ENVIRONMENTAL IMPACTS ASSESSMENTT FOR THE PROPOSED DODOMA CITY OUTER RING ROAD (110.2KM) TO BITUMEN STANDARDS- DODOMA REGION

ACKNOWLEDGEMENT

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ABBREVIATIONS AND ACRONYMS

AAS	Atomic Absorption Spectrophotometer
AIDS	Acquired Immune Deficiency Syndrome
A.M.S.L	Above Mean Sea Level
BATNEEC	Best Available Technology Not Entailing Excess Cost
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CRB	Contractors Registration Board
CTC	Care and Treatment Clinic
CoI	Corridor of Impact
DoE	Division of Environment
DUWASA	Dodoma Water Supply and Sanitation Authority
EAMGRS	Environmental Assessment and Management Guidelines for Road Sector
EIA	Environmental Impacts Assessment
EIS	Environmental Impacts Statement
EMA	Environmental Management Act
EMP	Environmental Management Plan
ERB	Engineering Registration Board
ESIA	Environmental and Social Impacts Assessment
ESMP	Environmental and Social Management Plan
GoT	Government of the United Republic of Tanzania
HBC	Home Based Care
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
MoWTC	Ministry of Works,Transport and Communication
NACP	National AIDS Control Programme
NEMC	National Environment Management Council
NGO	Non-Governmental Organization
NSGRP	National Strategy for Growth and Reduction of Poverty
OP	Operational Policy
PLHAS	People Living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
PMO-RALG	Prime Minister's Office, Regional Administration and Local Government
PO-RALG	President’s Office, Regional Administration and Local Government
RoW	Right of Way
SACCOS	Credit Co-operative Societies
SIA	Social Impacts Assessment
STD	Sexually Transmitted Diseases
STI	Sexual Transmitted Infections
TAC	Technical Advisory Committee
TACAIDS	Tanzania Commission for Aids
TANESCO	Tanzania Elictric Supply Company Ltd
TANROADS	Tanzania National Roads Agency
TTCL	Tanzania Telecommunucation Company Ltd

ToR	Terms of Reference
ULGSP	Urban Local Government Strengthening Project
VCT	Voluntary Counselling Treatment
WB	World Bank
WHO-GPA	World Health Organization Global Programme on AIDS

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EXECUTIVE SUMMARY

ENVIRONMENTAL IMPACTS ASSESSMENT FOR THE PROPOSED DODOMA CITY OUTER RING ROAD (108KM) TO BITUMEN STANDARDS- DODOMA REGION

Proponent: The United Republic of Tanzania, Ministry of Works, Transport & Communication through Tanzania National Roads Agency (TANROADS).

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INTRODUCTION

The Government of the United Republic of Tanzania through the Tanzania National Roads Agency (TANROADS) has set aside funds to carry out Feasibility Study, Environmental and Social Impact Assessment (ESIA), Detailed Engineering Designs of preparation of Tender documents for the Dodoma City Outer Ring road (110.2km) to bitumen standard. The Dodoma City outer ring road is a new road, which is expected to bypass the Dodoma town crossing all four Trunk roads at Ihumwa, Veyula, Nala and Matumbulu for Dar es Salaam Road, Arusha Road, Singida Road and Iringa Road respectively.

When the ring road is completed, it shall allow traffic not destined for Dodoma town to bypass the town along a number of high-speed freeways in a quick and easy fashion. it is expected that heavy vehicles entering the Dodoma town from the four main trunk roads will be diverted into the ring road either to bypass Dodoma completely or to transfer to another radial route to suite their eventual destination and in doing so avoid the town center. There will also be transfer of traffic to the ring road from the traffic that currently uses a network of roads within the town.

The contract to prepare engineering designs, Environmental Impact Assessment and Social Impact Assessment (EIA) and tender documents has been awarded to Crown-TECH-Consult Ltd who commissioned the preparation of EIA to Dr.Rubhera RAM Mato (Registered EIA Expert) to conduct the EIA Study. The Environmental Impact Assessment has been conducted in accordance with the requirements of the Environment Management Act No.20 of 2004 and Environmental Impact Assessment and Audit Regulations (2005).

PROJECT DESCRIPTION

The project road starts at Veyula settlement located along the Dodoma –Kondoa trunk road traverses south east towards Ihumwa settlement located along Dodoma-Morogoro trunk road. From Ihumwa the project road traverses towards south to the Matumbulu Settlement along Dodoma- Iringa trunk road then it precedes North West to Nala

settlement located along Dodoma –Singida trunk road before it completes the ring at Veyula.

In broad terms, improvement will involve a construction of new road. The rehabilitation and/or replacement of existing drainage structures and the construction of new, additional drainage structures are also important features of the proposed works. Pertinent features of the road design include:

Pertinent features of the road design include:

- The width of the bitumen carriageway will be 6.5m
- The width of the (paved) shoulders will be 1.5m
- A road reserve corridor of 75m
- At the 4 major junctions a reserve of 150m on both side of the road will be maintained
- Cross-drainage structures, intersections and ancillary road works
- The road will have 20-year design life

POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

Important laws that have relevance to road development in respect of environmental management include;

- Environmental Management Act No. 20 of (2004), Cap. 191
- The Land Act No. 4 of 1999 and the Village Land Act No. 5 of (1999)
- The Water Resources Management Act No. 11 of 2009
- The Water Supply and Sanitation Act No. 12 of 2009
- The Road Act, 2007
- The Urban Planning Act (2007)
- Land Use Planning Act (2007)
- Occupation Health Safety (2003)
- Local Government Acts No.7 & 8 of 1982
- National Land Use Planning Commission Act 3/84
- Explosives Act, 56/63
- Regional and District Act No 9, 1997
- Mining Act (1998)
- The Land Acquisition Act 1967
- Employment and Labour Relations Act No. 6 0f 2004
- Engineers Registration Act and its Amendments 1997 and 2007
- The Contractors Registration Act (1997)
- The HIV and AIDS (Prevention and Control) Act of 2008

PROJECT ENVIRONMENT

The climate of Dodoma is semi-arid, characterized by a marked seasonal rainfall distribution with a long dry and short wet seasons falling through December to April each year. In 2011 the total rainfall was 643.1mm while in 2012 it was 605.1mm. However, the calculated total annual rainfall ranges between 550-600mm per year.

The general trend of average temperature varies from 20^0C in July to 30^0C in November each year. The highest temperature is 31.4^0C while the lowest is 14.5^0C. Due to the semi-arid nature of Dodoma City dry wind is a common feature with increasing wind speed in July to November. It can be concluded that wind speed is usually high in dry season compared to wet season.

The terrain of proposed road is generally flat with a few rolling sections mostly covered by Miombo woodlands and farming activities dominated by sunflower, grapes, maize and millet. The road is mainly a new route which passes through a virgin land. Based on a field investigation and soil classifications, the laboratory test results for Grading and Atterberg's limits, it shows most part of the proposed road has sub grade soils with characteristic ranging from Silty or Clayey Gravel and Sand, Silty Soils and Clayey soils.

Geology of the area is characterized by intrusive Basement Complex rocks, mainly *granites*. The granites outcrop in scattered inselbergs, mainly in Dodoma Hills south of Dodoma and in the Chenene mountains in the north. The granitic rocks are believed to be of late *Precambrian age* but their exact age, mode of emplacement and distribution in depth are so far unknown.

Due to semi-arid nature of Dodoma Municipality, there is no surface water body within or near the proposed project road. There are small streams which are usually dry throughout the year, except during thunderstorms when they collect most of the runoff from the hills and foot slopes and store this water in the sandy stream beds or drain it into the swamps where it evaporates or feeds groundwater reservoirs.

Groundwater is abundant in almost all the villages along the project road. This is evidenced by the fact that shallow wells are one of the sources of domestic water supply for all the villages along the project.

Natural vegetation along the project site is almost uniform and it is mainly *Acacia-Commiphora* deciduous bushland. This vegetation type is a representative of Somali-Masai *Acacia-Commiphora* deciduous bushland found it Tanzania. It is being characterized by an assemblage of small trees and bushes growing on rocky soil with scattered emergent trees of *Adansonia digitata* (Boabab). Common trees found in this vegetation includes; *Commiphora spp, Acacia senegalensis, Euphorbia tirucalli,E. candelabrum, Delonix elata* and succulents species of *Opuntia vulgaris,Cissus quadrangularis, Adenia volkensii* as well as *Adenium obesum*.

PROJECT STAKEHOLDERS AND INVOLVEMENT

The main stakeholders include

- Regional secretariat and District commissioner;
- Dodoma Municipal Council
- Utility Companies (TANESCO, TTCL and DUWASA);
- Institutions near the project area (Ministry of Works, Transport and Communication, TANESCO, TTCL, DUWASA, JKT (Makutopora), JWTZ Ihumwa, UDOM, St. John University, and Tanzania Civil Aviation Authority)

- Ward and Mtaa leaders where the proposed project road pass

The following issues were raised by stakeholders;

i. Expropriation of community property and human resettlements. Stakeholders insist on fair compensation.
ii. The risk of disease intensifications, especially HIV/AIDS – they project would bring affected people or vice versa
iii. Land degradation from borrow pits and quarries sites (including their future as water catchment pans)
iv. The project should align with the new master plan which is in preparation.
v. Source of labour force – are the local people going to be maximally absorbed in the project? Will they really participate in the construction?

POTENTIAL SIGNIFICANT ENVIRONMENTAL AND SOCIAL IMPACTS

The development of highways, regional and rural roads, and other transportation systems cause a wide range of environmental and social impacts on a number of receptors. The impacts are of both positive and negative nature. The significant environmental and social impacts identified include;

Positive impacts;

- Job creation and increased income
- Improved Transport and economy in Dodoma suburbs
- Decongestion of Dodoma main Roads
- Reduced Vehicle operation costs
- Increase road accidents

Negative impacts;

- Increased spread of HIV/AIDS and other diseases
- Loss of vegetation and natural habitat;
- Increased water and soil pollution;
- Soil erosion;
- Noise, vibration and air pollution;
- Safety and health risks
- Interference to local hydrology;
- Increased natural resources exploitation rates;
- In-migration /influx of people from other areas;
- Land expropriation and relocation/ resettlement

MITIGATION MEASURES AND ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

The options to minimize or prevent the identified adverse social and environmental impacts as well as a monitoring plan have been suggested in this report and are contained in the ESMP. Many of them are based on good engineering practices. The ESMP describes the implementation schedule of the proposed mitigation measures as well as planning for long-term monitoring activities. It defines roles and responsibility of different actors of the

plan. The Approach environmental and social costs amount to TShs 319,000,000 (Excluding the costs that will appear in then (BOQ) and resettlement exercise. The estimated annual costs for carrying out the proposed environmental and social motoring programme amounts to TSH 105,000,000.

COST BENEFIT ANALYSIS

The following alternatives have been analyzed:

Alternative	Description of Alternative
Base Alternative	Without project or Do minimum.
(Alternative 1)	The project road retains status quo and gets minimal maintenance.
Alternative 2	Construct a Bypass Ring Road (2-lanes) AC standard
Alternative 3	Construct a Bypass Ring Road (4-lanes) AC standard
Alternative 4	Construct a Southern Bypass Half-Ring Road (2-lanes) AC standard

The result of the study concluded that construction of the Dodoma Outer ring road to AC standard is economically viable, with positive NPV and IRR greater than the test discount rate of 12%. Two options (2-lane and 4-lane roads) are both economically viable, but the 2-lane option has higher NPV and IRR values than the 4-lane option. The DBST option is therefore recommended as the most preferred option. On the other hand, the volume/capacity considerations show that the 2-lane option is likely to get traffic jams before its economic life of 20 years while the 4-lane option is not likely to develop traffic jams during its economic life. Based on the economic viability, it is recommended that the government should continue with project preparation and implementation activities.

DECOMMISSIONING

Decommissioning is not anticipated in the foreseeable future. However, if this will happen, may entail change of use (functional changes) or demolition triggered by change of land use.

1.0 INTRODUCTION

1.1 Project Background

TANROADS, which was established in 2000 by the Executive Agencies Act 30 of 1997, is responsible for the day to day management of trunk and regional roads network in Tanzania. Its primary function includes the maintenance and development of the road network to support the economic and social development of Tanzania. TANROADS is a semi-autonomous Government Executive Agency under the Ministry of Works, Transport and Communication.

The Government of the United Republic of Tanzania through the Tanzania National Roads Agency (TANROADS) has set aside funds to carry out Feasibility Study, Environmental and Social Impact Assessment (ESIA), Detailed Engineering Designs of preparation of Tender documents for the Dodoma City Outer Ring road (110.2km) to bitumen standard.

The Dodoma City outer ring road is a new road, which is expected to bypass the Dodoma town crossing all four Trunk roads at Ihumwa, Veyula, Nala and Matumbulu for Dar es Salaam Road, Arusha Road, Singida Road and Iringa Road respectively.

As per regulations major road development projects fall under category I projects (First Schedule of the EIA and Audit Regulations, 2005), which require a mandatory full EIA study. Therefore, this project falls under Category I and therefore, requires full ESIA study.

The Environmental Impact Assessment has been conducted in accordance with the requirements of the Environment Management Act No.20 of 2004 and Environmental Impact Assessment and Audit Regulations (2005). The Regulations give mandate to NEMC to oversee the EIA process, which culminates with an award of the EIA Certificate by the Ministry responsible for Environment. The EIA Certificate is among the prerequisite approvals required before the project takes off. This project will need this approval before it is implemented.

The contract to prepare engineering designs, Environmental Impact Assessment and Social Impact Assessment (EIA) and tender documents has been awarded to Crown TECH-Consult Ltd who commissioned the preparation of EIA to Dr. Rubhera RAM Mato (Registered EIA Expert) to conduct the EIA Study. This study was conducted between August and November 2017.

1.2 Project Development Objectives and Rationale

1.2.1 Project Objectives

The road aims to improve connectivity and decongest the traffic flow on the existing major arterials between the outer suburbs of Dodoma Municipality.

1.2.2 Project Rationale

When the ring road is completed, it shall allow traffic not destined for Dodoma town to bypass the town along a number of high-speed freeways in a quick and easy fashion. It is expected that heavy vehicles entering the Dodoma town from the four main trunk roads will be diverted into the ring road either to bypass Dodoma completely or to transfer to another radial route to suite their eventual destination and in doing so avoid the town center. There will also be transfer of traffic to the ring road from the traffic that currently uses a network of roads within the town.

1.3 Objectives of this ESIA Study

The objective of EIA is to assess the environmental and social impacts of the outer ring road project in Dodoma City and recommend mitigation measures to address the negative and positive impacts. Specifically, this ESIA study foresee all environmental, social and economic effects of the proposed project design before the project come into the actual implementation. The study therefore has addressed the social, economic, and environmental issues associated with the project and provided relevant mitigation plan to prevent or minimize adverse impacts and enhance the positive ones.

1.4 Rationale of the ESIA

To ensure that no segment of the population is adversely affected and the physical cultural resources are given the due attention, this ESIA study was carried out to identify constraints, risks and mitigation measures on the project affected communities. The ESIA provides input to the feasibility study and design proposals of the investments. The ESIA findings and recommendations contained in this report will be incorporated in the overall project design, specifically assist in the development of mitigation and enhancement measures of the identified risks, opportunities and impacts.

1.5 Scope of Work

The scope of this work is outlined in the ToR (Appendix I) and includes;

- To identify, predict, evaluate and mitigate the significant environmental impacts (positive and negative)
- To identify key social issues relevant to the project objectives, and specify the project's social development outcomes
- To predict and assess in quantitative terms as far as possible, the impacts from changes brought about by the project on the baseline environmental conditions.
- To establish the mitigation measures that are necessary to avoid, minimize or offset predicted adverse impacts and, where appropriate incorporate these into Environmental and Social Management Plan (ESMP)
- To identify stakeholders who are directly affected and carry out stakeholder analysis to determine their role in achieving social development outcomes.
- To inform, consult and carry out dialogues with stakeholders on matters regarding project design alternatives, implementation of environmental and social mitigation measures and to provide recommendations on project design that may require adjustments in project design.

- To develop monitoring and evaluation mechanism to assess effectiveness of mitigation measures including, resettlement outcomes during and after project completion.

1.6 Approach

1.6.1. Effective Guidelines

This EIA was conducted in accordance with the EIA and Audit Regulations (2005). Other important legal provisions providing guidance on environmental issues pertaining to road sector such as the Road Act (2007), Environmental Code of Practice for Road works (2008), and Environmental Assessment and management Guidelines in the Road Sector (2004) have been used in the undertaking Environmental Impact Assessment.

1.6.2. Study Team

Crown TECH-Consult Ltd composed a team to undertake the ESIA study. Two small teams were formed to undertake environmental and social components of the study. Both teams were led by Registered Experts; an environmentalist and sociologist respectively. The names of the experts have been provided in page i of this report.

In order to properly address the environmental issues, a team of experts participated in undertaking the EIA Study. The experts were Environmentalist, Environmental Engineer, Highway Engineer and a Sociologist. The team approached the study by conducting Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA). The two assessments (SIA and EIA) was then merged to produce one EIA report. Both teams were led by registered Experts; an environmentalist and sociologist respectively. The names of the experts have been provided in page i of this report.

1.7 Methodology

1.7.1 Desk Study-Documents Review

This entails a detailed study of relevant literatures pertaining to the project area and proposed design. To mention a few the following documents were reviewed;

- Project Inception Report
- Preliminary design report (Including Hydrology study, construction materials study and economic study)
- Dodoma Regional Socio-Economic Profile (2015)
- Dodoma City Socio-Economic Profile (2016)
- All policies and legislations relevant to this project

1.7.2 Stakeholders Consultations

Most of stakeholders were identified during scoping exercise (September 2017) while a few were identified during detailed ESIA study. The following levels of institutions were

consulted not only to gather environmental and social concerns about the project but also to inform stakeholders about the intended plans to construct the road;

- Regional secretariat and District commissioner;
- Dodoma Municipal Council
- Utility Companies (TANESCO, TTCL and DUWASA);
- Institutions near the project area;
- Ward and Mtaa leaders where the proposed project road pass
- Communities where the proposed project road pass

The concerns of each group have been summarized in chapter 5 and the list of stakeholders consulted is attached as appendix II. Methodology on how each group was consulted is provided in the subsequent sections;

1.7.2.1 Courtesy call to Regional and District Commissioner's Offices

The courtesy visits helped to the team to introduce themselves to regional and district security chairman and establish the right contacts in the project area, which in turn facilitated the study at the community level. The visits provided an opportunity to learn and share salient information about the proposed project with the authorities at the district and regional level. In addition, the team obtained important socio-economic secondary data about the project area.

1.7.2.2 Consultation with Municipal Council Officers

Both teams conducted interviews with heads of departments which are relevant to this project. The officers consulted included;

- Municipal Director
- Municipal Environmental Officer
- Municipal Natural Resources Officer
- Municipal Engineer (TARULA)
- Municipal Land officer
- Municipal Architect
- Municipal Community development officer

1.7.2.3 Consultation with Utility Companies

The preliminary design has showed that there are sections in which power lines and water supply pipes shall be affected by the project and therefore needs to be relocated. TANESCO regional Manager and DUWASA technical managers were therefore consulted. The aim of consulting them was to introduce the project so that they are aware of the proposed project and to gain experience on the procedure to relocate the infrastructure (power lines and water pipes) which are within the proposed RoW of the project. One to one discussion was the method used to gather information.

1.7.2.4 Consultation with Institutions located near the project area

There are institutions which shall be affected by the fact that they are located either near the project area or the proposed project road passes within the institutions. Interviews and one to one discussions were the method that was used during consultation. Table 1.1 below shows the list of institutions consulted and the reason for their consultation.

Table 1.1: Institutions Consulted by virtual of their location

SN	Institution	Remarks
1	JWTZ (9111G Ihumwa)	The proposed road passes near the military camp
2	University of Dodoma	Proposed road passes within UDOM
3	Tanzania Railways Limited	Propose road crosses railway at Ihumwa and Nala
4	Dodoma Mining Office	There are individuals with PMLs at Nala and Bihawana
5	St. John University of Tanzania	Proposed road crosses their land with 286ha
6	Ministry of Communication, Transport, and Works	Project road passes near Inland (dry) Port at Ihumwa
7	Tanzania Airport Authority-Dodoma	New Airport located at Msalato is near the proposed road
8	JKT Head Quarters	JKT Makutopora Camp located at Vehyula is near the project road
9	834 KJ Makutopora	JKT Makutopora Camp located at Vehyula is near the project road

(Source: socio-economic survey, 2017)

1.7.2.5 Separate Meetings with Mtaa and Ward Leaders

Brief meetings were held with local leaders including ward and mtaa officials. Leaders from 8 wards (Nala, Nghong'onha, Zuzu, Ihumwa, Nzuguni, Matumbulu, Mbabala and Makutopora) and 18 villages/mtaa were consulted. Discussions focused on existing socio-economic situation in the area and the need to identify clusters of people likely to be adversely affected by the project. The discussions provided an opportunity to introduce the project to the community leaders and identify key informers. The meetings were also intended to encourage community consultative approach, thus fostering a community participatory approach right from initial stages of the proposed project. The social study team had earlier met the leaders of the major settlements along the proposed road, during the scoping exercise. These leaders were informed about the project and initial contacts were established, including telephone numbers and other address exchanges. The questionnaire was provided to mtaa and ward executive officers to fill in the relevant secondary data available in the mtaa and ward.

1.7.2.6 Public consultations

In the study area, the team conducted a number of consultation meetings with key the general public. The public meetings were attended by all villagers including women, youth, old people and even children. Whoever was available in the village/mtaa was allowed to attend. Table 1.2 below shows the list of wards, villages and the members of communities (in numbers) that participated in the public meetings. The minutes of the meetings are attached as appendix III.

Table 1.2: Public Meetings attendance

Ward	Sub ward	Attendance
Nala	• Segu Chini • Segu Juu • Segu Bwawani • Chioni	77
Nghong'onha	• Nghong'onha • Mapinduzi A	201
Zuzu	• Chididimo • Sokoine	130
Ihumwa	• Chang'ombe • Ihumwa • Chilwana	200
Nzuguni	• Kitelela • Mahomanyika	241
Matumbulu	• Matumbulu	90
Mbabala	• Bihawana	117
Makutupora	• Sekondari • Sokoine • Makutupora	155

(Source: socio-economic survey, 2017)

1.7.2.7 Informal discussions

Informal discussions were held with key members of the community such as old people; influential persons; women/youth group leaders; and community-based resource persons.

1.7.3 Household questionnaire

Recruited and trained enumerators administered a total of 280 household questionnaires from 8 wards; (35 questionnaires for each ward) along the project area. to capture relevant baseline data from the project impacted communities in the project areas using well designed questionnaires. Both quantitative data and qualitative information were obtained through this tool which enriched the Impact Assessment report. The analysis of the questionnaire survey is presented in chapter 4.

1.7.4 Observations

Interviews and documentation methods were supplemented by observation to observe various features located along the proposed road within the Right of Way (RoW) of 75m from the centre of the proposed road to both sides and 150m at the four major junctions. Observed features within the corridor of impact were documented or recorded. These included topography, biological features (flora and fauna), and houses, various properties like crops, trees, and availability of infrastructure/utilities.

