70	Luapula	Milenge to Serenje		Not provided	Not provided	Not provided	Not provided	Fair	Completed	Road has potholes, gullies, eaten shoulders, no road signs and line markings on some sections of the road. However, RDA is currently carrying out pothole patching.



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