1.7.5 Environmental Impact Assessment

1.7.5.1 Impact Identification and Evaluation

The project construction cause a wide range of environmental and social impacts on a number of receptors. The ESIA identify these impacts for the purposes of mitigating the adverse ones or enhancing the benefits. Impact *identification* is a process designed to ensure that all potentially significant impacts are identified and taken into account in the EIA process. A number of 'tools' are available to assist in impact identification. The simplest, and most frequently used, are *checklists* of impacts, although *matrices*, *network diagrams* and *map overlays* are also commonly used. In this EIA *a matrix* were used.

The matrix consists of a horizontal list of development activities against a vertical list of environmental factors. Thus it identifies impacts by methodically checking each development activity against each environmental consideration to ascertain whether an impact is likely to occur.

Taking a step further, the ranking in all phases (mobilization, construction and demobilization/decommissioning) signified the magnitude of each and combined phases. As a result the more the score illustrated the severity the impact the road project or section has. The following factors were used to ascertain the significance of the impacts;

Table 1.3: Factors that were considered to ascertain significance of impacts

General	Ecological	Socila

• Magnitude
• Extent
• Non-conformity with environmental standards
• Level of public concern
• Social impacts resulting from environmental change
• Scientific and professional evidence concerning:
  ○ resource loss/ecological damage
  ○ negative social impacts
  ○ foreclosure of land and
	• Reduction in species diversity
	• Habitat loss, degradation or fragmentation
	• Affecting threatened, rare and endangered species
	• Impairment of ecological functions
		• Displacement of people
		• Human health and safety
		• Decline in important local resource
		• Loss/gain of valued area
		• Disruption of community livelihoods
		• Demands on services and infrastructure
		• Public concern
		• Political concern

resource use options • Environmental loss and deterioration • Probability and acceptability of risk • Environmental sensitivity		

The above factors were used to create six criteria which were used to determine the significance of the impacts in the Matrix these include;

- **Spatial Scale-** The spatial dimension encompasses the geographical spread of the impacts regardless of whether they are short term or long term. Table 1.1 describes the ratings used in the simple matrix as far as spatial scale is concerned.

Table 1.4: Spatial Rating

International (I)	Trans-boundary
National (N)	Within country
Regional (R)	Within Region
Local (L)	On and adjacent to site

(**Source:** UNEP EIA Manuals, 2002)

- **Temporal Scale-** Temporal boundaries refer to the lifespan of impacts. Table 1.5 describes the ratings used in the Simple Matrix.

Table 1.5: Temporal Rating

Short-Term (ST)	During construction
Medium-Term (MT)	Life of project
Long –Term (LT)	Residual impacts beyond life of project

(**Source:** UNEP EIA Manuals, 2002)

- **Reversibility of the impact-** Every impact was checked if its effect can be reversed or not. Letter R was used to denote reversible impacts while IR was used to denote Irreversible impacts.

- **Cumulative Impacts-** These are Impacts that cause changes to the environment that are caused by an action in combination with other past, present and future human actions. Table 1.6 show types of cummulative impacts;

Table 1.6: Types and Characteristics of Cummulative Impacts

Type	Characteristic	Example
Time crowding	Frequent and repetitive effects	Forest harvesting exceeds rate of re-growth
Time lags	Delayed effects	Bioaccumulation of mercury
Space crowding	High spatial density of effects	Numerous small mining enterprises on river
Cross-boundary	Effects occur away from the source	Atmospheric pollution and acid rain
Fragmentation	Change in landscape pattern	Fragmentation of habitat by agriculture
Compounding effects	Effects arising from a multiple sources or pathways	Synergistic effect of POPS in humans and rivers
Indirect effects	Secondary effects	Forest areas opened up as a result of new highway
Triggers and thresholds	Fundamental changes in system functioning	Climate change

(**Source:** UNEP EIA Manuals, 2002)

- **Residual Impacts-** These are long term impacts which go beyond the lifetime of the project in other words Residual impacts refer to those environmental effects predicted to remain after the application of mitigation suggested by the ESIA i.e. they are non-mitigable.

- **Timing-** During which phase of the construction is the impact likely to occur. The phases included Mobilization, Construction, Demobilization and Operation.

1.7.5.2 Identifying Mitigation and Management Options

The options for dealing with identified and predicted impacts were considered after comprehensive evaluation. This enabled the study team to analyze proposed mitigation measures. A wide range of measures have been proposed to prevent, reduce, remedy or compensate for each of the adverse impacts evaluated as being significant. Analysis of the implications of adopting different alternatives was done to assist in clear decision-making.

1.8 Report Structure

This report is divided into Twelve (12) chapters:

i. **Chapter one** contains the introduction on the background information of the proposed project, its development objectives, rationale and the proposed project implementation arrangements.

ii. **Chapter two** contains the project description, in which there is a description of the location and relevant components of the project and their activities.
iii. **Chapter three** illustrates policy, legal and administrative framework, which are the relevant to Tanzania's environmental policies and legislation applicable to construction projects.
iv. **Chapter four** has the baseline information relevant to environmental characteristics, which gives details concerning the Bio-physical environment and socio-economic environment at the project area.
v. **Chapter five** express the consultation exercise at the project area detailing the list of stakeholders consulted and the issues raised.
vi. **Chapter six** describes the positive and negative environmental impact of the project that is likely to be generated from the different phases (the planning and designing, construction, operation and maintenance and the demobilization phases).
vii. **Chapter seven** gives the mitigation measure for the potential negative impact of the project.
viii. **Chapter eight** presents the Environmental and Social Management Plan (ESMP).
ix. **Chapter nine** presents the Environmental Monitoring Plan that contains the proposed institutions to carry out the monitoring activities, the monitoring indicators, time frame and the proposed budget for monitoring.
x. **Chapter ten** gives the cost benefit analysis of the project.
xi. **Chapter eleven** provides the decommissioning plan for the proposed project however the decommissioning is not anticipated in the foreseeable future.
xii. **Chapter twelve** gives the summary and conclusions of the study.

The appendices, containing some key primary information collected during the study are attached at the end of this report. Generally, the report structure flows in conformity with that specified in the EIA and Audit Regulations of 2005 for Conducting ESIA.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The Dodoma Region lies in the heart of Tanzania in the eastern-central part of the country. The region, which is primarily semi-arid, covers an area of 41,311 square kilometres (15,950 sq mi). The region is bordered by the Manyara Region to the north, the Singida Region to the west, the Iringa Region to the south, and the Morogoro Region to the southeast.

Figure 2.1: Map of Tanzania showing the Project Region

Dodoma Municipal is one of the seven districts of the Dodoma Region of Tanzania. It is bordered to the west by Bahi District and to the east by Chamwino District. Its administrative seat is the city of Dodoma. It lies between Latitudes 6.00^{o} and 6.30^{o} south, and Longitude 35.30^{o} and 36.02^{o} East. It is 456 kms to Dar es Salaam and 426 kms to Arusha.

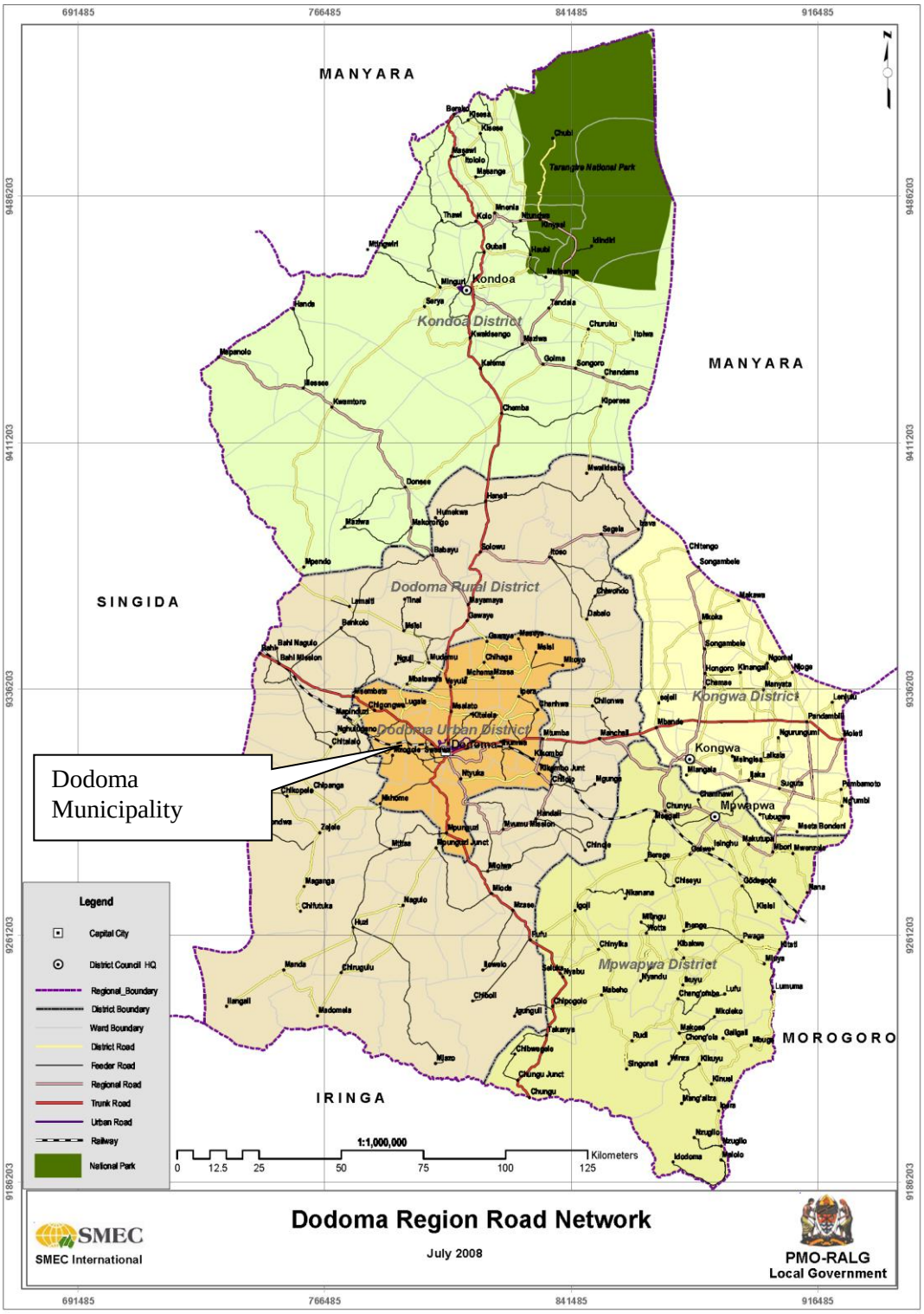

Figure 2.2: Dodoma Road Network Map showing Dodoma Municipality

The project road starts at Veyula settlement located along the Dodoma –Kondoa trunk road traverses south east towards Ihumwa settlement located along Dodoma-Morogoro trunk road. From Ihumwa the project road traverses towards south to the Matumbulu Settlement along Dodoma- Iringa trunk road then it precedes North West to Nala settlement located along Dodoma –Singida trunk road before it completes the ring at Veyula (Figure 2.3).

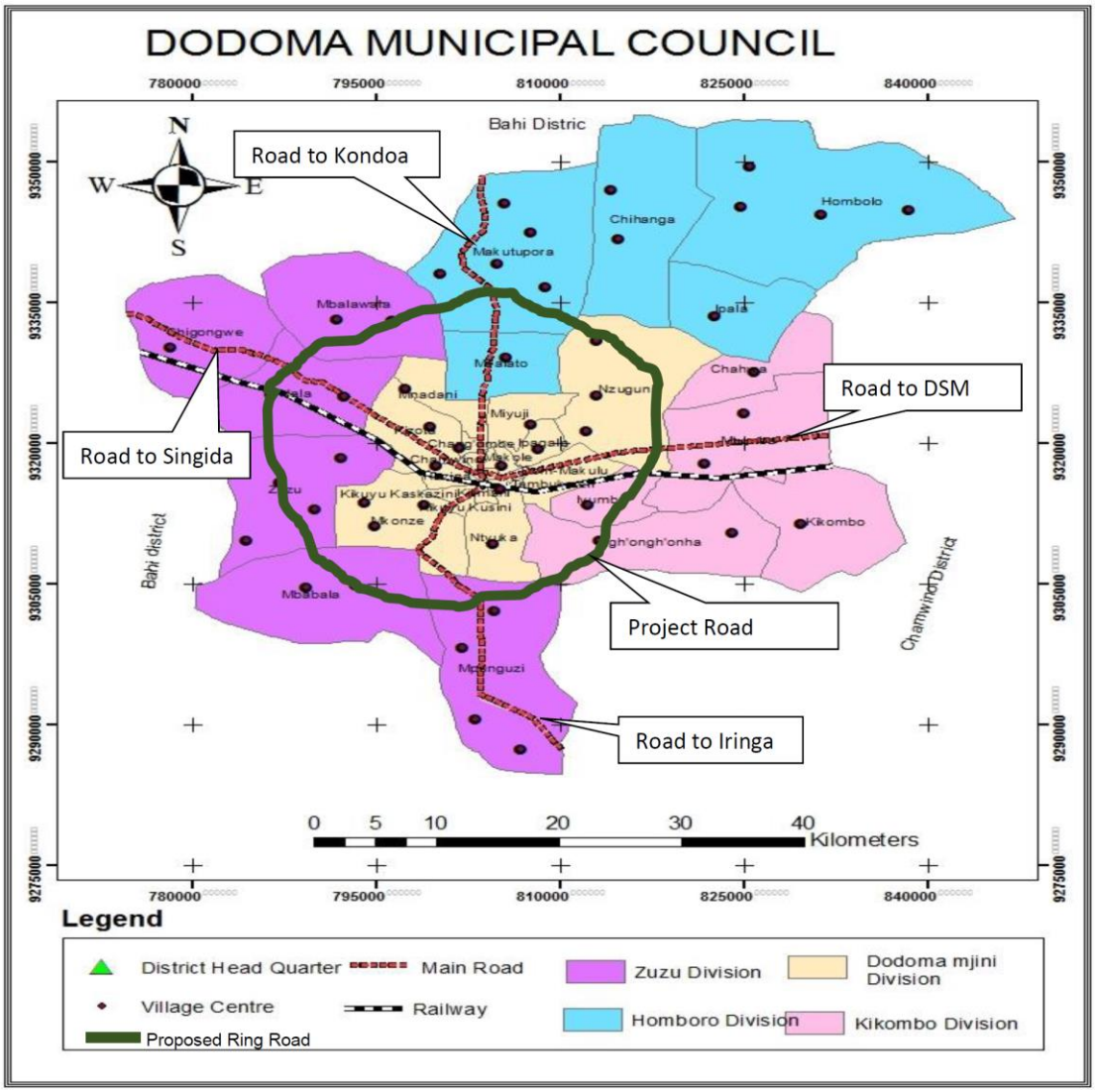

Figure 2.3: Map Dodoma City showing the project road

2.2 Project Design

This EIA study runs parallel with the preliminary design work. In broad terms, improvement will involve a construction of new road. The rehabilitation and/or replacement of existing drainage structures and the construction of new, additional drainage structures are also important features of the proposed works. Pertinent features of the road design include:

Pertinent features of the road design include:

- The width of the bitumen carriageway will be 6.5m
- The width of the (paved) shoulders will be 1.5m
- A road reserve corridor of 75m
- At the 4 major junctions a reserve of 150m on both side of the road will be maintained
- Cross-drainage structures, intersections and ancillary road works
- The road will have 20-year design life

The design speed of the road will be adjusted as necessary through villages and areas with a high concentration of people and animals. The following approved standards (Table 2.1) by the Ministry of Works Transport & Communication –(MoWTC) shall be adopted and adhered to:

Table 2.1: Design Standards to be followed

1.	Geometric design	MoW Road Geometric Design Manual of 2011, Code of practice for Geometric Design (Draft) published by SATTC –TU, 1998
2.	Pavement and Materials	MoW Pavement and Materials Design Manual, 1999
3.	Specifications	MoW Standard Specifications for Road Works
4.	Testing Procedure	MoW Central Materials Laboratory testing Manual
5.	Structures	British Standards BS 5400
6.	Hydrology and Hydraulics	TRRL East African Flood Model
7.	Surveying	Land Survey and Mapping Standards of Tanzania (Land Surveying Regulations CAP 390)

2.3 Project Activities

2.3.1 Mobilization or pre-construction phase

Activities

This phase entails mobilization of labour force, equipment and construction of offices/campsites as well as acquisition of various permits as required by the law. Other activities during this phase include Topographical Survey, Geo-technical Investigation, Soils and Construction Materials Investigation, Land acquisition (If any), material storage and material preparation, Identification sources of material including and source of water.

Duration

The duration of this phase will be four (4) months.

Types and Sources of Project requirements

Types and sources of project requirements during the pre-construction phase are shown in Table 2.2:

Table 2.2: Types and sources of project requirements during the pre-construction phase

Requirements	Type	Source Name	Quantity
Raw Materials	Gravel	Mlima kobe, Msalato, Mapinduzi, Nanenane, Vikonje, Mahomanyika, Matumbulu, Chobuluma and	82,000 cum

Requirements	Type	Source Name	Quantity
		Chiwondo	
	Hard Stone	Mdemu Hills, Vikonje, Matumbulu, Chigongwe	13,000 cum
	Sand	Muungano, Mtumba, Matumbulu/Bomba and Segu	4,000 cum
	Water	DUWASA Borehole	12,000 Lt
	Cement	Dar es Salaam	9,000 tones
	Reinforcement bars	Dar es Salaam	950 tones
	Timber	Local vendords in Dodoma	35,00 m
Energy	Electricity	TANESCO (National Grid)/ Generators	45,000 Kwh
	Fuel	Local vending stations	180,000 Lt
Manpower	Skilled	Contractor	20
	Unskilled	Local People along the road	80
Equipments	Dump Truck	• Contractor	4
	Graders	• Contractor	2
	Dozer	• Contractor	2
	Water Boozers	• Contractor	1
	Vibrators	• Contractor	1
	Excavator	• Contractor	4

Source: Consultant's Evaluation

Transportation

Materials (fine and course aggregates) from quarries will be transported by trucks to the construction site. Water will be moved by water boozers. Other materials like cement, timber and reinforcement bars will be transported by lorries to the construction site.

Storage

Some of the materials from borrow pits will be used directly after delivery and as such no piling up is expected. Aggregates shall be stockpiled near the crusher while sand shall be used direct at the construction site. Cement and reinforcement bars will be stored in special storage rooms. Timber will directly be used at the required areas and consequently there will be no stockpiling of timber at the campsite. Fuel/oils will be stored in drums at bunded areas.

Types, Amounts and treatment/disposal of Wastes

Types, amounts and treatment/disposal of wastes during the pre-construction phase are shown in Table 2.3:

Table 2.3: Types, amounts and treatment/disposal of wastes during the pre-construction phase

Waste	Types	Amount	Treatment/ Disposal
Solid Waste (Degradable)	Garbage: Food remains, cardboards and papers	10kg/day (based on generation rate of 0.2kg/day/ person and 50 workers)	Collected in a large skip bucket at the site office then to be composted and used as manure for the gardens at the camp site
Solid Waste (Non-Degradable)	Scrap metals and plastics	2-3kg per day	Sold to Recyclers
	Tins and glasses	1-3kg per day	Taken to the Sanitary landfill at Chidaya
Liquid waste	Sewage	1.6 m^3 (Based on 50 people, 40l/capita/day water consumption and 80% becomes wastewater)	Septic tank – Soakaway system at the site office
	Oils and greases	20-30Litres	Shall be collected by NEMC certified waste collector for reuse/ disposal

Source: Consultant's Evaluation

2.3.2 Construction phase

Activities

The major construction activities include;

- Extraction and transportation of materials (gravel, sand, hard stones, aggregates, water and bitumen)
- Clearing the Corridor of Impact (CoI).
- Construction of drainage structures
- Formation of the road embankment, establishment of sub-base and base, road surfacing
- Construction of bus bays
- Installation of road furniture
- Pedestrian Crossings, Speed Humps and Rumble Strips shall be provided in all built up areas, near schools and trading centres
- The landscaping of areas covered by the project road and establishment of vegetation for functional and aesthetic purposes on cut and fill slopes

- The final finishing and cleaning up of the road after construction, treating of old road and temporary diversions.

Duration

The duration of this phase will be two (2) years.

Types and Sources of Project requirements

Types, amounts and sources of project requirements during the construction phase are shown in Table 2.4:

Table 2.4: Types and sources of project requirements during the construction phase

Requirements	Type	Source Name	Quantity
Raw Materials	Gravel	Mlima kobe, Msalato, Mapinduzi, Nanenane, Vikonje, Mahomanyika, Matumbulu, Chobuluma and Chiwondo	4,900,000 cum
	Hard Stone	Mdemu Hills, Vikonje, Matumbulu, Chigongwe	313,000 cum
	Sand	Muungano, Mtumba, Matumbulu/Bomba and Segu	24,000 cum
	Water	DUWASA Borehole	320,000 Lt
	Bitumen	South Africa/Saudi Arabia	65,000 tones
	Cement	Dar es Salaam	69,000 tones
	Reinforcement bars	Dar es Salaam	2,500 tones
Manpower	Skilled	• Contractor	50
	Unskilled	• Local People	250
Energy	Electricity	TANESCO (National Grid)/ Generators	145,000 Kwh
	Fuel	Local vending stations	2,600,000 Lt
Equipment	Dozer	• Contractor	8
	Grader	• Contractor	10
	Pay Loader	• Contractor	10
	Excavator	• Contractor	10
	Vibro Roller	• Contractor	12
	Tandem Roller	• Contractor	4
	Macadam Roller	• Contractor	4
	Tire Roller	• Contractor	8
	Dump Truck	• Contractor	4

Requirements	Type	Source Name	Quantity
	Mixer Truck	• Contractor	4
	Water Truck	• Contractor	8
	Tractor w/Trailer	• Contractor	14
	Tire crane	• Contractor	6
	Cargo Crane Truck	• Contractor	10
	Cargo Truck	• Contractor	10
	Crusher Plant	• Contractor	4
	Screen Unit	• Contractor	4
	Concrete Batch Plant	• Contractor	4
	Asphalt Plant	• Contractor	2
	Asphalt Finisher	• Contractor	2
	Asphalt Distributor	• Contractor	4
	Air Compressor	• Contractor	4
	Generator	• Contractor	8
	Fuel Truck	• Contractor	4
	Light Vehicle	• Contractor	20

Source: Consultant's Evaluation

Transportation

Materials (fine and course aggregates) from quarries will be transported by trucks to the construction site. Water will be moved by water boozers. Other materials like cement, timber and reinforcement bars will be transported by Lorries to the construction site.

Storage

Some of the materials from borrow pits, quary site and sand pit will be used directly after delivery and as such no piling up is expected. Cement and reinforcement bars will be stored in special storage rooms. Timber will directly be used at the required areas and consequently there will be no stockpiling of timber at the campsite. Fuel/oils will be stored in drums at bunded areas.

Types, Amounts and treatment/disposal of Wastes

Types, amounts and treatment/disposal of wastes during the construction phase are shown in Table 2.5:

Table 2.5: Types, amounts and treatment/disposal of wastes during the construction phase

Waste	Types	Amount	Treatment/ Disposal
Solid Waste (Degradable)	Vegetations (Trees, Grasses) and remnants of timber.	500-800m^3 of biomass	Source of energy for cooking for residents near the project road
	Food remains, cardboards and papers	10kg/day (based on generation rate of 0.1kg/day/ person for 100 people)	Collected in a large skip bucket at the campsite then to be composted and used as manure for

			the gardens at the camp
Solid Waste (Non-Degradable)	Topsoils	70.2m^3 (Based on removal of 10cm topsoil from the (6.5x108,000)m^2 of the carriageway	Backfilling material in the borrow pits, fill the diversions.
	Scrap metals, drums and plastics	3-6 kg per day	Sold to Recyclers
	Tins and glasses	2-3 kg per day	Taken to the sanitary landfill at Chidaya
Liquid waste	Sewage	3.2m^3/day (Based on 100 people, 40l/capita/day water consumption and 80% becomes wastewater)	Septic tank –Soak away system at the campsite
	Oils and greases	20-30Litres	Shall be collected by NEMC certified waste collector for reuse/ disposal

Source: Consultant's Evaluation

2.3.3 Demobilization phase

Activities

- Demobilization of temporary structures will be done for proper restoration of the site (e.g. removing/spreading top-soils piled along the road, removing all temporary structures, sites offices may be left to the local governments depending on agreements that will be reached during the mobilization phase.
- Other activities include rehabilitation of the workshop and stockpile yard, rehabilitation of site at least to the original condition, clearance of all sorts of wastes including used oil, sewage, sewage, solid wastes (plastics, wood, metal, papers, etc).
- Deposit all wastes to the sanitary landfill at Chidaya
- Restoration of water ponds to a natural and useable condition
- Termination of temporary employment.

Duration

Demobilization stage will last for a period of three (3) months.

Types and Sources of Project requirements

Types, amounts and sources of project requirements during the demobilization phase are shown in Table 2.6:

Table 2.6: Types and sources of project requirements during the demobilization phase

Requirements	Type	Source	Quantity
Manpower	Skilled	Contractor	10
	Unskilled	Local People along the road	25
Equipments	Bull dozer	Contractor	1
	Motor grader	Contractor	1
	Roller Compactor	Contractor	1
	Plate compactor	Contractor	1
	Tippers	Contractor	4

Source: Consultant's Evaluation

Types treatment/disposal of Wastes

The demobilization of the temporary structures will result mainly into solid wastes such as timber, iron sheets and rubbles from demolitions. Timber and iron sheets will be sold to people in the nearby communities for reuse while the rubbles will be sent to the authorised dumpsite for disposal.

2.3.4 Operation phase

Activities

The actual usage of the road is expected to commence after the construction works. The project roads are under "regional road" category and therefore will be directly managed by TANROADS Regional Manager. The design period is 20 years, after which re-surfacing will be needed. During this time, TANROADS will carry out routine maintenance by attending to pot holes, clearance of vegetation within the CoI (Coridor of Impact) and monitoring.

Other activities includes Installation of road signs, thermo-plastic road marking, reinforcement and replacement of road furniture, control of litter accumulation on road sides, awareness rising on proper road use and road management to the communities, monitoring and evaluation, management to reduce pollutant concentrations in runoff, disposal of wastes from road maintenance activities, storage and management of maintenance materials and equipment.

Duration

The duration of this phase will be twenty years (20) years.

Types and Sources of Project requirements

Types and sources of project requirements during the operational phase are shown in Table 2.7:

Table 2.7: Types and sources of project requirements during the operational phase (Maintenance)

Requirements	Type	Source	Quantity
Raw Materials	Gravel	Mlima kobe, Msalato, Mapinduzi, Nanenane,	120,000cum

		Vikonje, Mahomanyika, Matumbulu, Chobuluma and Chiwondo	
	Hard Stone	Mdemu Hills, Vikonje, Matumbulu, Chigongwe	8,000 cum
	Sand	Muungano, Mtumba, Matumbulu/Bomba and Segu	10,000cum
	Water	DUWASA Borehole	20,000 Lt
	Asphalt	TPDC	3000 cum
	Cement	Dodoma local vendors	100 t
Manpower	Skilled	Contractor	5
	Unskilled	Local People along the road	20
Equipments	Excavator	TANROADS/Contractor	1
	Wheel loader	TANROADS /Contractor	1
	Water Boozer	TANROADS /Contractor	1
	Bull dozer	TANROADS /Contractor	1
	Motor grader	TANROADS /Contractor	1
	Roller Compactor	TANROADS /Contractor	1
	Plate compactor	TANROADS /Contractor	1
	Crasher	TANROADS /Contractor	1
	Tippers	TANROADS /Contractor	2

Source: Consultant's Evaluation

Transportation

Materials (fine and course aggregates) from quarries will be transported by trucks to the construction site. Water will be moved by water boozers. Other materials like asphalts, cement, timber and reinforcement bars will be transported by lorries to the maintenance site.

Storage

Most of Materials like Aggregates, Sand, and Water will be used directly after delivery and as such no piling up is expected. Cement and reinforcement bars will be stored in special storage rooms at the TANROADS store. The asphalt will be stored in their respective containers which will be kept in the storage rooms.

Types, Amounts and treatment/disposal of Wastes

Types, amounts and treatment/disposal of wastes during the construction phase are shown in Table 2.8:

Table 2.8: Types, amounts and treatment/disposal of wastes during the operational phase

Waste	Types	Amount	Treatment/ Disposal
Solid Waste (Degradable)	Vegetations (Trees and Grasses)	10-15m^3 Per month	Source of energy for cooking for residents near the project road
Solid Waste (Non-Degradable)	Scrap metals, drums and plastics	1-3kg per month	Sold to Recyclers

	Tins, glasses	1-2kg per month	Taken to the sanitary landfill at Chidaya
Liquid waste	Oils and greases	Non	Car maintenance will be done at proper garages

Source: Consultant's Evaluation

2.4 Construction materials

The main construction materials for the road include sand, gravel, hard stones (aggregates), reinforcement iron bars, water and bitumen. Most of the materials shall be obtained locally (within Tanzania) except bitumen which shall be imported. Material investigations have been made with the aim of identifying sources for suitable construction materials including borrow pits, sand pits, construction water sources and quarry sites.

2.4.1 Borrow Areas

During soil and materials investigation, nine borrow areas were identified along the project road almost 0km to 90km. Table 2.9 below gives a summary of the locations of the potential borrows areas and their estimated quantities.

Table 2.9: Borrow Areas and Estimated Quantities

S/n	Chainage (km)	Name	Offset distance	Estimated Quantities	Remarks/ Existing or New
1	0+000	Mlima Kobe	5.22Km, LHS	519,000m3	Existing
2	0+000	Msalato	4Km, RHS	434,000m3	Existing
3	25+450	Mapinduzi	9.245Km, LHS	414,000m3	New
4	25+450	Nanenane	5.7Km, LHS	444,500m3	Existing
5	25+450	Vikonje	9.6Km, RHS	474,800m3	Existing
6	25+450	Mahomanyika	7.35Km, LHS	308,800m3	Existing
7	53+660	Matumbulu	5Km, LHS	258,700m3	Existing
8	46+000	Chibuluma	1.91Km, LHS	525,800m3	New
9	90+250	Chiwondo	6.375Km, LHS	497,400m3	New

(Source: Consultant's Evaluation, 2017)

Figure 2.4: Nanenane (L) and Chibuluma (R) borrow areas
(Source: Project Materials report, 2017)

2.4.2 Hard Stones

Four proposed hard stone sources for aggregates were investigated. One source namely Mdemu Hills found along Dodoma - Manyara road 13.4Km offset from Ch. 0+000 along the project, Vikonje Hills found along Dodoma – Morogoro road 10.7Km offset on LHS from Ch.25+450 of the project, Matumbulu quarry found at 3.5Km offset on LHS from Ch. 53+660 of the project, Chikongwe Hard Stone found at 11Km offset on LHS from Ch. 90+250 of the project and Chikongwe Quarry (Nyanza Roads works crusher) found at 9.7Km offset on LHS from Ch. 90+250 of the project. The available rock types at the named sources are grey fine grained fresh gneiss rock. Rocky outcrops and boulders are expected to be used in masonry works and pitching of drainage structures.

Table 2.10: Hard stone sources and their Estimated Quantities

S/n	Chainage (Km)	Name of Hard stone	Offset dist. (m)	Estimated Quantities (m3)	Remarks
1	0+000	Mdemu Hills	13.4Km, LHS	1,400,000	Existing
2	25+450	Vikonje	10.7Km, LHS	900,000	Existing
3	53+660	Matumbulu	3.9Km, LHS	1,750,000	Existing
4	90+250	Chigogwe Quarry (Nyanza Road works crasher)	9.7Km, LHS	1,950,000	Existing

(Source: Consultant's Evaluation, 2017)

Figure 2.5: Mdemu Hills (L) and Vikonje (R) quarry sites
(Source: Project Materials report, 2017)

2.4.3 Sand for Concrete

Four sources of sand pits were found and samples taken for laboratory testing. One source namely Muungano found along Veyula – Dodoma Capital town road 5.4Km offset from Ch. 0+000 of the project road, Mtumba found along Ihumwa – Morogoro road 4.7Km offset from Ch. 25+450 of the project road, Matumbulu/Bomba found at 50m offset from Ch. 53+663 on LHS of the project road and the last one namely Segu found at 3.6Km offset from Ch. 90+250 on RHS of the project road. Table 2.11 gives a summary of the locations of sand pits and their estimated quantities.

Table 2.11: Location of Sand deposit and their Estimated Quantities

S/n	Chainage (Ch:)	Name	Offset dist. (m)	Estimated Quantities (m3)	Remarks
1	00+000	Muungano	5.4Km, RHS	1,600,000	Existing
2	25+450	Mtumba	4.7Km, LHS	2,500,000	Existing
3	53+660	Matumbulu	50m, LHS	650,000	Existing
4	90+250	Segu	3.6Km, RHS	110,000	Existing

Figure 2.6: Muungano (L) and Matumbulu (R) Sand sources
(Source: Project Materials report, 2017)

2.4.4 Water Sources

Due to geographical nature of Dodoma region, there is no any perennial water source identified along the route, thus the only water sources identified and sampled for laboratory testing is from DUWASA located at town center.

2.4.5 Sources of industrial materials for road construction

Traditional road construction materials that will be used in this project, generally have been tested by Approved Labolatories for compliance. These include;

Cement
Cement for construction is easily available in the mainland, parked in 50kg bags and sourced from the factory in Dar-Es Salaam, Tanga, Mtwara and Mbeya.

Reinforcement Steel
Reinforcement steel for structural works is also available in mainland from various factories in Dar-Es Salaam and or Abroad. Strength and other properties of reinforcing steel to be confirmed by testing of samples in approved testing laboratories.

Bitumen
Bitumen for road works is generally readily available from either TPDC or external suppliers. Bitumen properties will be checked by testing representative samples in approved laboratories.

3.0 POLICY, ADMINISTRATIVE AND LEGAL FRAMEWORK

3.1 National Policies

Environmental awareness in the country has significantly increased in recent years. The government has been developing and reviewing national policies to address environmental management in various sectors. Among others, the objective of these policies is to regulate the development undertaken within respective sectors so that they are not undertaken at the expense of the environment. The national policies that address environmental management as far as this project is concerned and which form the corner stone of the present study include the following:

3.1.1 National Environmental Policy (NEP) of 1997

Tanzania currently aims to achieve sustainable development through the rational and sustainable use of natural resources and to incorporate measures that safeguard the environment in any development activities. The environmental policy document seeks to provide the framework for making the fundamental changes that are needed to bring consideration of the environment into the mainstream of the decision-making processes in the country.

The National Environmental Policy, 1997 stresses that for a framework law to be effective, environmental standards and procedures have to be in place. For example, Chapter 4 of the policy (Instruments for Environmental; Policy), Section 61, states that "*As part of the (National Environmental Policy) strategy in the implementation of the National Environmental Guidelines, specific criteria for EIA conduct will be formulated".*

The National Environmental Policy as a national framework for environmental management emphasized that the transport sector shall focus on the following environmental objectives:

- Ensuring sustainability, security and the equitable use of resources for meeting the basic needs of the present and future generations without degrading the environment or risking health or safety.
- To prevent and control degradation of land, water, vegetation and air which constitute our life support system.
- To conserve and enhance our natural and man-made heritage, including the biological diversity of the unique ecosystem of Tanzania.
- To improve the condition and productivity of degraded areas including rural and urban settlement in order that all Tanzanians may live in safe, healthful, productive and aesthetically pleasing surroundings.
- To raise public awareness and understanding of the essential linkages between environment and development and to promote individual and community participation in the environmental action.
- To promote international co-operation on the environment and expand our participation and contribution to relevant bilateral, sub-regional, regional, and global organizations and programs, including implementation of treaties.

With specific regard to the transport sector, the National Environmental Policy (in Section 51) focuses on the following

- Improvement in mass transport systems to reduce fuel consumption, traffic congestion and pollution;
- Control and minimization of transport emission gases, noise, dust and particulates;
- Disaster/spills prevention and response plans and standards shall be formulated for transportation of hazardous/dangerous materials.

Critically, the National Environmental Policy emphasize the following aspects of natural resources management taking into account that the project proposal has impacts on natural resources:

- Wildlife resources should be protected and utilized in a sustainable manner; and on the basis of careful assessment of natural heritage in flora and fauna, fragile ecosystem, site under pressure and endangered species, with participation of, and benefits to, the local communities. Environmentally adverse impacts of development project in wildlife conservation area e.g. (tourist hotels, road construction) will be minimized by Environmental Impact Assessment studies.
- It encourages the development of sustainable regimes for soil conservation and forest protection, taking into consideration the links between desertification, deforestation, freshwater availability, climatic change and biological diversity.

On addressing the issues of poverty alleviation, the policy recognizes its impact to the environment. The policy focuses on the satisfaction of basic needs of citizens with due cognizance to protecting the environment. This project will ensure that the above policy objectives are met.

The NEP advocates the adoption of Environmental Impact Assessment (EIA) as a tool for screening development projects which are likely to cause adverse environmental impacts.

3.1.2 National Transport Policy (2003)

The vision of this policy is “to have an efficient and cost-effective domestic and international transport service to all segments of the population and sectors of the national economy with maximum safety and minimum environmental degradation”. Its mission is to “Develop safe, reliable, effective, efficient and fully integrated transport infrastructure and operations which will best meet the needs of travel and transport at improving levels of service at lower costs in a manner which supports government strategies for socio-economic development whilst being economically and environmentally sustainable”.

In transport, the main objective of the policy is to improve infrastructure whilst minimizing wasteful exploitation of natural resources and enhancing environmental protection. Improving infrastructure assists in poverty reduction and eradication which is a major goal in Tanzania. Most activities in the project area depend in one way or another on the environment and therefore protection of the environment is vital.

In order to promote environmental protection whilst reducing poverty in rural areas, the policy direction is to:

- Influence use of alternative energy sources such as biogas and solar available at the residential localities instead of travelling long distances in search of firewood as a source of power; and
- Raise environmental awareness.

Sections 5.9 of Road Transport and Environment it gives policy directions towards enhancing environmental protection through environmentally friendly and sustainable transport infrastructure both in the rural and urban areas. This project is the implementation of this policy since the project road shall provide a reliable means of transporting people for good social welfare.

3.1.3 National Construction Industry Policy (2003)

The road sector is among the key areas covered by this policy. Among the major objectives of the policy, which supports a sustainable road development sector, include the promotion and application of cost effective and innovative technologies and practices to support socio-economic development activities such as road-works, water supply, sanitation, shelter delivery and income generating activities and to ensure application of practices, technologies and products which are not harmful to either the environment or human health. Proponent shall see to it that, effective and innovative construction methods which are not harmful to environment and general public are used

3.1.4 National Land Policy (1995)

The National Land Policy states that, "*the overall aim of a National Land Policy is to promote and ensure a secure land tenure system, to encourage the optimal use of land resources, and to facilitate broad - based social and economic development without upsetting or endangering the ecological balance of the environment*". This EIA has been conducted to ensure the project is not conducted at the expense of the Environment which is the aim of the National Land Policy.

3.1.5 National Energy Policy (2003)

The first energy policy for Tanzania was formulated in April 1992. Since then, the energy sector has undergone a number of changes, necessitating adjustments to this initial policy. These changes include changes in the role of the government from a service provider to a facilitator, liberalization of the market and encouragement of private sector investment. The overall objective of the National Energy Policy of 2003 is to contribute to the development process by establishing efficient energy production, procurement, transportation, distribution and end-user systems in an environmentally sound manner and with due regard to gender issues.

The continuing decline in industrial and agricultural production during the period between 1980 and 1985 led to increased inflation and a decline in the standard of living. In order to arrest this decline, the government gave priority to the rehabilitation of basic economic

infrastructure, especially communication, so that they can fully support the production sector. The energy policy considers the condition of roads as a determinant factor in vehicle energy use. Rough and pothole filled roads necessitate frequent braking and acceleration, leading to wasteful use of fuel. The project road shall provide smooth, well-surfaced and well maintained road which lead to energy savings.

3.1.6 National Human Settlements Development Policy (2000)

Among the objectives of this policy that touch the road sector are to improve the level of the provision of infrastructure and social services for the development of sustainable human settlements and to make serviced land available for shelter to all sections of the community. Such infrastructure and services constitute the backbone of urban economic activities. All weather roads (Project Road) and a reliable and efficient transport system are essential to increase productivity and the establishment of manufacturing industries.

3.1.7 National Gender Policy (2002)

The key objective of this policy is to provide guidelines that will ensure that gender sensitive plans and strategies are developed in all sectors and institutions. While the policy aims at establishing strategies to eradicate poverty, it puts emphasis on gender quality and equal opportunity of both men and women to participate in development undertakings and to value the role-played by each member of society.

The TANROADS have adopted the policy through the provision of equal opportunities to both men and women in road works and related activities. This project will also ensure that women, who are the main users of the infrastructure, will be adequately involved at all levels of project planning to implementation.

3.1.8 National Community Development Policy (1996)

The main objectives of the Community Development Policy is to enable the Tanzanian individuals and the community as a whole to contribute more to the government objects of self reliance and therefore bring about development at all levels and finally the nation as a whole. The policy provides directions to ensure there is sustainable cooperation between authorities in planning and implementing development plans, that there is transparency and sharing of information during the preparation and control of budgets for development projects, that the concerned community is well informed and educated in ordre to maximaxi their participation in ther own development and so forth. The policy also recognise and emphasize that family householsd is the basis for community development.
The Dodoma outer ring project has taken on board the directives of the development policy in many ways. The project is in line with this policy as the road construction shall lead to community development.

3.1.9 National Policy on HIV/AIDS (2001)

The National Policy on HIV/AIDS (2001) was formulated by the Government of Tanzania (GOT) under technical support from the World Health Organization Global Programme on

AIDS (WHO-GPA) that led to the establishment of National HIV/AIDS Control Programme (NACP) under the Ministry of Health. However, due to its multi-sectoral nature there was a need to involve all sectors and community participation was found to be crucial. One of the government strategic initiatives is to establish Tanzania Commission for AIDS (TACAIDS) under the Prime Minister's Office. The Commission provides leadership and coordination of national multi-sectoral response to the HIV/AIDS epidemic. The management functions, institutional and organizational arrangement of TACAIDS are outlined in the National Policy.

The policy identifies HIV/AIDS as a global disaster, hence requiring concerted and unprecedented initiative at national and global levels. It recognizes HIV/AIDS as an impediment to development in all sectors, in terms of social and economic development with serious and direct implication on social services and welfare. Thus, the policy recognizes the linkage between poverty and HIV/AIDS, as the poor section of the society are the most vulnerable.

The main policy objective is reflected well in the establishment of TACAIDS. However, the policy has also set a number of strategic objectives to deal with specific HIV/AIDS problems:

- Prevention of transmission of HIV/AIDS;
- HIV Testing;
- Care for People Living with HIV/AIDS (PLHAS);
- Enhance Sectoral roles through participation and financial support;
- Promote and participate in research on HIV/AIDS-including dissemination of scientific information and development of HIV vaccine;
- Creating a legal framework through enactment of laws on HIV/AIDS-governing ethical issues and legal status of HIV/AIDS affected families;

Other objectives:

- monitoring and safeguarding rights of infected or affected people;
- prevent human rights abuse, discrimination and social injustice;
- provide effective treatment for opportunistic diseases;
- promote fight against drug substance abuse;
- Prohibit misleading advertisements of drugs and other products for HIV/AIDS prevention, treatment and care.

This project can be a precursor of Incidents of HIV/AIDS due to the influx of people into the areas including construction workers. This would result in an increase in the incidence of diseases including STI, and HIV/AIDS.

3.1.10 The National Water Policy (2003)

This policy aims at achieving sustainable, effective and efficient development and management of urban water supply and sewerage (UWSS) services. This will be attained by providing a framework in which the desired targets are set outlining the necessary measures to guide the entire range of actions and to harmonise all related UWSS activities and actors with a view of improving the quality of service delivery.

To prevent wasteful water use and control water leakages the policy states that "*Water demand in urban areas is increasing at a rate, which is not proportional to the rate of expansion of water supply and sewerage services. This is due to high rate of urbanisation, increase of industrial activities and significant unaccounted-for-water that includes leakage, wastage and illegal connections. Water demand management measures will be undertaken to conserve and use the available water efficiently and equitably, by instituting:*

(i) Measures on proper tariff setting (at an economic cost), metering, rationing, leakage control and mass education on frugal use of water and conservation.

(ii) Regulations on efficient use of water by using low capacity cisterns."

To ensure domestic and industrial wastewater is not haphazardly discharged to contaminate water sources and the environment the policy states that

"(i) *Sewerage systems and sludge disposal facilities will be constructed and old ones will be rehabilitated;*

(ii) Cesspit emptying services will be established and /or contracted to the private operators, cesspit emptiers will be required to discharge only at sewage treatment facilities.

(iii) Discharge of untreated wastewater to the sea shall be through long and a deep sea out-falls.

(iv) Legislation requiring industries to pre-treat their wastewater before discharging into municipal sewerage system will be reviewed.

(v) Legislation enforcement mechanism will be strengthened.

(vi) UWSS entities shall co-operate with industries and other institutions in the research and development of least cost technologies for wastewater treatment and recycling.

(vii) Industries shall be required to use environmentally friendly raw materials with less toxic elements and adopt cleaner production technology."

TANROADS shall observe this policy and the recommendations on water use and wastewater disposal shall be based this policy.

3.1.11 The National Health Policy (2007)

This Policy is a revision of the 1990 Health Policy, which emphasized on the need for increasing community involvement in health development and improved access and equity in health and health services. One of the main objective of this policy is to ensure that health services are available and accessible to all people wherever they are in the country, whether in urban and rural areas. The policy encourages safe basic hygienic practices in workplaces, promote sound use of water, promotes construction of latrines and their use, encourage maintenance of clean environment; working environment which are conducive to satisfactory work performance. TANROADS and Contractor shall provide a clean environment to its workers (including enough toilets, ventilation, lighting, drinking water etc.) in addressing the provision of this policy.

3.1.12 The National Employment Policy (1997)

The National Employment Policy identifies two categories of employment namely wage employment and self-employment. The policy revisits the state of employment in Government, Parastatals, Private sector and Informal Sector. This policy is the vision

leading to utilization of available labour force and tapping available natural resources. The policy also identifies strategies for exploiting existing wealth, especially in sectors dealing with Industry and trade, Agriculture and livestock, Fisheries, Service sector and small-scale mining. On top of that it identifies special groups which require special treatment while seeking employment and proposes responsibilities of different authorities to deal with different aspects of the policy. This project shall provide employment to local people during construction and therefore it is in line with this policy.

3.1.13 National Agricultural Policy (2013)

Agricultural development depends heavily on good infrastructure, such as roads, communication, energy, marketing facilities and efficient transport services. Good infrastructure and transport systems are essential elements for movement of agricultural produce, goods and services to and from rural areas that are vital stimulants to the development of the rural economy. Infrastructure developments particularly in rural areas are vital determinants of transaction costs in agriculture and hence the absence of good infrastructure in turn affects the sector's competitiveness. Passable roads, adequate energy, efficient communication and marketing infrastructure are important in stimulating agricultural growth and development in rural areas. Nevertheless, inaccessibility of rural areas due to poor rural roads; poor communication facilities; inadequate rural electrification; high transport costs; and inadequate market infrastructure affect profitability of agriculture.

The objective of this policy regarding infrastructure states that "*Rural infrastructure and transport systems improved to reduce transaction costs that affect agricultural growth and competitiveness*." The Policy Statements includes

i. Rural road connectivity for improved agricultural development shall be facilitated in collaboration with the ministry responsible for infrastructure and the Prime Minister's Office-Regional Administration and Local Government (PMO-RALG);
ii. Conducive environment for Public Private Partnerships in infrastructure development particularly in rural areas shall be created; and
iii. Availability and accessibility to rural electrification, water, communication, transport services and market infrastructure shall be facilitated.

The ring road shall enhance agriculture activities in the project area since large vehicles shall pass at the periphery of the Municipality where agriculture activities takes place.

3.1.14 The National Livestock Policy (2006)

The rationale of the National Livestock Policy is to commercialize the industry and stimulate its development while conserving the environment. The aim is to support the livelihoods of livestock farmers through increased incomes and self-sufficiency in food of animal origin and thus addressing the goals set in the National Strategy for Growth and Reduction of Poverty (NSGRP) of 2004.

The Policy has taken into account the comparative advantage the country has as regards to the large livestock population compared to most African countries. It has also considered current developments in trade liberalization, globalization, privatization and divestiture of

state enterprises, enhancement public-private partnership, advances in science and technology, which have direct impact on the development of the livestock industry. The Policy further emphasizes on the importance of value addition in order to access competitive markets and to prolong shelf-life of livestock products. Tanzanian population is expected to increase to 55.2 million by the year 2025 thereby significantly increasing demands for livestock and livestock products; therefore, a need for special emphasis on improvement of livestock productivity. The project road passes at the outskirts of the Dodoma City where livestock keeping is practiced and therefore it shall promote growth of the sector by bringing reliable transportation system closer to pastoralists.

3.2 Legal Framework

3.2.1 Environmental Management Act No. 20 of (2004), Cap. 191

The Environmental Management Act (EMA) is a piece of legislation that forms an umbrella law on environmental management in Tanzania. Its enactment has repealed the National Environment Management Council Act. 19 of (1983) while providing for the continued existence of the National Environment Management Council (NEMC).

Among the major purposes of the EMA are to provide the legal and institutional framework for sustainable management of the environment in Tanzania; to outline principles for management, impact and risk assessment, the prevention and control of pollution, waste management, environmental quality standards, public participation, compliance and enforcement; to provide the basis for implementation of international instruments on the environment; to provide for implementation of the National Environmental Policy; to provide for establishment of the National Environmental Fund and to provide for other related matters.

Part III, Section 15(a) states that "*in matters pertaining to the environment, the Director of Environment shall coordinate various environment management activities being undertaken by other agencies to promote the integration of environment considerations into development policies, plans, programmes, strategies projects and undertake strategic environmental assessments with a view to ensuring the proper management and rational utilization of environmental resources on a sustainable basis for the improvement of the quality of human life in Tanzania*".

Part VI of the EMA deals with Environmental Impact Assessments (EIA) and other Assessments and directs that an EIA is mandatory for all development projects. Section 81(2) states that "*An Environmental Impact Assessment study shall be carried out prior to the commencement or financing of a project or undertaking*", while Section 81(3) states "*a permit or licence for the carrying out of any project or undertaking in accordance with any written law shall not entitle the proponent or developer to undertake or to cause to be undertaken a project or activity without an environmental impact assessment certificate issued under this Act*". This EIA is conducted for this project in order to abide to this law.

Part IX of the law provides for waste management sections. Section (a) provides for Solid waste management, Section (b) provides for management of litter, Section (c) provides for

liquid waste management, Section (d) provides for gaseous wastes and section (e) provides for hazardous waste management. This part stresses on waste minimization that end of pipe treatment. It gives mandate to local governments to create bylaws for waste management in their areas. These sections shall be observed during all phases of the project.

Part X of the law deals with Environmental Quality Standards. Section 140 of this act states that "*The National Environmental Standards Committee of the Tanzania Bureau of Standards established under the Tanzania Bureau of Standards Act, 1975 shall develop, review and submit to the Minister proposal for environmental standards and criteria in relation to; water quality; discharge of effluent into water; air quality; control of noise and vibration pollution; sub-sonic vibrations; soil quality, control of noxious smells; light pollution; and any other environmental quality standard*" Some of these standards have already been published in the government *gazzete* while others are not in place. This project shall take into account all the standards specified by this act.

3.2.2 The Land Act No. 4 of 1999

These laws declare all land in Tanzania to be "Public land" to be held by the state for public purposes. The Acts empower the President of the United Republic of Tanzania, to revoke the "Right of Occupancy" of any landholder for the "public/national interest" should the need arise. The laws also declare the value attached to land.

Land tenure system

The existing land ownership system has a history of more than forty years. At present the Land Act (1999) provides guidance to land ownership in Tanzania. The law vest all land in the President and grant occupancy rights to individuals, legal persons and territorial communities. The President holds *land in trust* for all citizens and can acquire land for public use and benefit, for instance, to resettle people from densely populated areas to sparsely populated areas, settle refugees and so forth. The President can also acquire land for other national projects, like road construction.

Compensation rules

Under the Government Standing Order on expropriation for public utility, the holder of a Right of Occupancy is guaranteed a free enjoyment of the land and is entitled to compensation if dispossessed by the Government for public use. In many cases whilst the holders agree to leave their land they are not happy with the amount and delay of the compensation. Often, for example, improvements that they have made to the land are omitted or underrated. The expropriation should match the price that improvements can fetch if sold in the open market. Replacement value (defined as the cost of putting up a structure equivalent to the evaluated one) makes allowance for age, state of repair and economic obsolescence.

The compensation must therefore include:-

- The replacement value of the un-exhausted improvements
- Disturbance and transport allowance

- Loss of income
- Cost of acquiring or getting an equivalent land
- Actual value of the present property/utility available in the land and
- Any other immediate costs or capital expenditure incurred in the development of the land.

This project shall involve involuntary resettlement of people and their properties, this law shall govern the whole process of valuation and compensation.

3.2.3 The Water Resources Management Act No. 11 of 2009

This is a new legislation that has repealed the Water Utilization (Control and Regulation) Act (1974). The Act provides for institutional and legal framework for sustainable management and development of water resources; outlines principles for water resources management; for prevention and control of water pollution; and provides for participation of stakeholders and general public in implementation of the National Water Policy. Its main objective is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that among others meets the basic human needs of present and future generations, prevents and controls pollution of water resources and protects biological diversity especially the aquatic ecosystems.

In accordance with this law, all water resources in Mainland Tanzania shall continue to be public water and vested in the President as the trustee for and on behalf of the citizens. The power to confer a right to the use of water from any water resource is vested in the Minister responsible for water. There are no surface water bodies at the project area and therefore ground water (via borehole) shall be used during construction of this project. The intended borehole is owned by DUWASA which has a water right from Wami Ruvu Basin Offices. This basin authority will be consulted before abstraction of water from the borehole.

3.2.4 The Road Act, 2007

For purposes of this project, the Road Act 2007 serves as a guide to the use of the road reserve. Contrary to previous informal understanding, the reserve is exclusive to road related activities that do not include other utilities. However, clause 29 (2) does give provision for the request and terms of approval for use of the road reserve by utilities such as power lines and water pipes.

On land acquisition the Act clearly states in part III, Section 16 that *'where it becomes necessary for the road authority to acquire a land owned by any person, the owner of such land shall be entitled to compensation for any development on such land in accordance with the Land Act and any other written law'.* TANROADS shall observe this law for the conservation of the Road Reserve and Compensation of the PAPs.

3.2.5 Public Health Act 2009

An Act provide for the promotion, preservation and maintenance of public health with the view to ensuring the provision of comprehensive, functional and sustainable public health services to the general public and to provide for other related matters. Section 54 of this

law states that " *A person shall not cause or suffer from nuisance, likely to be injurious or dangerous to health, existing on land, premises, air or water*". Therefore, TANROADS shall develop this project road so that nobody suffers from nuisance or cause danger to peoples' life.

3.2.6 Land Use Planning Act (2007)

The Act provides for the procedures for the preparation, administration and enforcement of land use plans; to repeal the National Land Use Planning Commissioning Act and to provide for related matters. Among the objectives of the Act as given in Section 4 are to facilitate the orderly management of land use and to promote sustainable land use practices. The project entail taking 75m on both sides of the centreline which is change of land use as the land was used for other purposes. This change in land use shall cause change in livelihood, therefore TANROADS shall comply with the provisions of this act. Any infringement on existing land use shall need consultation with land use planning authorities.

3.2.7 Occupation Safety and Health Act (2003)

The law provides for safety, health and welfare of persons at work in factories or other work places; to provide for protection of persons other than persons at work against hazards to health and safety arising out of or connection with activities of persons at work; and to provide for connected matters.

Section 62 of the law states that "*where in a workplace, workers are employed in any process involving exposure to any offensive substance or environment, effective protective equipment shall be provided and maintained by employer for the use of the persons employed*". In this road project the contractor shall provide PPEs as per provision of this act including, overall dress, boots, helmets, ear plugs etc. depending on the exposure.

Section 58 present the issue of first aid box and it states that " *There shall be provided and maintained a first aid box or cupboard to the prescribed standard and the first aid box or cupboard shall be distinctively marked "FIRST AID" having only appliances or stocks of first aid equipment*". A well-stocked first aid kit shall be provided at the campsite.

Section 24 (1) states that "*a thorough pre-placement and periodic occupational medical examination for fitness for employment and for employees shall be carried out by a qualified occupational health physician or where necessary a qualified medical practitioner as may be authorised by the chief inspector*". The contractor shall conduct medical examination to all those who require employment before employing them.

3.2.8 The Standards Act No. 2 of 2009

An Act to provide for the promotion of the standardization of specifications of commodities and services, to re-establish the Tanzania Bureau of Standards (TBS) and to provide better provisions for the functions, management and control of the Bureau, to repeal the standards Act, Cap.130 and to provide for other related matters. This act is

relevant to this project as the quality of the Bitumen/Asphalt, and other products to be imported by Contractor during construction will have to abide to the standards set by TBS.

3.2.9 Regional and District Act No 9, 1997

The Act provides for Regional Commissioners to oversee Regional Secretariats, with District Commissioners directly supervising the District Councils. Local authorities oversee the local planning processes, including establishing local environmental policies. The National Environmental Policy establishes a policy committee on Environment at Regional level chaired by the Regional Commissioner, mirrored by environmental committee at all lower levels, i.e. at the District, Division, Ward and Village or Mtaa Councils.

Under the EMA 2004, the Regional Secretariat is responsible for coordination for all advice on environmental management in their respective region and in liaison with the Director of Environment. At Local Government level, an Environmental Management Officer should be designated or appointed by each City, Municipal, District or Town Council. In each City or Municipality or District Environmental Committees should be established to promote and enhance sustainable management of the Environment. The Village Development Committee is responsible for proper management of the environment in their respective areas. The District Council designates for each administrative area as township, ward, village, sub-street and Environmental Management Officer to coordinate all functions and activities related to protection of environmental in their area. TANROADS and Contractor shall observe all local environmental bylaws set by TANROADS and Dodoma Regional Secretariat.

3.2.10 The Land Acquisition Act 1967

Under the Land Acquisition Act, 1967, the President may, subject to the provisions of this Act, acquire any land for any estate or term where such land is required for any public purpose.

Land shall be deemed to be acquired for a public purpose where it is required, for example, for exclusive Government use, for general public use, for any Government scheme, for the development of agricultural land or for the provision of sites for industrial, agricultural or commercial development, social services, or housing or; where the President is satisfied that a corporation requires any land for the purposes of construction of any work which in his opinion would be of public utility or in the public interest or in the interest of the national economy, he may, with the approval, to be signified by resolution of the National Assembly and by order published in the Gazette, declare the purpose for which such land is required to be a public purpose and upon such order being made such purpose shall be deemed to be a public purpose; or in connection with the laying out of any new city, municipality, township or minor settlement or the extension or improvement of any existing city, municipality, township or minor settlement; etc.

Upon such acquisition of any Land the President is compelled on behalf of the Government to pay in respect thereof, out of moneys provided for the purpose by Parliament, such compensation, as may be agreed upon or determined in accordance with the provisions of the Land Acquisition Act, 1967.

The President may also revoke a right of occupancy if in his opinion it is in public interest to do so. Accordingly, the land for which a right of occupancy has been revoked reverts back to the Government for re-allocation pursuant to the existing need (s). It should also be noted here that, though the land belong to the government some changes on the land act has taken place. Land has value to the owner; therefore any land taken from the user has to be compensated. Based on this act the villagers affected by the project are claiming that they should be compensated for the lost farms and land used for residential purposes. Any land acquisition that shall be done during the implementation of this project shall be guided by this law.

3.2.11 Employment and Labour Relations Act No. 6 0f 2004

The Act makes provisions for core labour rights; establishes basic employment standards, provides a framework for collective bargaining; and provides for the prevention and settlement of disputes. TANROADS shall see to it that the contractor adheres to employment standards as provided for by the law.

3.2.12 Engineers Registration Act and its Amendments 1997 and 2007

The Acts regulate the engineering practice in Tanzania by registering engineers and monitoring their conduct. It establishes the Engineering Registration Board (ERB). Laws require any foreigner engineer to register with ERB before practicing in the country. Foreign engineers working with this project shall abide to the law requirement.

3.2.13 The Contractors Registration Act (1997)

The Contractors Registration Act requires contractors to be registered by the Contractors Board (CRB) before engaging in practice. It requires foreign contractors to be registered by the Board before gaining contracts in Tanzania. TANROADS shall comply with the law requirement during the recruitment of contractors for project implementation.

3.2.14 The HIV and AIDS (Prevention and Control) Act of 2008

The law provides for public education and programmes on HIV and AIDS. Section 8(1) of the law states that “The Ministry (Health), health practitioners, workers in the public and private sectors and NGOs shall for the purpose of providing HIV and AIDS education to the public, disseminate information regarding HIV and AIDS to the public”. Furthermore, Section 9 states that “Every employer in consultation with the Ministry (Health) shall establish and coordinate a workplace programme on HIV and AIDS for employees under his control and such programmes shall include provision of gender responsive HIV and AIDS education.” This project shall abide to HIV/AIDS act in the fight against the disease.

3.2.15 The Industrial and Consumer Chemical (Management and Control) Act, 2002

The Act provides for among other issues, importation, transportation, storage, use and disposal of chemicals in Tanzania. Road Contractor is required by law to have a certificate from the Chief Government Chemist for importation, storage or disposal of any chemicals

(Asphalt, Lime etc.). Furthermore, Road Contractor as any other individual dealing with chemical is required to comply with all provisions/regulations regarding packaging, handling, storage, use and disposal of chemicals, as set by the this Act. The minister appoints an inspector from time to time to ensure compliance. Failure to compliance might lead to revocation of the certificate. This law shall guide the contractor and TANROADS on importation, transportation, storage, use and disposal of construction materials of chemical nature such as Asphalt.

3.2.16 The Water Supply and Sanitation Act No. 12 of 2009

Legislation that provides for sustainable management, adequate operation, and transparent regulation of water supply and sanitation services; provides for establishment of water supply and sanitation authorities as well as community owned water supply organizations; and provides for appointment for service providers. The main aim of this law is to ensure the right of every Tanzanian to have access to efficient, effective and sustainable water supply and sanitation services for all purposes by taking into account among others protection and conservation of water resources and development and promotion of public health and sanitation; and protection of the interest of customers. Under this law, the Minister responsible for water affairs shall establish water authority and cluster water authorities in order to achieve commercial viabilities. The proposed project shall use water DUWASA which was established by the mandate of this act.

3.2.17 The Urban Planning Act (2007)

The law provides for the orderly and sustainable development of land in urban areas, to preserve and improve amenities; to provide for the grant of consent to develop land and powers of control over the use of land and to provide for other related matters. Under Section 3, among others the law seeks to improve level of the provision of infrastructure and social services for sustainable human settlement development which is the case for this project.

3.2.18 Mining Act No 4 (2010)

This Act states that “building material” includes all forms of rock, stones, gravel, sand, clay, volcanic ash or cinder, or other minerals being used for the construction of buildings, roads, dams, aerodromes, or similar works but does not include gypsum, limestone being burned for the production of lime, or material used for the manufacture of cement.

This act make sure minerals are well controlled and Section 6(1) states that "*no person shall, on or in any land to which this act refers, prospect for minerals or carry on mining operations except under the authority of Mineral Right granted, or deemed to have been granted under this Act.*" In additional section 50.-(1) (v) of the act states that "*The Minister shall grant an application for a mining licence for minerals which has been properly made under section 49 and a successful application for a mining licence made under section 71 unless the applicant has not included the relevant environmental certificate issued under the Environment Management Act*". For this project the contractor shall obtain mining license for before extracting any building materials stipulated in this act

3.2.19 Explosives Act, 56/63

This Act gives the Commissioner for Mines responsibility for regulating explosives. First, section 3 stipulates that no import, manufacture, possession, acquisition, or disposition of explosives is allowed unless the substance is approved for use by the Commissioner. Sections 7-9 stipulate that a person must have a license from the Commissioner for Mines to legally manufacture explosives. Penalty for failure to have a license is 5,000 and/or 2 years. Part V of the Act further requires a permit for transport of explosives. Part VI requires a permit for acquisition, possession, and disposal of explosives. Part VII requires a permit for storage of explosives. Part VIII requires a permit for use of explosives. An explosives permit can give conditions. The following applications and sample permits are included in Appendix A:

- Application for Import Permit
- Import Permit
- Import Permit (General Authority to Import Explosives)
- Application for License to Purchase or Acquire Explosives
- License to Purchase or Acquire Explosives
- Magazine License
- Explosive Store License
- Application for Blasting Certificate
- Blasting Certificate
- Return of Explosives

In addition to these general permitting requirements, section 12 provides that "*the person in charge of the explosives is liable if an "unauthorized person" has access thereto or possession thereof. Section 51 establishes general penalties of Tsh. 4,000 and/or 1 year*". Also, under section 53, "*the Commissioner has authority to revoke a license or blasting certificate*". TANROADS shall see to it that the contractor has all required permits stipulated by this law for the importation, transportation and used of explosives in the quarry sites.

3.2.20 The Petroleum Act, 2001

This act make provisions for Importation, Exportation, Transportation, Transformation, Storage and wholesale and retail distribution of petroleum products in a liberalized market and to provide for related matters. Section 7 of the act restricts persons/Institutions from performing petroleum supply operations without having obtained a licence in accordance with the provision of this act. Section 8 (1) states that *" Prior to the issuance of the licence, the applicant must comply with all necessary Environmental requirements as provided for under the Environmental Management Act.*" TANROADS and the contractor shall see to it that the provisions of this law are taken into task during construction of the Dodoma outer ring road.

Part IX of the law provides for petroleum supply operations which include importation, transportation, transformation storage and distribution. Section 33 (1) states that "*No person shall import petroleum or petroleum products unless the importation is conducted*

efficient procurement" All the petroleum products to be imported for this project shall use efficient procurement as described by this act.

Section 37 deals with transportation and it states that " *No vehicle, vehicles or facility shall transport petroleum or petroleum products unless such vehicle, vessel or facility complies with the specifications made by the Minister"*. This section shall be observed during transportation of petroleum products (esp asphalt) to the project site.

Section 43 (1) of the legislation states that " *Every person storing petroleum or petroleum products shall ensure that the petroleum products, as the case may be stored in accordance with the licence issued by the authority*". A licence shall be acquired for the storage of petroleum products for this project.

3.3 Relevant Regulations and Guidelines, International treaties and conventions

3.3.1 The Tanzania 2025 Development Vision

The Tanzania Vision 2025 aims at achieving a high-quality livelihood for its people attain good governance through the rule of law and develop a strong and competitive economy. Specific targets include:

- A high quality livelihood characterized by sustainable and shared growth (equity), and freedom from abject poverty in a democratic environment. Specifically the Vision aims at: food self-sufficiency and security, universal primary education and extension of tertiary education, gender equality, universal access to primary health care, 75% reduction in infant and maternal mortality rates, universal access to safe water, increased life expectancy, and absence of abject poverty, a well-educated and learning society.
- Good governance and the rule of law moral and cultural uprightness, adherence to the rule of law, elimination of corruption.
- A strong and competitive economy capable of producing sustainable growth and shared benefits a diversified and semi-industrialized economy, macro-economic stability, a growth rate of 8% per annum, adequate level of physical infrastructure, an active and competitive player in regional and global markets.

Good roads are one of the most important agents to enable Tanzania achieve its Development Vision objectives (both social and economic), such as eradicating poverty, attaining food security, sustaining biodiversity and sensitive ecosystems. Construction of the project road through this project contributes to the attainment of the 2025 Vision.

3.3.2 Land (Assessment of the Value of Land for Compensation) Regulations, 2001

These regulations provide criteria for the assessment of compensation on land, as per market value for real property; disturbance allowance is calculated as a percentage of market value of the acquired assets over twelve months; and transport allowance calculated at the cost of 12 tons hauled over a distance not exceeding 20 km. The other criteria includes loss of profit on accommodation based on business audited accounts and accommodation allowance equivalent to the rent of the acquired property per month over a 36 month period. These regulations shall guide the compensation exercise in this project.

3.3.3 Environmental Impact Assessment and Auditing Regulations (2005)

These regulations set procedures for conducting EIA and environmental audit in the country. The regulations also require registration of EIA experts. This EIA has been conducted following the above stated regulations.

3.3.4 National Strategy for Growth and Reduction of Poverty (2005)

One of NSGRP objective is to improve the quality of life and social wellbeing. This can be achieved through improving passable (good/fair condition) rural roads from 50% in 2003 to at least 75% in 2010. The strategy will also ensure that the health facilities are improved and accessible and drugs are made available throughout the year (NSGRP, 2003). Construction of the project road shall contribute to poverty reduction within the project area.

3.3.5 Environmental Assessment and Management Guidelines for the Road Sector (2011)

The Environmental Assessment and Management Guidelines for the Road Sector (EAMGRS) were developed in December 2004 (Signed in 2011), just after EMA (2004) was enacted. The guidelines give procedures for the EIA process as briefly explained in Table 3.2.

Table 3.2: Developed EIA Procedures in the Road Sector

EIA PROCEDURES IN THE ROAD SECTOR (as per EAMGRS 2011)
Administrative Procedures: EIA administrative procedures vary based on the significance of the environmental impacts. The Minister for Environment is responsible for projects with potential major environmental impacts. The EIA of projects with potential non-major environmental impacts are carried out under the Ministry responsible for the road sector and the Road Sector-Environmental Section (RS-ES). **Environment Application and Screening Process:** EA procedures in the road sector are initiated when the Road Implementing Agency (RIA) submits an Environment Application Form to the RS-ES during the Project Identification or Project Planning/Feasibility Study Phase. An environmental screening of the proposed project will determine whether the project will require: An Initial Environmental Examination (IEE); a Limited Environmental Analysis (LEA); or a detailed Environmental Impact Assessment (EIA). Environmental Screening is done based on the information presented in the Environmental Application Form. The RS-ES is responsible for screening projects and this may acquire a reconnaissance study by an environmental specialist, especially if the project traverses sensitive areas or when there is potential for complex environmental issues. All road projects with non-major environmental impacts shall be subject to an Initial

Environmental Examination (lEE) or a Limited Environmental Analysis (LEA). Projects with major environmental impacts are subject to EIA. The RS-ES will register non-major-impact-projects. For major-impact-projects, the registration is done by NEMC.

Source: EAMGRS 2011

3.3.6 The Environmental Management (Air Quality Standards) Regulations, 2007

The objectives of these regulations are to set baseline parameters on air quality and emissions and enforce minimum air quality standards. They are also meant to help developers including industrialists to keep abreast with environmentally friendly technologies and ensure that the public health as well as the environment is protected from various air pollution emissions sources. These Regulations stipulate the role and powers of the National Environmental Standards Committee. According to the regulations, the approval of a permit for emission of air pollutants shall be guided by ambient, receptor, emission and specification standards approved by the Minister. Offences and penalties for contraveners are also provided for in the regulations.

Emission limits of sulphur and nitrogen dioxides, carbon monoxide, lead, ozone, black smoke and suspended particulate matter together with their test methods are specified. Tolerance limits and test methods for dust, sulphur dioxide and nitrogen oxides from cement factories into the air as well as from motor vehicles are also given. TANROADS shall monitor the air quality from the vehicles with guidance from this law.

3.3.7 The Environmental Management (Soil Quality Standards) Regulations, 2007

These regulations set limits for soil contaminants in agriculture and habitat, enforce minimum soil quality standards, prescribe measures designated to maintain, restore and enhance the sustainable productivity of the soil and prescribe minimum soil quality standards for sustaining ecological integrity and productivity of the soil. According to the regulations, among others, the National Environmental Standards Committee has the powers to set pollutant limits and specify procedures for determination of the quality of soil for protection of the soil from degradation as a result of anthropogenic activities such as agricultural and mining activities and waste disposal. Owners and operators of a main polluting activity are required to voluntarily register with NEMC and obtain a soil pollutants discharge permit. Obligations of polluters are also given. According to the regulations, the NEMC plays a crucial role in soil quality compliance and enforcement. Recording and reporting requirements, Offences and penalties for non-compliance as well as how appeals against aggrieved decisions should be handled are stipulated. Contaminant limits for selected soil pollutants mainly halogenated hydrocarbons (example, trichloethylene, dichloromethane, tetrachloroethylene, carbon tetrachloride, etc.), fuel hydrocarbons (benzene, ethylbenzene, total xylenes, toluene, etc.), organic and inorganic pesticides (lindane, Atrazine, DDT, sulphur, Hexachlorobenzene, Aldrin, etc.) and their respective test methods are specified. The Regulations also cover contaminant limits for some heavy metals (e.g. arsenic, cadmium, nickel, copper, zinc, etc.) together with their test methods.

Most of the pollutants covered in these regulations will not be produced from the project activities in appreciable concentrations. However, there is a potential for soil pollution

from petroleum hydrocarbons due to the use of fossil fuels for running machineries, plants and vehicles during both the construction and operational phase. Nonetheless, the developer is committed to abide to the provisions of these regulations should any of the project activity produce anyone of the pollutants covered in the regulations.

3.3.8 The Environmental Management (Water Quality Standards) Regulations, 2007

Among others, the object of the regulations is to enforce minimum water quality standards prescribed by the National Environmental Standards Committee, enable the National Environmental Standards Committee to determine water usages for purposes of establishing environmental quality standards and values for each usage and ensure all discharges of pollutants take into considerations the ability of the receiving water to accommodate contaminants for protection of human health and conservation of marine and aquatic environments. The Regulations elucidate the role of the National Environmental Standards Committee of Tanzania Bureau of Standards in setting minimum quality standards for water, sewerage, etc. They also give prohibitions and prescribed minimum water quality standards. The applicant of water right is obliged to indicate the likely impact on the environment and comply with prescribed effluent or receiving water standards, which are not below the standards specified in these regulations if the water right or permit is granted.

The regulations give NEMC the power to designate main water polluting activities for which prior grant of permit must be obtain from the Council. It can be observed from the regulations that, the NEMC plays a crucial role in water quality compliance and enforcement. Recording and reporting requirements, Offences and penalties for non-compliance as well as how appeals against aggrieved decisions should be handled are stipulated.

3.3.9 Solid waste Management Regulation, 2009 GN. NO. 263

The regulation has been made under section 114, 115, 116, 117, 118, 119, 120, 121, 122 and 230 of Environmental Management Act, 2004. These regulations apply to all matter pertaining to solid waste management. They aimed among other things at setting standard for permit to dispose solid waste and license to own or operate solid waste disposal site. These regulations shall guide all the collection and disposal of solid waste from the industry.

3.3.10 The Environmental Management Act (Hazardous Waste Control), 2009

These regulations have been made under section 110(4) and (5), 128, 133 (4), 135 and 130 of the Environmental Management Act, 2004. These regulations apply to all categories of hazardous waste and to generate, storage, disposal and their movement into and out of mainland Tanzania. These regulations require that any person dealing with hazardous waste in Tanzania be guided by following principles of environment and sustainable development:

- The precautionary principle
- Polluter pays principle, and
- The producer extended responsibility

Road construction and operations is not associated with production of hazardous wastes. However, if it happen that hazardous wastes are produced TANROADS shall take stoke of this regulations in handling them.

3.3.11 The Environmental Regulations 2015 (Standards for control of noise and Vibrations)

Under these regulations NEMC is mandated, in consultation with the TBS, to establish criteria and procedure for the measurement of noise and vibration pollution; minimum standards for the emission of noise and vibration pollution into the environment and guidelines for the abatement of unreasonable noise and vibration pollution emitted into the environment from any source. The Regulations provide the detailed noise standards pursuant to this provision. The purpose of these Regulations is to ensure the maintenance of a healthy environment for all people in Uganda, the tranquillity of their surroundings and their psychological well-being by regulating noise levels, and generally, to elevate the standard of living of the people by prescribing the maximum permissible noise levels from a facility or activity to which a person may be exposed; providing for the control of noise and for mitigating measures for the reduction of noise.

The permissible limits are provided for in the Schedule to the Regulations. It is evident that construction of the roads shall produce too much noise and vibrations owing to the use of heavy machinery.

3.3.12 Standard Specifications for Road Works (2000)

These specifications were officially released in 2002. The main aim is to provide the specifications which should be adhered by contractor construction of roads. This document is usually part and parcel of the contract documents. Section 1700 of these specifications is dedicated to Environmental Protection and Waste disposal. This section contains the following Sub-sections;

- 1703 Landscape Preservation
- 1704 Temporary Soil Erosion Control
- 1705 Preservation of Trees and Shrubbery
- 1706 Prevention of Water Pollution
- 1707 Abatement of Air Pollution
- 1708 Dust Abatement
- 1709 Noise Abatement
- 1710 Light Abatement
- 1710 Preservation of Historical and Archeological Data
- 1711 Pesticides, Toxic Waste and Hazardous Substances
- 1712Clean up and Disposal of waste materials
- 1713 Measurements and Payments

This Section of standard specification shall be part and parcel of the ESMP for this project.

3.4 Institutional Framework

3.4.1 Overall Management Responsibility

The institutional arrangement for environmental management in Tanzania is well spelt out in the EMA (2004). There are seven (7) institutions mentioned by the act, of which the Minister Responsible for the Environment is the overall in-charge for administration of all matters relating to the environment.

Part III, Section 13(1) of EMA (2004) states that the Minister responsible for environment shall be in overall in-charge of all matters relating to the environment and shall in that respect be responsible for articulation of policy guidelines necessary for the promotion, protection and sustainable management of environment in Tanzania.

The legal institutions for environmental management in the country include;

- National Environmental Advisory Committee;
- Minister responsible for Environment;
- Director of Environment;
- National Environment Management Council (NEMC);

3.4.2 National Environmental Advisory Committee

The National Advisory Environmental Committee is comprised of members with experience in various fields of environmental management in the public and private sector and in civil society. The committee advises the Minister on any matter related to environmental management.

Relevance: TAC review and advice the minister regarding this EIA if it complies with the law.

3.4.3 Minister Responsible for Environment

The Minister is responsible for matters relating to environment, including giving policy guidelines necessary for the promotion, protection and sustainable management of the environment in Tanzania. The Minister approves an EIA and may also delegate the power of approval for an EIA to the DoE, Local Government Authorities or Sector Ministries.

Relevance: Shall issue certificate for this EIA.

3.4.4 Director of Environment

The Director of Environment heads the Office of the Director of Environment and is appointed by the President of the United Republic of Tanzania.

Relevance: TAC review and advice the minister regarding this EIA if it complies with the law.

3.4.5 National Environment Management Council (NEMC)

The NEMC's purpose and objective is to undertake enforcement, compliance, review and monitoring of EIA's and to facilitate public participation in environmental decision-making.

Relevance: Register and oversee the whole process of this EIA; Controls the implementation of the Environmental Management Plan (EMP) during and after construction of the road; Monitors the effects of activities on the environment during and after construction;

4.0 BASELINE ENVIRONMENTAL AND SOCIAL CONDITIONS

4.1 Identified zones of Impacts

This section covers the baseline environmental situation along the project corridor. Most of information provided in this section was gathered through observation and measurements during field survey. Some of the data were obtained through literature search. The baseline information provided below belongs to three zones;

i. Direct Impact Zone (DIZ) - This is the Right of Way of the proposed project road which includes 75m from the centreline (150m in total), 150m on both sides for the four major junctions, borrow pits, quarry sites, campsites etc.
ii. Immediate Impact Zone (IIZ): These are immediate surrounding areas about 500m on both side of the proposed road (villages/mitaa along the road)
iii. Area of Influence (AI) - This includes the wider geographical areas that are influenced by this project (e.g. Dodoma Municipality).

4.2 Dodoma City Synopsis

4.2.1 History

The history of Dodoma Urban settlement can be traced back before colonialism when the area was a popular passage route for the seasonal migration of wild animals from north circuit (Arusha) to southern corridor (Mikumi) currently Mikumi National Parks. In the course of animal passage a historical incidence occurred when a group of elephants submerged in the wet land near the former Mazengo secondary school (now St. John University of Tanzania). The act of submerging in the wet land is known as *Idodomya* in vernacular language of Kigogo community. This historical manifestation is what came to be the origin of the name Dodoma.

Dodoma town was declared the National Capital under The Presidential Decree No.320 of 1973. Since then, a series of successful stories have followed. In 1980, Dodoma Citywas established and in 1995 the Government decided that all parliamentary activities should take place in Dodoma and consequently The Tanzania National Assembly moved to Dodoma in February 1996.

4.2.2 Area and Administration

The Municipality of Dodoma covers the Capital District which is an area earmarked for the Capital Development Area. The area involved includes the area earmarked for urbanization to a population of 1,000,000; future International Airport, underground water catchment area; agriculture and livestock grazing area, a forestation and conservation areas; and other necessary institutional and service facilities. Numerically therefore Dodoma Municipal covers an area of about 276,910 hectares, (equivalent to 2,769 sq. km), radiating 30-40 kilometres in each direction from the present centre of the existing town. It is the smallest district in Dodoma region representing 6.3% of the total area. Dodoma City is administratively divided into one parliamentary constituency, 4 divisions, 41 wards, 18 villages, 170 mitaa and 89 hamlets.

4.2.3 Climate

The climate of Dodoma is semi-arid, characterized by a marked seasonal rainfall distribution with a long dry and short wet seasons falling through December to April each year. In 2011 the total rainfall was 643.1mm while in 2012 it was 605.1mm. However, the calculated total annual rainfall ranges between 550-600mm per year.

The general trend of average temperature varies from 20^0C in July to 30^0C in November each year. The highest temperature is 31.4^0C while the lowest is 14.5^0C. Due to the semi-arid nature of Dodoma Citydry wind is a common feature with increasing wind speed in July to November. It can be concluded that wind speed is usually high in dry season compared to wet season.

4.2.4 Topography

The Dodoma region is characterized by broad upland plains which are part of East African‘s Central Plateau. The Plains shelve gently down to mbuga swamps and separated by ranges of hills and punctuated by inselbergs, prominent, isolated rock outcrops. The Dodoma hills rise about 400 metres above the general level of plains. They are of great charm, with gentle valleys dividing them, such as Ntyuka and Ruaha valleys. Bounding the northerly plain to the North east are the more mountainous Hombolo Hills, rising 900 meters above the plain. From the site of the capital these appear as a massive wall.

4.2.5 Vegetation

In their natural state, the plains are marked by open grassland with little or no tree or bush cover. Due to the erratic nature of the rains and strong radiant heat of the sun, much of the grass is sparse, except in the low lying areas. Most common, however, are wooded grassland and bush land with thickets. These types of ground cover represent the majority in Dodoma area. In many areas they are typified by groups of enormous baobab trees. The bush tends to be leafless and drab in the dry season, but springs to luxuriant life during the rains when the whole countryside turns a brilliant green. Woodlands form the remainder of the area, with the heaviest concentrations on the hills of the region.

4.2.6 Population

According to the 2012 National Housing and Population Census, the population of Dodoma Citywas 410,956 consisting of 199,487 males and 211,469 females representing (24%) and (1%) of the Dodoma region and National population respectively.
Basing on the annual growth rate of 2.4 % of 2012, the population of Dodoma City is exponentially projected at 463,353 in 2017 (five years since 2012 census) and 522,428 in 2022 (ten years after the 2012 census).

The population density for the Municipality was 116.6 persons per sq. km in 2002, 148.4 persons per sq.km in 2012 and in 2013 is 151.7 persons per sq.km as obtained from the projected population. In the next census which will be in 2022 the population density is projected to be 202.3 persons per sq.km

4.2.7 Culture

Dodoma City is one of the districts in Tanzania that is endowed with cultural practices. The major tribes in the Municipality include; Gogo, Rangi, Sandawe, and few of the other tribes. The polygamist, extended families and male dominating decision making are among of the key culture of the areas. The most common languages spoken in the council include Kiswahili, Kigogo, Kisandawe, Kirangi and other minor tribes. The common food stuff for the indigenous people in DMC include Ugali (Stiff porridge) served with dried green vegetables and milk in some families. Mlenda is common for gogo people and Sandawe people and they are normally collected during wet seasons and dried for future use.

4.2.8 Housing Condition in the Municipality

There are three types of housing structures in Dodoma City(1) cement bricks with iron sheet /or tiles roofing (2) stone walls with iron sheet/tiles roofing; and (3) mud or timber walls with iron sheet roofing or grass thatched. Most of the houses in the centre of the town are constructed by brick and corrugated iron-sheets, also many government offices and few individual houses are constructed by bricks and the roofing is by tiles. New big expensive hotels and new expensive houses are also being constructed in Municipality indicating an attraction to medium and high -income people. Whereas the low-income people own/rent mud, wood and iron /grass thatched houses. These are mostly located in the squatter areas or in the outskirts of the municipality.

4.2.9 Land use

The land in the Municipal is used for subsistence agriculture, grazing and forest reserve. The Municipal has few roads which are accessible in all year round especially in urban. However, in some areas especially in rural accessibility is difficult during rainy season. About 71% (196,000 hectares) of the total area (276,900 hectares) is suitable for agricultural production. The estimated area for food crop production is 107,249 hectares and about 49,304 hectares are for cash crops production. The rest of the land is subdivided into grazing land (39,447 hectares), forest reserves (30,046 hectares), open land (11,362 hectares) and urban area covers 39,492 Hectares.

4.2.10 Education

Primary Education

For the year 2013, the number of primary schools in Dodoma Citywas 111 whereby, the largest share was dominated by public schools in terms of distribution and quantities. Generally, the distribution of these primary schools (both public and private) for the period of three years was high in Kizota ward followed by Hombolo by 8 and 7 respectively. Other wards and their corresponding number of schools for the period of three years are Mtumba (6); Makutupora (5); Makole (5); Mpunguzi (5); Nzuguni (4); Ng'hong'honha (4); Chihanga (4); Mkonze (4); Kiwanja cha ndege (4) to mention a few. In all 37 wards of the Municipal there was at least one public primary school in each ward, while private primary schools are found in only twelve wards. These schools attracted a total of 74,529 pupils in 2013, made up of 67,836 pupils from public schools and 6,693 from private schools.

Secondary Schools

The number of secondary schools in Dodoma Cityhas been constant at 36 and 15 secondary schools for public and private respectively. Most of these secondary schools are found in Chamwino and Kizota wards (both have 12 secondary schools), followed by Kiwanja cha ndege ward (9 schools); Mtumba (9 schools); Mbabala (9 schools) and others. Almost 8% of these secondary schools are boarding schools and the rest are day schools. Considerable physical facilities shortages such as furniture (chairs, tables, desks etc.) and other facilities such as dormitories, teacher's houses and offices, libraries, beds etc. have been reported and observed to most secondary schools especially public ones.

Tertiary Education in the Municipal

Table 4.1 Shows the Eight institutions offering tertiary education in the Municipality and their respective wards.

Table 4.1: Distribution of Institutions Offering Tertiary Education in DMC by Ward

Name of the Institution	Name of Location (Ward)
The University of Dodoma (UDOM)	Ng'hong'hona
St John's University	Kikuyu
Institute of Rural Development Planning (IRDP) College of Business Education (CBE)	Miyuji Makole
Madini Institute	Miyuji
Mirembe Institute	Hazina
ASEKI	Miyuji
Assemblies of God Bible College	Miyuji
Msalato Bible College	Msalato
Local Government Training Institute	Hombolo

4.2.11 Health

Health Facilities

In Dodoma Citythere are 70 health offering points, among which 49 are owned by government while the remaining 21 are owned by private entities including religious institutions and individual health specialists. Table 4.2 shows the ownership pattern in relation to the types of health facilities available in the respective region.

Table 4.2: Ownership of Health Facilities, 2013

Ownership	Dispensaries	Health Centers	Hospital	Specialized Clinics	Total
Public	39	8	2	0	49
Private	13	5	1	2	21
Total	**52**	**13**	**3**	**2**	**70**

Status of HIV/AIDS in Municipality

According to the Tanzania HIV/AIDS and Malaria Indicator Survey (THMIS) 2012, HIV prevalence among adults aged 15-49 in Tanzania mainland has declined progressively from 7% in 2003/04 to 5.3% in 2011/12. While the prevalence of HIV/AIDS in Dodoma region has declined from 3.3% in 2003/2004 to 2.9% in 2011/2012. However, number of PLHIV recorded in Dodoma Citywas14,087; 15,366 and 16,824 in 2011, 2012 and 2013 respectively and the number of PLHIV patients who were on ARVs was 4,485 (2011), 5,271 (2012) and 6,105 (2013).

4.2.12 Water Supply and Sanitation

Dodoma City depends on several sources including charcoal dams, shallow wells, open spring, rainwater harvesting and boreholes. Dodoma urban areas are mostly served by ground water from Mzakwe Basin. This basin is 30km north of Dodoma town and has a potential of producing 72,000m^3 of water per day from 21 boreholes (100-130m deep). However, the current supply of water is 40,000m^3 per day; this is produced from 8 boreholes only against the 21 boreholes available.

Compared to urban areas, water supply in rural areas is limited; about 39 villages in the Municipality have 25 deep water wells, 70 shallow water wells, 2 dams, 1 natural spring and 4 wind mills. It is about 51% of people in the Municipality have an access to safe and clean water. The management of water supply in Dodoma urban is under DUWASA. The major sources of water in the Municipality include deep and shallow wells, seasonal river water and dam.

4.2.13 Transport and Communication

Roads

The Municipality has six types of roads including; collector roads (157.2km), feeder roads (168.8km), urban roads (164.0km), these include the roads not in the ACT which collector roads (44.0km), urban roads (25.0km). The total road network under jurisdiction of Dodoma Citycovers a total length of 548.20km. The roads are paved, graveled or earthed. The conditions of these roads are good, fair or poor. Table 4.3 details out the situation. In addition to the Municipality road network there are 148km of paved road and 62km of earth roads owned and maintained by TANROADS.

Table 4.3: Road Surface Type with Conditions in Dodoma Municipal Council

Road Type	Length (Km)	Condition		
		Good (Km)	Fair (Km)	Poor (Km)
Paved	73.5	48.0	9.0	16.5
Gravel	186.1	66.3	79.1	40.7
Earth	288.6	98.2	17.3	173.1
Total	**548.2**	**212.5**	**105.4**	**230.3**

Airport and Airstrip

There is one operating airport in the DMC that is located in Kiwanja cha ndege ward. The air services are mostly provided by a Mission Aviation Fellowship Company (MAF) and other undetermined air service providers. The air services are not used commercially effectively since the business has not captured well the market. However in most cases the airport serves well for Government business when top Government officials visit the capital of Dodoma. Due to its location and taking cognancies of the capital city the Tanzania Government started venture of designing and construction of Dodoma International Airport which is to be located at Msalato in Miyuji ward. Compensation has been affected and designs are in progress. There is an airstrip at Hombolo which is privately used by the Catholic Missionaries.

Railway

Dodoma Cityis well connected with most areas through the central line which is a major railway line in Tanzania. It runs west from Dar es Salaam to Mwanza and Kigoma. In the Municipality, there are three railway stations at Zuzu, Kikombo and Dodoma town (Tambukareli). However, operationally services provided by the Railway Corporation have not been impressive due to number of factors including having old facilities and detonating infrastructure and managerial problems.

Communication Services

Communication services in the Municipality have expanded from just the presence of postal office/agencies, radios, TVs to the provision of cellular, e-mail, facsimile and interment services. This has been a notable improvement in communication services in DMC which has accelerated the economic activities in the Municipality. Among the service providers who have played well in this venture include: Airtel, Vodacom, TTCL mobile, Tigo and Zantel and Internet services.

Radio stations include: RTD, RFA, KISS FM, Nyemo FM, Dodoma FM, RADIO MWANGAZA FM, RADIO ONE, East Africa Radio, Capital Radio FM, Kifimbo Radio FM, RASS FM, Clouds FM and RADIO UHURU. The provided services have been important in terms of social and economic prosperity of the Municipal.

In addition, the Municipality has access to Television stations namely Television ya Taifa, Independent Television, Star Television, Agape Television Net Work and Channel Ten. Common newspaper in the Municipality include Mwananchi, Guardian, Uhuru, Mtanzania, Mzalendo, Tanzania Daima, Daily news, The Citizens and East African newspaper to mention some.

4.3 Baseline environment along the proposed project road

4.3.1 Topography and Land use

The terrain of proposed road is generally flat with a few rolling sections mostly covered by Miombo woodlands and farming activities dominated by sunflower, grapes, maize and millet.

Figure 4.1: The flat terrain of the proposed project road

4.3.2 Geology and Soils

The road is mainly a new route which passes through a virgin land. Based on a field investigation and soil classifications, the laboratory test results for Grading and Atterberg's limits, it shows most part of the proposed road has sub grade soils with characteristic ranging from Silty or Clayey Gravel and Sand, Silty Soils and Clayey soils.

Geology of the area is characterized by intrusive Basement Complex rocks, mainly *granites*. The granites outcrop in scattered inselbergs, mainly in Dodoma Hills south of Dodoma and in the Chenene mountains in the north. The granitic rocks are believed to be of late *Precambrian age* but their exact age, mode of emplacement and distribution in depth are so far unknown.

4.3.3 Water Resources and Hydrology

Surface Water Resources

Due to semi-arid nature of Dodoma Municipality, there is no surface water body within or near the proposed project road. There are small streams which are usually dry throughout the year, except during thunderstorms when they collect most of the runoff from the hills and foot slopes and store this water in the sandy stream beds or drain it into the swamps where it evaporates or feeds groundwater reservoirs.

Ground Water Resources

Groundwater is abundant in almost all the villages along the project road. This is evidenced by the fact that shallow wells are one of the sources of domestic water supply for all the villages along the project.

Ground Water Quality

Data on water quality from boreholes and shallow wells was not available to the consultant during the study. Interview with the local people indicates that water from almost all the shallow wells and boreholes along the road fresh with saline test.

4.3.4 Air Quality along the proposed road

The typical air pollutants from road transportation sources are Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2) and volatile compounds; and particulate matters (dust).

Despite the fact data on pollutant concentration along the proposed site was not available, ambient air quality was observed to be very good due to the following reasons;

- Currently there is no road (except for the 4 junctions) so there is neither dust nor vehicular emissions
- There is no industry nearby as the land is mainly used for settlements and farming
- Settlement areas are open (which facilitates populates dilution/dispersion)

4.3.5 Noise and Vibrations

Despite the fact that data on noise pollution of the project area was not available during the time of conducting the survey, the fact that there is no road (except for the 4 junctions), the noise and vibrations levels are rated to be negligible as the only source of noise at the project area are motor vehicles using the 4 major roads crossing the project area.

4.3.6 Scenic and Visual Impacts

The most common sources of deterioration of scenic and visual and qualities are caused by the presence of borrow pits and stockpiles of construction material as well as road generated dust, particularly the discoloration of buildings and vegetation. The survey did not observe any other significant deterioration of scenic visual quality.

4.3.7 Biological Environment

Flora

Natural vegetation along the project site is almost uniform and it is mainly *Acacia-Commiphora* deciduous bushland. This vegetation type is a representative of Somali-Maasai *Acacia-Commiphora* deciduous bushland found it Tanzania. It is being characterized by an assemblage of small trees and bushes growing on rocky soil with scattered emergent trees of *Adansonia digitata* (Boabab). Common trees found in this vegetation includes; *Commiphora spp, Acacia senegalensis, Euphorbia tirucalli,E. candelabrum, Delonix elata* and

succulents species of *Opuntia vulgaris,Cissus quadrangularis, Adenia volkensii* as well as *Adenium obesum*.

Figure 4.2: Typical natural vegetation of the project area

Settlements along the project site have alien plants which area characterized by ornamental plants and includes; *Bouganvillea, Catharanthus rosea, Cenna siamea* and *Mangifera indica*.

Figure 4.3: Alien vegetation at Veyula settlement

Cultivated land: This is a land which its natural vegetation have been removed being replaced with annul or perennial crops. This vegetation type is very common along the site especially near settlements. Dominant crops cultivated include; sun flower (*Helianthus annuus*), millet (*Pennisetum glaucum*), grapes (*Vitis vinifera*) and Maize (Zea *mays*).

Fauna

The main fauna of the area for which the project road passes consist of domestic animals such as livestock, dogs, chicken, and birds. No wildlife of any kid was observed.

Protected areas and Ecologically Sensitive Area

According Municipality Natural resources officer there is no protected area along the proposed project road.

Rare and endangered species

There are neither rare nor endangerd species along the project road

4.4 Socio-Economic Survey of the Affected Villages

Socio economic survey was conducted in all main eight (8) wards located along the route. In each village thirty five (35) households were interviewed. Therefore, the information analysed in this report is based on the above background. That means other villages located in the project area but not located direct to the road are excluded in the sampled wards.

4.4.1 Composition of the households

The average family size in the sampled wards is 4 members per household though there are some families with more than four or less members. The consultation show that majority of families headed by women are normally widow, divorced or never married women. Orphans and disabled persons were also found among the household interviewed.

The extended family is predominant structure of the household; male is the head of the household. Only in few cases whereby female head the house mainly in widowed families. Only 4% of the household heads were elder children in the family. Majority 81% of household heads were males. The rest 15% of the household heads were females. Refer to figure 4.4 below;-

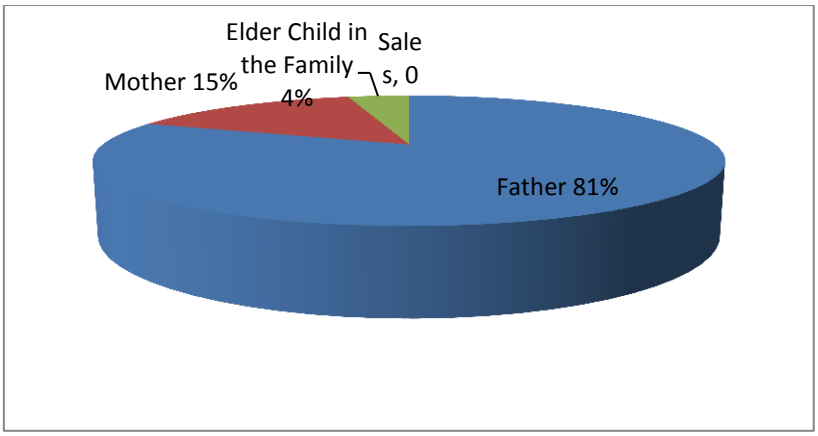

Figure 4.4: Head of Households interviewed
Source: Socio economic survey; 2017

4.4.2 Gender status in the Household

The interview with women revealed that, women are socially excluded from their proportionate share of the health and wealth of their societies, weakly represented in decision making and disproportionate burdened with task loads. The relationship between men and women, able and disabled, children, youth and old aged is of Para amount for National harmony and stability and social- economic development. However, the ward governments in the project area tries to involve all groups and empowering them in decision making so as to make an effective economic development. With all this effort women shy off to participate in decision making.

Economically, It was revealed that (60%) of economic development is made by women. Women are constrained with a lot of other responsibilities including reproduction and other household chores. The challenge that faces women is limited land ownership which limits their advancement.

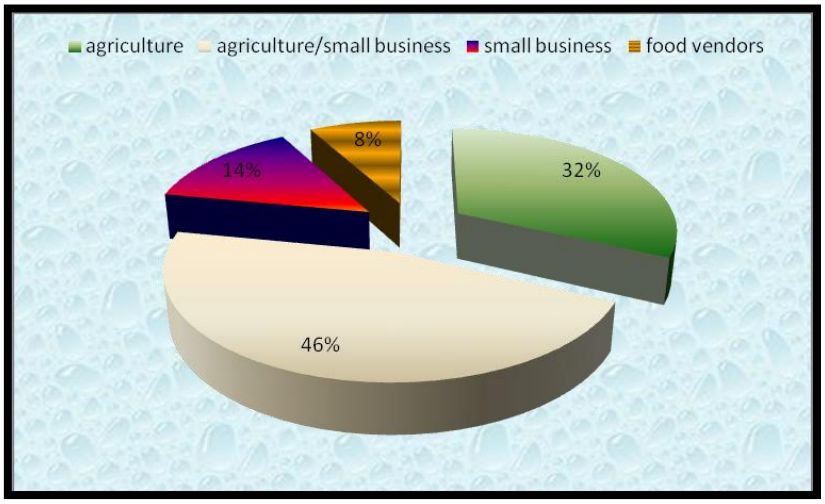

Figure 4.5: Economic activities performed by women
Source: Socio economic survey; 2017

4.4.3 Ethnicity and Religion of the Affected Villages

The main ethnic groups in the project area are Wagogo and Warangi who resided in Hombolo and Kikombo divisions respectively. Other small ethnic groups include the Wahehe, Wanyaturu, Wasandawe and Wasukuma. Most of the ethnic groups are predominantly agriculturalists. Regarding religion, 78% of residences are Christians and 22% are Muslims and the rest never indicated their religion.

4.4.4 Language

In Tanzania, Swahili is the national language and also the language spoken by a majority including population in rural areas. However, in some instances, the elder population are more conversant in their mother tongues and this may be the case encountered in many rural areas. Hence, in this project area, Swahili is the main language spoken though you still find some using the local dialects. The ethnic languages spoken in the project area include Kigogo, Kirangi, and Kisandawe languages.

4.4.5 Dependency Ratio within households

Considering the competing household needs Visa vie the income levels, the majority of over 55% of the interviewed household are dependant of 35 of the working age. The dependant group include children at school or at pre-school age as well as elderly group above 65 years.

4.4.6 Settlement

The route corridor is densely populated. Settlement patterns include dispersedly (though by no means isolated) dwelling nucleated villages and small urban centres. Most of the settlement reveal the influence of the Government Institution like Makutupora Jkt, Ihumwa Army division, University of Dodoma, in that houses are built in straight lines – though much infilling has since occurred**.**

Buildings in the densely populated centres of large wards like Ihumwa, Nala, Makutupora and Matumbulu do face the proposed road, other places the houses are far from the proposed road, and instead there are farms.

4.4.7 Tenure and Land Use

There are different systems of land tenure found along the project road. This includes; customary right-inherited from parents, village government allocation, buying as well as self-allocation. The primary data from the socio economic survey revealed that 45% of the interviewed households acquired land through buying while 47% inherited land form their parents the rest 5% reported to have been given land by village government. Only 3% of the interviewed households have been allocated land themselves. During the selling of land the village government normally witnesses the transaction and keep records for future reference in case of problem between a seller and a buyer. During the study it was revealed that land has value at Nghong'onha, Makutupora,Ihumwa and Nzuguni wards settlements compared to other wards along the route. Refer to the figure below:

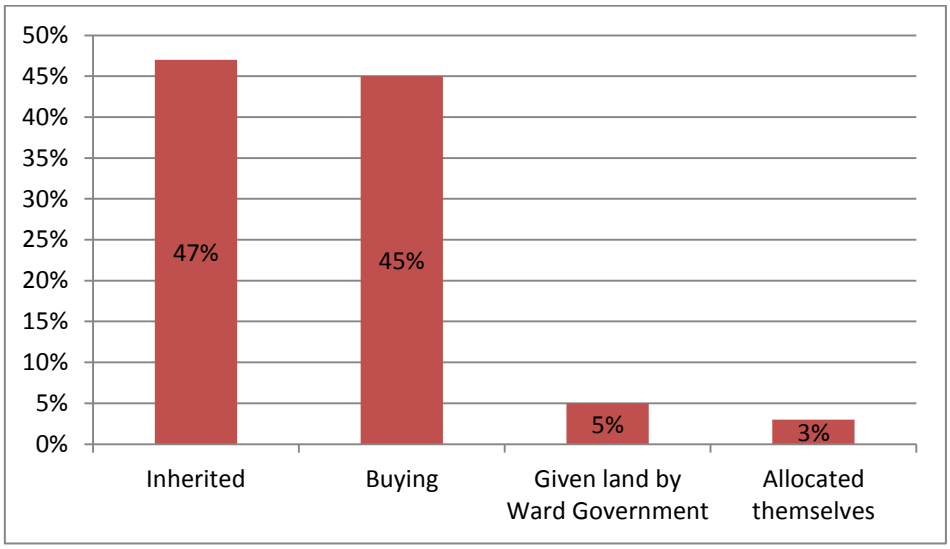

Figure 4.6: Land Tenure systems
Source: Socio economic survey; 2017

Regarding land ownership, majority of household hold below 1 acre of land (64.8%). Majority of the respondents are of the view that the government should support PAP's in the process of land acquisition. Concerning relocation most of the affected people would

prefer to remain in their present wards (85%). The rest would not mind to relocate elsewhere.

Most widespread land use in study area is small-scale, rain-fed agriculture. Use of the drier upland areas by local farmers is limited; and most of land are using during the rainy season for farming.

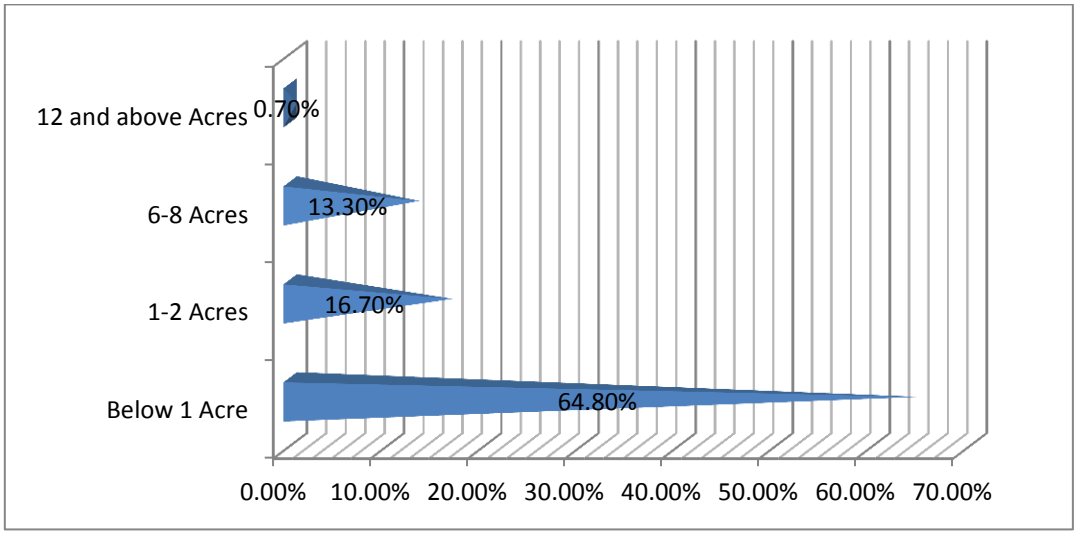

Figure 4.7: Land size owned by members of household
Source: Socio economic survey; 2017

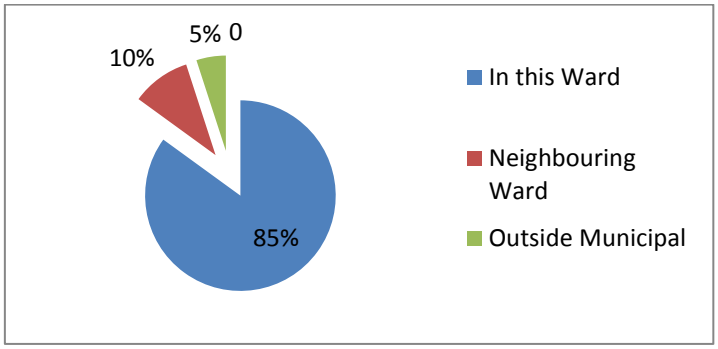

Figure 4.8: Choice of Household settlements
Source: Socio economic survey; 2017

4.4.8 Employment / Household

The informal sector is the main employment of residents along the proposed project road. Other common activities include livestock keeping and petty business. Only 15% of the respondents are employed in the formal sector.

4.4.9 Agriculture

Majority of the people in the study area are predominantly subsistence farmers. Minority are engaged in poultry and livestock keeping. Agricultural production system in the wards seems to be based on shifting cultivation using mainly traditional, and thus labour-intensive,

methods and technology. Few inputs are used, as only a minority of the wealthier farmers can afford to hire a tractor; similarly pesticides and fertilizers are both expensive and difficult to obtain. However, the councils have been distributing fertilizers that support the agricultural system conducted within the Council. The cropping cycle follows the rainfall pattern for the area with December, January and February being the main crop growing season and harvesting starts at the end of March to May.

The principle food crops grown in the area are maize, beans and grapes. Cash crops include grapes. Maize is the major food crops contributing in earning villager's income. Though, majority of the people sell any surpluses of these food crops locally in the villages/Mitaa. A variety of other vegetable and tree crops are also grown for mixed purposes of subsistence (construction) and trading

4.4.10 Livestock keeping

Livestock keeping is one of the main components of the economy in the project area. This includes cattle, goats, pigs, sheep and chicken. 94.8% of the respondents own livestock. Out of 94.9 of the respondents reported to own chicken/duck/turkeys. Only 1.9% own cattle and 0.4% own goats/sheep. See the table below;

Table 4.4: Type of livestock kept in the household

Item	Frequency	Percent
Not owning livestock	5	2
goats/sheep	24	9
chicken/ducks/cattle	251	89
Total	280	100.0

Source: Socio economic survey; 2017

4.4.11 Source of income for the interviewed households

The socio-economic survey reveals that 87.8% of the interviewed households solely depend on agriculture as their source of income. Other groups depend on agriculture but also are involved in other activities like small business, formal employment (teachers, village government officials) as well as livestock keeping.

Table 4.5: Source of income for the interviewed households

Item	Frequency	Percent
Agriculture	18	7

small business	11	4
formal employment/agriculture	54	19
agriculture/small business/livestock keeping	197	70
Total	280	100.0

Source: Socio economic survey; 2017

Eighty percent of the respondents reported to earn below 300,000 Tshs per month, followed by 10% who earn between (300,000 to 500,000 Tshs per month) and 8% (500,001/- - 1,000,000/- per month). Lastly 2% reported to earn above 1,000,000/- Tshs per month. Please refer to the figure below:

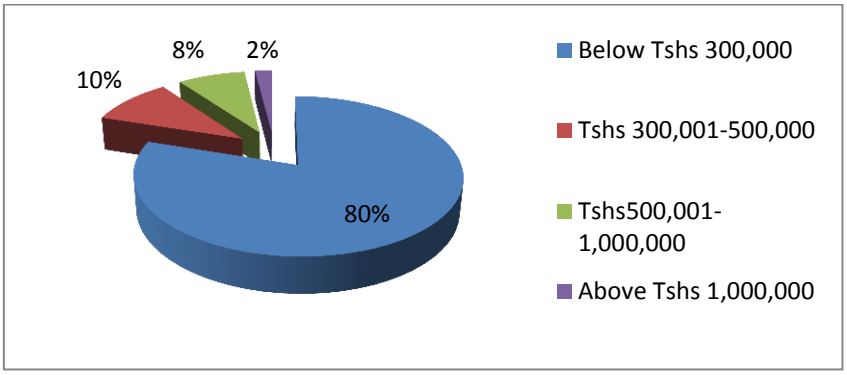

Figure 4.9: Total cash income for the last month
Source: Socio economic survey; 2017

On the other hand 40% of the respondents reported to earn below 1,000,000 Tshs per annum, followed by 30% who earn between 1,000,001-3,000,000 Tshs per annum. The rest 20% their income is between 3,000,001/- - 5,000,000/- per annum,6% 5,000,001-7,000,000 and 4% above 7,000,0000 Please refer to the figure below.

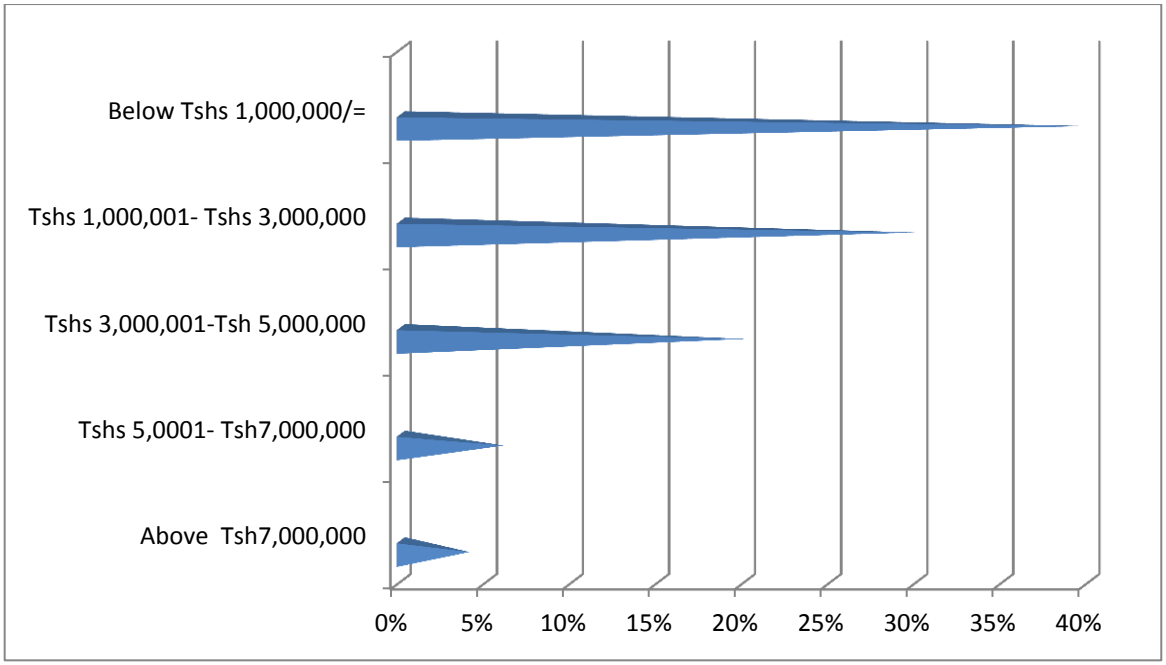

Figure 4.10: Total cash income for the last year
Source: Socio economic survey; 2017

4.4.12 Water Supply

There are different sources of water in the project area. This includes house connection, communal hand pumps as well as natural springs. During the socio-economic survey, it was reported by water users that there are water problem especially in ward like Matumbulu, Nghong'onha and Mbambala wards because of this majority of people don't have a permanent source of water. Villagers travel long distances looking for water. Makutupora, and Zuzu have no water problem compared to other wards

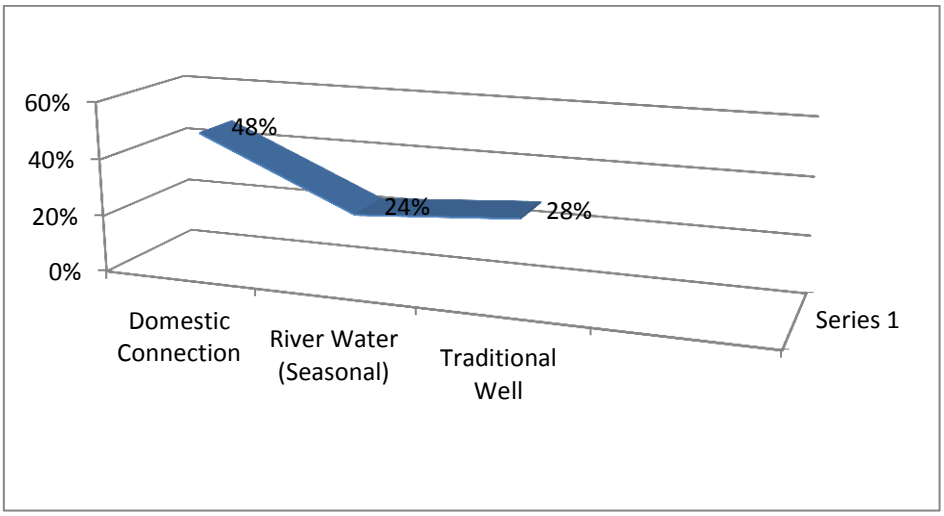

Figure 4.11: Sources of water found in the project area
Source: socio-economic survey; 2017

Generally, water used by residents in some wards is not safe; as a result water related diseases attack water users. During the survey residents reported to experience water related diseases such as diarrhoea, intestinal worms and typhoid.

4.4.13 Sanitation (Solid and liquid waste)

Sanitation facilities give an indication of health status, as well as socio-economic development. Most of the households use pit latrines without permanent structures including walls and roofs. Good solid waste management was observed during the survey. Majority of the household dispose the waste in pit holes (94.3%), although in some households they throw in farms (5.7%). Poor solid waste disposal results into air pollution.

Table 4.5: solid waste disposal

	Item	Frequency	Percent
	Farm	16	5.7
	pit hole	264	94.3
	Total	280	100.0

Source; socio-economic survey; 2017

4.4.14 Energy

Some of the households are connected with electricity while others not. Majority 76% of the interviewed households are connected with electricity while the rest 20% use solar as a source of light and 4% use kerosene.

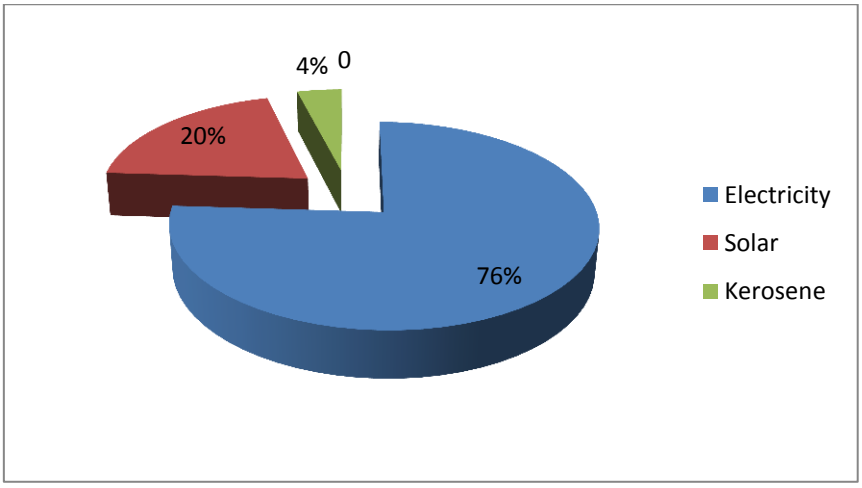

Figure 4.12: Source of light for the households
Source; socio-economic survey; 2017

The main source of energy for cooking in the project area, both in the urban and rural areas is firewood (80%), followed by charcoal (15%), while 5% use gas.

Table 4.6: source of cooking for the households

Item	Frequency	Percent
Firewood	224	80
Charcoal	42	15
Gas	14	5
Total	280	100.0

Source: socio-economic survey; 2017

4.4.15 Telecommunications

The entire networks are available along the proposed road, although the signals in some areas are weak particularly in valleys. These Cellular phones include; Vodacom, Tigo, Zantel Airtel, Halotel and Smart. Post office, Internet and fax services are available along the proposed Road project.

4.4.16 Health services

The accessibility to health facilities in the project area is good since almost every ward consulted has dispensary. Villagers do walk about 1 – 5 km to reach a dispensary. The hospitals are found at Dodoma Town. In the course of the survey, the Consultant learned that access to modern treatment was accessible to many households due to availability of treatment. The medical personnel are adequate and qualified.

4.4.17 Education

Education services are well developed. Almost in each ward there is a secondary school. The problem that was observed is the distance of walking to reach those secondary schools. For instance, students within Zuzu, Matumbulu and Nzuguni do walk more than 5 kilometres to reach to a place where the secondary school is located.

It is anticipated that the road improvement will have an impact on quality of education by making it easier to construct schools of durable materials and to attract teachers to work in otherwise remote locations. However, it likely to have a positive impact on the school attendance, this is because most of the families are affording the costs to send their children to school.

4.4.18 Houses

In the Dodoma Municipal communities, cement bricks are the usual walling materials. Good numbers of houses are roofed with corrugated iron sheets. These houses are normally

owned by wealthier members of the community. The proportion of houses built with durable materials is significantly found at all Wards. All houses are either square or rectangular. All houses are single story and have two to three rooms. Houses are almost exclusively owners occupies, there are many houses which are rented by employees and other people working in the wards.

5.0 STAKEHOLDERS CONSULTATIONS AND PUBLIC INVOLVEMENT

5.1 Introduction

Public consultation is an essential requirement of the environmental impacts assessment process, Its aim is to ensure the public acceptance of the project as well as to limit adverse impacts; it also helps to uncover issues that the preparation team may not have been identified nor addressed in the EIA. If the community participates in the early stages of project preparation, then it should be possible to develop a close relationship between the community and the project team, thereby allowing the community to put forward valuable proposals before project implementation. The Objectives of public consultation are to:

- share information about project components and proposed project activities with the community in the project areas, and also with relevant stakeholders.
- gather different viewpoints and opinions, and to understand the concerns and sensitivities of local authorities and communities on environmental problems in the project areas, especially problems which were not identified by the EIA team. Using this information, public concerns can be addressed in time, during project design and when selection between alternative solutions are made and;
- perform a thorough and comprehensive evaluation of all environmental impacts and propose the most effective mitigation measures that exactly address the expected adverse environmental impacts of the project.

5.2 Public Consultation Process

Preparatory activities were conducted by the team of consultants which aimed at engaging the stakeholders to take full part in the consultation process. This included sending information to Wards leaders requesting their assistance in the preparation of public meetings within their respective constituencies. Stakeholders' consultations were done at Regional, District, ward level and (mitaa) located along the proposed roads. The comments received and issues raised from these public participation exercises have been incorporated not only to enrich the report but also attached as appendix for reference. Indeed, the consultations greatly helped in determining mitigation measures for the project. The methodology stakeholders' identification and consultation is presented in section 1.7.2 of this report. Table 5.1A presents the issues raised by institutions while Table 5.1B presents issues raised by communities during public meetings.

Table 5.1A: Issue response Table for Institutions

Institution	Name	Position	Issues/ Concerns
Dodoma Regional Secretariat	Rehema Madenge	Dodoma Regional Administrative Secretary	The construction of the road will open the economically other areas like Bihawana, Matumbulu also Zuzu, which the centres for businesses will grow and also agriculture issues will be improved
Dodoma District Commissioner's Office	Christina Mndeme	Dodoma District Commissioner	The Construction is need especially now Dodoma Municipal is growing and expanding, the upgrading of Infrastructures is more important.
Dodoma Municipal Council	• Hidaya Maeda • Eng. Lusako Kilembe/ Atumani Kissiwa • Yusuph Nguzo • Akengarami Urassa • Jane R. Meda • Damas Mwakindingo • Mafungo Manyama • William Alfayo	• AG. Municipal Director • Municipal Engineer • Municipal Architect • Environmental Management Officer • Environmental Management Officer • Land Officer • Community development officer • Town Planner	• We are welcoming the project, so that to improve our Dodoma Municipality • Dodoma Municipal now is finalising its master plan, it will be good if the consultant/TANROADS share the design with the Dodoma Municipality • The project will help the master plan to attentive, and feasible • All borrow pits must be rehabilitated well after construction • There are three satellite towns earmarked at Veyula, Nala and Kikombo (near Ihumwa) therefore the project road shall serve these towns • All types of wastes must be well collected and taken to the Landfill at Chidaya about 12km from city centre • Community sensitization programme on HIV matters must be part and parcel of the project. Community development officers of the municipal must be part of the programme.
TANESCO DODOMA	Respecius	AG. Dodoma Regional	TANESCO also looking to set its infrastructures like

	Ndyanabo	Manager	the ring road , around Dodoma Municipal, so it will be better to share design with the TANESCO office Dodoma
Dodoma Urban Water and Sewerage Authority (DUWASA)	Daniel Mgunda	AG; Technical Manager	DUWASA as its infrastructures which the ring road will cut across especially at Makutupora ward, there is a main pipe come from Mzakwe, the design should be consider it
University of Dodoma	Eng. James Joel	AG; Estate Manager	The idea is good because it will help UDOM to have a good road access. Also the places where it has shown that the road will cut across within UDOM, the Estate Manager's office should be informed.
TRL/RAHCO	Eng. Happiness Henry	District Engineer	We are welcoming the project, and whenever , it needed assistant from TRL/RAHCO , the Consultant don't hesitate to inform the office
ZONE MINES OFFICE (CENTRAL ZONE DODOMA)	Silimu Mtigile	Dodoma Regional Resident Mining Officer	Where the borrow pits will be identified, it will better to inform the office for mining, so that it can calculate the service levy from there.
ST. JOHN UNIVERSITY	Daniel Wandera	Director of Planning and Development	St. John has 200 acres at Nala Ward, where the road will across, it will be better to show the office exactly ROW, so that to see the impact of land acquisition
MINISTRY OF TRANSPORT	Banaga Katabazi	Senior Human Resource Officer	There road will help the dry port, at Ihumwa area, for good and Transportation
TANZANIA AIRPORT AUTHORITY	Julius .K. Lugwana	Airport Manager	The road is passing near the new airport area at Msalato, where will help to bring people from every places from and within Dodoma Municipality

834 KJ MAKUTUPORA	Aristides Rutta	Commanding Officer	We are welcoming the project, as it will help the camp to be separated from civilians
911 KJ IHUMWA	Elias P	Relation Officer	The surveyors should show exactly the root, in order to see if it will affect the military operations
JKT HQ	NB Ngassa		If the road will pass within the camp area of JKT Makutupora, will not allowed, but if it cross along the border between the civilians area and camp it will be better in order to avoid conflicts and civilians to encroach the camp area.

Table 5.1B: Issue response Table for Community

Ward and Mtaa	Aspect	Issue/ Concerns and Questions	Responses / Remarks
Makutupora Ward	Diversions and road close	It is expected the road closure to take part during road construction.	This obliges contractors to construct diversions that will allow users to access road service.
	Employment opportunities	Can we get employment? As most of unskilled labours are here within wards?	During the construction of the road the members of the community will be employed by the contractor. The women will provide services such selling food and drinking. They will also operate tea shops along the route.
Ihumwa Ward	Other infrastructure located	The contractor should involve leaders and local people to locate existing infrastructure especially water pipes in	The survey should be done so that before construction the infrastructures should be shifted.

Ward and Mtaa	Aspect	Issue/ Concerns and Questions	Responses / Remarks
	adjacent to the proposed road	order to avoid cutting pipes or destruction of the same. Communities expressed their experience that once pipes are cut, contractors rarely reinstall them after completion of the project causing water problems to the community	
	Land acquisition for shifting	Since we are here for long time, if it happens we need to shift, will be any compensation?	The government should help them in finding new places for shifting even though they are going to be compensated. Therefore, ward/sub ward governments in collaboration with the central government should engage to assist the PAPs in acquiring the land for construction. Many ward/subward governments have enough reserved lands for those who will be landless.
Nala Ward	Dust management	As for now the dust management is very weak especially during dry seasons , as cough is common along the habitats , we need a good dust management	The contractor must have means of reducing the dust otherwise conditions may be intolerable during the dry season.
	Increase of road accidents	Increase of road accident is another concern raised by stakeholders in ward/sub ward along the project road	There will be road signs and speed humps for the whole road.
Matumbulu Ward	Destruction of properties	We did not build in the road, but the proposed road is coming to our places, what will the implications especially on compensation issues?	The road project will cause for the loss of PAP's properties i.e. houses, farm, properties etc. They went further by asking on whether the government will

Ward and Mtaa	Aspect	Issue/ Concerns and Questions	Responses / Remarks
			compensate both land and structures to be affected by the project. The stakeholders insisted that the government should by all means compensate the affected people.
MBABALA WARD	Increase of HIV/AIDS Infection	The project will increase immigration in the area with consequential HIV/AIDS increase.	Some measures will be put in place to control the disease.

6.0 ASSESSMENT OF IMPACTS AND IDENTIFICATION OF ALTERNATIVES

6.1 Spatial, Institutional and Temporal boundaries

6.1.1 Spatial Boundaries

The spatial dimension encompasses the geographical spread of the impacts regardless of whether they are short term or long term. The spatial scale considers the receptor environmental component and can be local or broader. Following this, three zones of impacts are considered;

The core impact zone: This includes the area immediately bordering the project (local). In the case of this project local impacts will include the site of the construction, (borrow areas, quarries and camp sites)

Immediate impact area: These are immediate surrounding areas (project wards)

The zone of influence: This includes the wider geographical areas that are influenced by this project (e.g. Dodoma Municipality).

6.2 Impact Identification

The impacts are categorized into Pre-Construction phase impacts, Construction phase impacts and Operational phase impacts. The main receptors of impacts associated with the anticipated Infrastructure Upgrading include physical resources (hydrology, surface water quality, soils, air quality and noise); ecological resources (vegetation); material assets, public health and safety, aesthetics and landscape.

The following impacts were identified to be likely to occur during pre-construction phase;

- Job creation and increased income
- Land expropriation , loss of property and resettlement
- Loss of employment and income

The following impacts were identified to be likely to occur during construction phase;

- Job creation and increased income
- Destruction of public utilities
- Soil erosion and instability of slopes
- Risk Water and Land Pollution
- Increased noise, vibration and air pollution
- Occupational Safety and health risks
- Increase road accidents
- Increased Waste
- Loss of Scenic Quality
- Loss of Vegetation
- Child Labour

- Increased HIV/AIDS
- Population Influx
- Visual Intrusion during Construction

The following impacts were identified to be likely to occur during operational phase;

- Job creation and increased income
- Improved Transport and economy in Dodoma suburbs
- Decongestion of Dodoma main Roads
- Reduced Vehicle operation costs
- Increase road accidents

The interaction between the intended project activities and the different environmental receptors are summarized in a simplified matrix presented in Table 6.1.

6.3 Impact Rating

Taking into account the criteria stated in methodology section (1.6.3), A simple matrix with the following ratings was used to determine significance of the identified impacts stated in section 6.2 above:

+3	Very high positive impacts
+2	High positive impacts
+1	Minor positive impact
0	No impacts
-1	Minor negative impact
-2	High negative impacts
-3	Very high negative impacts

Table 6.1: Environmental and Social Impacts Matrix for the Proposed Dodoma Outer Ring road

		Impact Rating Criteria					Impact Significance Rating			
S/N	Environmental parameters/Impacts	Spatial Scale	Temporal Scale	Reversibility	Cumulative Effects	Residual Impact	Mobilization Phase	Construction Phase	Demobilization Phase	Operation and Maintenance
	Negative Impacts									
1.	Land expropriation, loss of property and resettlement	L	ST	R			-3	-2	0	0
2.	Destruction of public utilities	L	ST	R			-1	-2	0	0
3.	Soil erosion and instability of slopes	L	ST	R	✓		0	-2	-1	0
4.	Increased noise, vibration and air pollution	L	MT	R	✓		-1	-2	-2	-1
5.	Occupational Safety and health risks	L	ST	R			-1	-2	0	+1
6.	Increased accidents	L	MT	R	✓		-1	-2	-1	-2
7.	Increased Waste	L	ST	R			-1	-2	-2	-1
8.	Loss of Scenic Quality	R	LT	IR		✓	-1	-2	-1	-1
9.	Loss of Vegetation	R	LT	R		✓	-1	-2	0	0
10.	Interference to local hydrology	L	LT	R		✓	0	0	0	-2
11.	Loss of Definite Materials and Land Degradation	L	ST	IR		✓	-1	-2	-1	-1
12.	Increased HIV/AIDS	R	LT	IR	✓	✓	-1	-2	0	0
	Positive Impacts									
1	Employment Opportunities	R	LT				+2	+3	+1	+2
2	Improved Transport and economy in Dodoma suburbs	N	LT				0	0	0	+3
3	Decongestion of Dodoma main Roads	R	LT				0	0	0	+3
4	Improved community life and services	R	LT				0	0	0	+3

Key: Spatial Scale: Local (L), Regional (R), National (N)
Temporal Scale: Short Term (ST), Medium Term (MT), Long Term (LT)
Reversibility: Reversible (R), Irreversible (IR)
Significance: Highly Adverse (-3); Adverse (-2); Mild Adverse (-1); No impact (0); Mild Beneficial (+1); Beneficial (+2); highly Beneficial (+3).

The team focused on significant positive and negative impacts that were rated +2, +3, -2, -3 and developed mitigation measures and ESMP for them.

The following significant impacts were predicted to be likely to occur during pre-construction phase;

- Job creation and increased income

The following significant impacts were predicted to be likely to occur during construction phase;

- Job creation and increased income
- Destruction of public utilities
- Soil erosion and instability of slopes
- Risk Water and Land Pollution
- Increased noise, vibration and air pollution
- Occupational Safety and health risks
- Increase road accidents
- Increased Waste
- Loss of Scenic Quality
- Loss of Vegetation

The following significant impacts were predicted to be likely to occur during operational phase;

- Improved Transport and economy in Dodoma suburbs
- Decongestion of Dodoma main Roads
- Improved community life and services
- Increase road accidents

In the next sections, significant impacts (positive and negative) associated with each phase of the project are discussed or evaluated.

6.4 Pre- Construction Phase

Positive impacts

6.4.1 Job Creation and Increased Income to Local Communities

During this phase people shall be employed by the contractor to do mobilization works such as construction of site offices, quarrying and material extraction and transportation activities etc. About 50 people shall be employed during this phase. This shall increase the income to all those who have the opportunity to be employed by the contractor.

Negative Impacts

6.4.2 Land expropriation, loss of property and resettlement

The use of land for road construction shall entail the voluntary sale or compulsory acquisition (expropriation) of homes, property, businesses, farms and other

productive resources. In Tanzania expropriation method is common, which by its nature causes social disruption and economic loss for the affected individuals and their families. The impacts of expropriation are not only social and economic, but also psychological and in most cases complex or devastating. A participatory approach and dialogues to solving such issues have proved fruitful in previous road development projects in Tanzania.

The construction would most likely involve among other things, demolition of people's houses and business premises affecting all communities along the project road. Apart from buildings, some of the cultivated farms and forest resources (Tea Plantations, Pine and watt plantations) will be affected. Compensation for lost property (farm or building) is an important issue that should not be underestimated. During consultations with the communities and district authorities/leaders, it was very clear that compensation must be made prior to implementation of the project. Failure of implementing the compensation plan can result into social friction with local communities that can cause delay in construction schedule. The design team is still in the process of locating the centerline for the new road; therefore it is not possible now to give the accurate data on the number of properties to be affected by the project road.

Figure 6.1: Houses located within the RoW at Veyula

6.5 Construction Phase Impacts

Positive impacts

6.5.1 Job Creation and Increased Income to Local Communities

Most of the casual labourers and some skilled workforce will be absorbed from within Dodoma Municipality. The Project is expected to employ more than 100 casual labourers from nearby streets. In addition, the local people will be selling food and other merchandise to the construction workforce. The utilization of local workmanship will take place for the activities that do not require a high specialization, and in any case there will be diffusion of knowhow from the more qualified personnel towards the local personnel.

Negative Impacts

6.5.2 Destruction of Public Utilities

Electric Power Supply lines and water supply pipes are expected to be affected by the project since the utilities run alongside the project roads. These shall cause disruption of services during construction caused by moving of the utilities outside the corridor of impact. Relocation of these infrastructures is therefore very important for the construction of this project. However, this relocation can cause the following impacts to the community;

- Cost implications to the authorities managing the infrastructures
- Disruption of service to the community provided by these infrastructures.

Figure 6.2: Power lines running along the project site at Matumbulu

6.5.3 Soil Erosion and Instability of Slopes

Construction works would accelerate erosion problems in most cut sections. Nevertheless, all cuts in the sloping grounds should be refurbished firmly and provided with the vegetation cover to reduce the effect of soil erosion. This impact is expected at all sub-projects since Dodoma has very prone soil (Loose, Semi arid) for erosion.

6.5.4 Noise, Vibration and Air Pollution during Construction Phase

Dust will arise from roads construction work due to excavation work, movement of vehicles, stock piling of materials, operation of crusher and asphalt plants, and general earth works at the site. Exhaust fumes will mainly come from construction plant, machinery and vehicles in operation. Fumes will also come from the processing of asphalt. Dust and fumes will have major direct but short-term impacts during the project construction phase. Along the project roads, the adjacent areas are relatively open, without impediment to air movement hence enhance dilution of air pollutants. For areas away from the road, leafy vegetation should be able to filter out a considerable content of low level air borne pollutants. Thus, ventilation and vegetation are anticipated to lessen the air pollution problem. Moreover, sprinkling of the road with water during construction work will further lessen generation of dust, and consequently alleviate the air pollution problem.

Noise and vibration will be produced by construction vehicles, plant and machinery during delivery of materials, processing of materials, and actual construction work. Due to an increase in activities and number of operational vehicles, the impacts of noise and vibration will cause disturbance to humans and animals as well as birds. Vibration may even cause physical damage to properties near the construction site. The vegetation and loose soil along the roads in the project area have the potential for damping noise and vibration. As such, noise and vibration impacts will have short range – near the construction site. Dust will be a temporary nuisance to the people within the core impact area especially during construction in the dry season.

6.5.5 Safety and Health Risks

Roads construction exposes the labourers and the general public to bronchial and other respiratory tract diseases due to dusts. Also poor use (or not using at all) of the safety gears during construction phase will result into loss of lives or injuries during construction. The incidence rate of water borne diseases such as cholera and diarrhoea will increase if there will be no proper sanitation practices at the site office.

6.5.6 Increased Road Accidents

Increased traffic during construction and poor road safety measures like absence of diversion (where necessary) during construction and road safety awareness campaigns will result into unnecessary road accidents to people especially school children and old people. Also, there are a lot of motorcycle (bodaboda) and bicycle riders (both women and men) and they seem not to care about vehicles on the main road. This may be a significant Impact during construction.

6.5.7 Increased Wastes

It is obvious that construction activities are associated with production of wastes. These wastes can either be solid waste or liquid waste. The waste streams are construction activities and domestic activities of the workers at the site offices. The solid waste include, Spoil, rubbles, Tree logs, metals, glasses, papers etc while the liquid waste include Sewage, oils etc. These wastes if not well handled can change the aesthetic nature of the project area and can even lead to water pollution in case of improper disposal of oils. The quantities and types of wastes were presented in chapter 2.

6.5.8 Loss of Scenic Quality

Scenic quality deterioration will occur due to stock piling of construction materials and discoloration of plant leaves and houses in the vicinity of the roads due to windblown dust. Excavation work as well as presence of construction vehicles, plant and equipment will also add to scenic quality deterioration. Scenic quality deterioration will also occur off-site, at the sources of construction materials, the quarries and sand mines. If these are not made good they may become an eyesore.

Scenic quality deterioration can destroy the economic and aesthetic value of public and/or private property including land. Scenic quality degradation effects will be significant, short term and direct. They will, in spite of everything, be manageable given proper site operation and prior warning as well as issuance of site operation guidelines.

6.5.9 Loss of Vegetation

Land clearance to obtain the required area for the facilities will involve uprooting vegetations which falls within the area as well as displacing huge masses of topsoil. This impact is insignificant since most of the proposed site area have no vegetation at all except for a few which has a few trees and grasses.

Figure 6.3: Typical vegetation to be affected

6.5.10 Loss of Definite Materials and Land Degradation

Construction of the road will have direct impacts related to excavation, quarrying and deposition of spoil material. Significant volumes of earthworks fill; road gravel and rocks will be extracted during project execution. Since the road will be constructed to bitumen standard, then, significant use of definite materials is expected.

Quarrying involves clearing the vegetation at the sites, excavation and transportation of the material. Thus, borrowing and quarrying activities will cause habitat change, land degradation (due to removal of fertile top soil), landscape impairment (visual intrusion) and soil erosion-which lead to siltation of waterways. Quarrying, excavation and the disposal of spoil material can destroy the economic and aesthetic value of public and/or private property including land. Some species may be affected during construction, but not to the level of extinction. However, establishment of detour routes during construction may damage some species.

Scenic quality deterioration will occur due to stock piling of construction materials and discoloration of plant leaves and houses in the vicinity of the roads due to windblown dust. Excavation work as well as presence of construction vehicles, plant

and equipment will also add to scenic quality deterioration. Scenic quality deterioration will also occur off-site, at the sources of construction materials, the quarries and sand mines. If these are not made good they may become an eyesore. Scenic quality deterioration can destroy the economic and aesthetic value of public and/or private property including land. Scenic quality degradation effects will be significant, short term and direct. They will, in spite of everything, be manageable given proper site operation and prior warning as well as issuance of site operation guidelines.

6.5.11 Increased spread of HIV/AIDS

The most health risk is on HIV/AIDS epidemic. Considering the socio-economic as well as geographical characteristics of the project area, there exist number problems that either may influence high infection rate, or deter efforts to combat the epidemic. For example, the problem of low or irregular incomes among young women aged 15 – 45 years is HIV/AIDS risk factor, which can influence high infection rate in the project area. At the same time, poor road networks in villages along the project road hinder the transmission of information, education and communication on the prevention of HIV/AIDS to reach people in the interior rural areas.

Local people at the project area were concerned about the influx of people into the area including construction workers. This would result in an increase in the incidence of diseases including STI, and HIV/AIDS. This would also lead to an increased pressure and demand on social services. Currently Dodoma Region prevalence rate is 5%. This rate can dramatically increase during construction of the project road if proper measures will not be implemented.

6.6 Operational Phase Impacts

Positive Impacts

6.6.1 Job Creation and Increased Income to Local Communities

There would also likely be employment availability during the operation phase pertaining to roads maintenance such as grass cutting, cleaning drainage culverts, etc; as well as some clerical / low level supervision jobs. Such employment would contribute to poverty reduction, especially for women.

6.6.2 Improved Transport and economy in Dodoma suburbs

The proposed road will facilitate easy transportation within the Dodoma City as well as increasing communication among the communities along the road. The road would be particularly beneficial to passengers and cargoes where journey times will be shortened.

This will have an impact to the enhanced capacity of the marginalized groups to afford education, health and decent housing in the project areas. The improved

roads will boost up the existing informal sector, which is a source of self-employment for mainly women and youth; the roads will ensure increased commuting speed and thereby facilitating the goods exchange in the informal sector. The road expected to expand and improve the informal sector in which the unemployed women and youth will engage themselves to perform various income generating activities.

6.6.3 Decongestion of Dodoma main Roads

When the ring road is completed, it shall allow traffic not destined for Dodoma town to bypass the town along a number of high-speed freeways in a quick and easy fashion. It is expected that heavy vehicles entering the Dodoma town from the four main trunk roads will be diverted into the ring road either to bypass Dodoma completely or to transfer to another radial route to suite their eventual destination and in doing so avoid the town center. There will also be transfer of traffic to the ring road from the traffic that currently uses a network of roads within the town.

6.6.4 Improved Community Life and Services

There are several social related advantages that will accrue from the project. Improved transportation will enable easy delivery of drugs/medicines to health care facilities. The proposed roads will facilitate patients in the streets along the subprojects to receive faster medical attention (especially emergency cases). Health workers and teachers will enjoy easier access to work than before. The road will facilitate easy access to health centers, and thus lives of some patients will be saved. Bitumen roads will reduce current level of dusts experienced in the subprojects. In so doing quality of settlement will increase and health of people living in the project areas will be protected.

Negative Impacts

6.6.5 Increased Road Accidents

Road deaths, injuries and damage to property are most tangible negative impacts on the community environment and may be reduced or increased as a result of road projects. The project road transverse villages and the effects the road causes on safety in these settlements are dependent on location.

Increased traffic and speed driving will result into unnecessary road accidents to livestock and people especially school children and old people. The main causes for accidents are poor road conditions due to lack of maintenance, reckless driving, defective vehicles, drunkenness, poor road facilities for the pedestrian and cyclists and unqualified drivers. Vehicles travelling at increased speeds will make it difficult for road users to cross the road, particular children and elderly people will be at risk of accidents.

6.6.6 Interference with Local Hydrology

The change from gravel/ earth surface to bituminous surfacing will improve drainage of the area, especially with improvement of roadside drainage and cross drainage. This will result into a minor positive impact. On the other hand sources of construction materials will create pits in which water will accumulate. These can be breeding sites for mosquitoes and can serve as a means of harvesting rainwater as well. The latter possibility can help to alleviate water shortages in the area especially during dry seasons. For the crossing of canals and drains small bridges will be constructed. The direct CoI of the surface water bodies will be confined within the RoW of the Project, and it will be minor and temporary in nature. Other negative hydrologic and drainage impacts are not foreseen.

6.7 Analysis of Alternatives

6.7.1 Overview

In the EIA process it is important to consider different alternatives, or options, which will achieve the project's objectives. It is also important to include a consideration of what would happen without the project – that is the no project alternative. Environmental assessment for each alternative is also carried out, since each alternative is likely to have a different set, or degree, of impacts. In this EIA consultations with stakeholders and site visits provided basis for identifying alternatives. The following types of alternatives are presented for consideration:

6.7.2 No Project Alternative

The no project alternative entails retaining the current status quo without upgrading the proposed local roads. Adopting this option would mean avoiding most of the negative impacts associated with the project and missing all the positive benefits such increased productivity and economic growth in Dodoma Municipality. Therefore adopting a no project alternative would mean failure to implement the transport and poverty eleviation policies.

7.0 IMPACTS MITIGATION MEASURES

7.1 General Considerations

This chapter is devoted to describing measures or actions that shall be implemented so as to minimize or enhance any of the potential impacts identified in the preceding chapter. Many of the mitigation measures put forward are nothing more than good engineering practice that shall be adhered to during the design and construction phases. The developer is committed to the implementation of mitigation measures contained in this report.

7.2 Mitigation Measures for Pre-Construction Phase Impacts

7.2.1 Land Expropriation, Loss of Property and Resettlement

- The designs shall try as much as possible to avoid peoples properties
- Compensation shall be done according to Tanzania laws governing resettlement before commencement of the construction activities.
- Resettlement Action Plan (RAP) shall be prepared and implemented

7.3 Mitigation Measures for Construction Phase Impacts

7.3.1 Destruction of Public Utilities

- The TANESCO and UWASA shall be involved from the early stages of these project so as to have an integrated planning.
- Early notice shall be given to the community before any service interruption
- The funds for the relocation of this infrastructure shall be part and parcel of the project.

7.3.2 Soil Erosion and Instability of Slopes

- Unnecessary ground clearance and sensitive re-alignments shall be avoided.
- Lined drainage channels at sensitive terrains shall be provided to control speed and volumes of storm-water. The discharge points shall be carefully chosen to avoid erosion of arable land and creation of gullies.
- The contractor should plant grass or any other vegetation cover to minimise exposed soil surface.
- Proper grading to promote sheet flow and minimize flow concentration on unconsolidated soil.
- Directing flow to properly designated channels.

7.3.3 Noise, Vibration and Air

- The nuisance of noise, vibration and dust will be transient and good work practice can minimize them. In addition, these impacts are already being experienced due to the existing road segments.

- The impacts of noise will further be minimized by proper choice of plant and machinery (i.e. fitted with noise silencers or reducers) and locating quarry areas away from human habitations (at least 500m away).
- Dust at work places within or close to human habitation should be critically minimized by periodic water sprinkling on working sections. The contractor shall advise or notify local households on dust, noise, vibration and other dangers.
- Watering should be practiced regularly at all active work sections along the road and at all quarries and borrow sites for the protection of workers. In addition, sections of road heavily traversed by construction vehicles should also be regularly watered.

7.3.4 Safety and Health Risks

- Appropriate working gear (such as nose, ear mask and clothing) and good site management shall be provided.
- During construction the contractor shall ensure that the site office is fenced and hygienically kept with adequate provision of facilities including waste disposal receptacles, sewage, fire fighting and clean and safe water supply. The contractor may be required to drill a borehole for obtaining water for construction.
- A well-stocked First Aid kit (administered by trained first aider) shall be maintained at each site office, quarry sites and each active work section along the road.
- The first aider shall also be responsible for primary treatment of ailments and other minor medical cases as well as providing some health education to the workforce.

7.3.5 Increased Road Accidents

- The road design shall take account of safety concerns especially at human habitation crossings e.g. installation of bus stops at settlement centres.
- Traffic management plan shall be incorporated in the designs to include for example details of signs, markings, intersection layouts, access restrictions, bus stops, crossings, footpaths etc.
- The traffic management plans shall be presented both in English and Swahili.

7.3.6 Increased Waste Generation

- Adequate number of waste bins shall be provided at the constructio sites site
- Only inert materials or readily decomposable materials shall be disposed by burial.
- No burning of waste materials which produces black smoke shall be approved. Plastics shall not be burned.
- No open burning of oils shall be done

- The construction sites shall have adequate toilets with septic tank-soak away treatment system

7.3.7 Loss of Definite Materials and Land Degradation

- The topsoil shall be stock piled for later use in reinstating the pit. Shallow slopes will encourage rapid re-vegetation thus preventing erosion as well as providing safety to animals.
- Obtaining sand from valleys and riversides must be well investigated to avoid accelerated land degradation and pollution of water sources and/or interfere with agricultural activities in farmland.

7.3.8 Loss of Vegetation

- Close supervision of earthworks shall be observed in order to confine land clearance within the proposed new coridor of impact boundaries.
- Topsoil shall be stockpiled and used for reinstating flora along the road. It is assumed that displaced fauna will return once the work is over, or seek another habitat locally.
- The road design shall try as practicable to offset the route so as to avoid felling all big trees that take many years to grow or other flora of outstanding importance.
- Consultation with the Dodoma Municipal Natural Resources Officer shall be made

7.3.9 Loss of Definite Materials

- Exploitation of construction materials will be from the authorized source only
- The borrow pits/quarries shall be restored after use constituting levelling the area and seeding or planting of trees and/or grasses will done in association with local government (natural resources department). If appropriate the levelled area will be left for natural re-vegetation.
- Shallow slopes will encourage rapid re-vegetation thus preventing erosion as well as providing safety to animals.
- Obtaining sand from valleys and riversides must be well investigated to avoid accelerated land degradation and pollution of water sources and/or interfere with agricultural activities in farmland.
- Construction equipment shall be maintained in good running condition and refuel restriction at the workshop/base camp.

7.3.10 Increased HIV/AIDS and other sexual related diseases

- The contractor shall deploy locally available labour as practically possible
- Maintain good security in the area with signage like “No employment at the moment”, to keep away job seeker to avoid unnecessary people in project sites

- A safety, health and environment induction training shall be conducted to all workers, putting more emphasis on HIV/AIDS.
- In order to prevent more HIV/AIDS infection, during the implementation phase, the project shall include information education and communication component (IEC) in its budget. This will help to raise more awareness on HIV/AIDS, and means to suppress its incidence.
- Staff shall be encouraged the use of preventive measures like condoms by availing condom dispensers.

7.4 Mitigation Measures for Operational Phase Impacts

7.4.1 Increased Road Accidents

- Capacity building of district polices (traffic) offices
- Installation of proper road signs and regular inspections for their presence
- Installation of speed control devices like humps
- Installation of pedestrian lanes at human settlement crossings

7.4.2 Interference with Local Hydrology

- Where possible, the designs shall leave enough unpaved space alongside the road for water to seep into the ground
- The design will provide controlled and effective storm water dispersion by installation of adequate and appropriate drainage structures.

8.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

8.1 Impact Management plan

Plans for the implementation of mitigation measures for the proposed project are provided below. The Plans indicate institutional responsibilities, time to take the action and estimated costs. The proposed costs are only indicative, should the proposed development proceed with the suggested changes, the developer will work out on actual costs and include them in the overall cost of the project. Based on the EMA, (URT 2004), NEMC is required to ensure compliance of all the agreed conditions for authorization. The measures are given in Table 8.1. The proponent is committed to implement the mitigation measures suggested by the Environmental and Social Impact Management Plan (ESMP).

8.2 Environmental Monitoring

The national EIA guidelines require the developer to prepare and undertake monitoring plan and regular auditing. Monitoring is needed to check if and to what extent the impacts are mitigated, benefits enhanced and new problems addressed. Recommendations for monitoring have been included in the ESMP (Table 9.2). The ESMP also assigns responsibilities for monitoring activities. However, the divisional/ward/village environmental committees and district environmental committee will participate in the long-term daily monitoring of the project road.

8.3 Environmental Audit

It is recommended that environmental audits determine the long-term effects of adopted mitigation measures. It is recommended that environmental audits be carried out on the project as part of the on-going maintenance programme. The audits will unveil the actual performance of mitigation measures and will allow effective measures to be included in future projects based on the audit results. As per operative EIA documents in Tanzania, environmental audits would be a responsibility of the developer (TANROADS).

8.4 Implementation of the ESMP

TANROADS as the proponent shall be the Implementer of the ESMP through other organs. The environmental measures incorporated in the detailed engineering design will be attached to the Contract Documents. The Contractor shall take stock of the contents of the Environmental Impact Assessment Statement of the Project.

An environmental expert should be appointed to assist the resident engineer, in order to make sure that the environmental measures recommended in this report are effectively complied with and timely adjusted whenever necessary. The expert will be familiar with the scientific measurement of environmental impacts and remedies. He/she will work on a part-time basis and may be selected, by the firm in-charge of supervision works, from the roster of national environmental experts. He

will liaise with the relevant public agencies and will carry out the training scheme associated to his assignment.

8.5 Personnel and Training

The Environmental expert of the supervision team will conduct on-job training to district level staff. This will strengthen their performance in participating to the implementation of the action plans (AP). The project will set a budget for this purpose. The environmental expert will design and deliver the environmental training packages.

8.6 Environmental cost

The principal environmental cost includes the cost of implementing the mitigation measures proposed and that of carrying out monitoring of specific environmental parameters. These costs are indicated in Table 8.1. It should be noted that most of the costs for mitigation measures are already included in the bills of quantities of the overall works. The costs of the environmental supervisor shall be included in the overall supervision cost of the works. The supervisor shall be engaged for at least 3 man-days a month over the entire construction period.

Table 8.1: Environmental and Social Management Plan (ESMP) for the Proposed Dodoma Ring Road

Impact	Mitigation measure	Responsible institution/Individuals	Mitigation Time frame	Annual Costs	Lump sum (Onetime costs) Costs
Land acquisition/ Loss of Property/farmland	• Compensation shall be done according to Tanzania laws governing resettlement before commencement of the construction activities. • Resettlement Action Plan shall be prepared and observed	○ TANROADS/ Consultant/Affected people	Mobilization phase		Valuation is in process
Construction phase					
Destruction of Public Utilities	• TANESCO and DUWASA and TTCL shall be involved from the early stages of these projects so as to have an integrated planning. • Early notice shall be given to the community before any service interruption • The funds for the relocation of this infrastructure shall be part and parcel of the project.	• TANROADS/ Contractor/ Consultant / TANESCO/DUWASA	Design and Construction		Provided in the BoQ (Series 1000)
Soil Erosion and instability of Slopes	• Unnecessary ground clearance and sensitive re-alignments shall be avoided. • Lined drainage channels at sensitive terrains shall be provided to control speed and volumes of storm-water. The discharge points must be carefully chosen to avoid erosion of arable land and creation of gullies. • The contractor should Plant vertiver grasses to minimize exposed soil surface. • Proper grading to promote sheet flow and minimize flow concentration on unconsolidated soil. • Directing flow to properly designated	• TANROADS/ Contractor/ Consultant/ Env Supervisor	During Design and Construction	15,000,000	

Impact	Mitigation measure	Responsible institution/Individuals	Mitigation Time frame	Annual Costs	Lump sum (Onetime costs) Costs
	channels.				
Noise pollution	• Provide working gear to workers • All noisy works shall be restricted during day time only • Proper choice of equipment which offer environmental advantages	• Contractor/TANROADS / Env. Supervisor	Construction	4,000,000	
Air pollution	• Watering road section (near human habitation) • Proper choice of equipment which offer environmental advantages	• TANROADS/ Contractor/ Env. Supervisor	Construction	6,000,000	
Vibration	• Advance notice to local communities	• TANROADS/ Contractor	Construction	2,000,000	
Occupational Safety and health risks	• Appropriate working gear (such as nose, ear mask and clothing) and good site management shall be provided. • A well-stocked First Aid kit (administered by trained first aider) shall be maintained at each site office, quarry sites and each active work section along the road.	• TANROADS/ Contractor/ Env. Supervisor Local community	Construction Phase	12,000,000	
Increased Accidents	• Contractor shall prepare Traffic Management plan which shall be approved by the Engineer and the TANROADS • A transport coordinator shall be appointed to control the movement of vehicles and equipment and he shall be responsible for safe and smooth deployment of fleet. • All drivers and operators shall possess a valid Tanzania license for the types of vehicle being driven or machinery operated. • An in-house training on defensive driving	• TANROADS/ Design team/ Traffic Police/ Contractor	Design stage and Construction Phase	8,000,000	

Impact	Mitigation measure	Responsible institution/Individuals	Mitigation Time frame	Annual Costs	Lump sum (Onetime costs) Costs
	techniques and safe tipping operation shall be imparted to all drivers before allotting vehicles to them. • Over speeding shall not be allowed at any case and if observed do so disciplinary actions shall be taken against the defaulter. Maximum speed shall be limited to 40km/hr. • Nobody is allowed to drive if under the influence of alcohol or drugs. • Beware signage shall be established on public institutions' entrances				
Increased Waste	• Vegetations (Trees, Grasses) and remnants of timber shall be given to residents near the project roads to be used as Source of energy. • Food remains, cardboards and papers (Degradable waste) shall be collected in a large skip bucket at the site office then to be composted and used as manure for the gardens at the site office • Top soil shall be used as backfilling material in the borrow pits, fill the diversions. • Plastics and Scrap Metals shall be sold to certified recyclers • Tins Glasses and other inert materials Taken to the Authorized dumpsite • Sewage shall be directed Septic tank –Soak away system at the site/office and mobile toilets along the route.	• TANROADS/ Contractor/ Env. Supervisor	Construction Phase	20,000,000	
Loss of Scenic Quality	• The topsoil shall be stock piled for later use in reinstating the pit.	• Contractor/Consultant / /Supervisor/ TANROADS	During Mobilization, Construction and	2,000,000	

Impact	Mitigation measure	Responsible institution/Individuals	Mitigation Time frame	Annual Costs	Lump sum (Onetime costs) Costs
	• Sand and Gravel shall be sourced from the approved Sand mines and Quarries (Which have mining license)		after construction		
Loss of Vegetation	• Close supervision of earthworks shall be observed in order to confine land clearance within the proposed new corridor of impact boundaries. • The contractor shall replant trees and grasses along the roads where possible. • Topsoil shall be stockpiled and used for reinstating flora along the road. It is assumed that displaced fauna will return once the work is over, or seek another habitat locally. • The road design shall try as practicable to offset the route so as to avoid felling all big trees that take many years to grow or other flora of outstanding importance. • Consultation with the Dodoma Municipal Natural Resources Officer shall be made prior to clearing trees. • Trees and Crops to be removed shall be compensated	• TANROADS/ Contractor/ Supervisor / Contractor	During Construction	50,000,000	
Loss of Definite Materials	• Exploitation of construction materials will be from the authorized source only • The borrow pits/quarries shall be restored after use constituting levelling the area and seeding or planting of trees and/or grasses will done in association with local government (natural resources department). If appropriate the leveled area will be left for natural re-vegetation.	• TANROADS/ Contractor/ Supervisor / Contractor	During Construction	30,000,000	

Impact	Mitigation measure	Responsible institution/Individuals	Mitigation Time frame	Annual Costs	Lump sum (Onetime costs) Costs
	• Shallow slopes will encourage rapid re-vegetation thus preventing erosion as well as providing safety to animals. • Obtaining sand from valleys and riversides must be well investigated to avoid accelerated land degradation and pollution of water sources and/or interfere with agricultural activities in farmland. • Construction equipment shall be maintained in good running condition and refuel restriction at the workshop/base camp.				
Increased HIV/AIDS and other sexual related diseases	• The contractor shall deploy locally available labour as practically possible • Maintain good security in the area with signage like "No employment at the moment", to keep away job seeker to avoid unnecessary people in project sites • A safety, health and environment induction training shall be conducted to all workers, putting more emphasis on HIV/AIDS. • In order to prevent more HIV/AIDS infection, during the implementation phase, the project shall include information education and communication component (IEC) in its budget. This will help to raise more awareness on HIV/AIDS, and means to suppress its incidence. • Staff shall be encouraged the use of preventive measures like condoms by availing condom dispensers.	• TANROADS/ Contractor/ Supervisor / Contractor/ NGOs	During Construction	150,000,000	
Operation phase					

Impact	Mitigation measure	Responsible institution/Individuals	Mitigation Time frame	Annual Costs	Lump sum (Onetime costs) Costs
Increased Road accidents	• In order to prevent accidents, during the operational phase, the project should include information education and communication component (IEC) in its budget. This will help to raise more awareness on road safety issues. • Capacity building of district polices (traffic) offices • Installation of proper road signs (in Swahili Language) and regular inspections for their presence • Installation of speed control devices like humps • Installation of pedestrian lanes at human settlement crossings	• Design Engineer /Traffic police/ TANROADS	Operation phase	10,000,000	
Interference to local hydrology	• The design shall utilize as much as possible the existing channels • Where possible, the designs shall leave enough unpaved space alongside the road for water to seep into the ground • The design will provide controlled and effective storm water dispersion by installation of adequate and appropriate drainage structures. • The discharge points shall be well designed to avoid accelerate erosion downstream.	• Design engineer/ TANROADS	Design Stage	10,000,000	
Total Cost				**319,000,000**	

Source: Consultant's Evaluation

9.0 ENVIRONMENTAL AND SOCIAL MONITORIG PLAN

Monitoring refers to the systematic collection of data through a series of repetitive measurements over a long period of time to provide information on characteristics and functioning of environmental and social variables in specific areas over time. Environmental monitoring is an essential component of project implementation. Environmental Monitoring Plan provides mechanism of monitoring environmental impacts of a project during its execution in order to reduce their negative effects and to introduce standards of good practice to be adopted for all project works. It facilitates and ensures the follow-up of the implementation of the proposed mitigation measures proposed in the EMP. The parameters of the proposed road project identified for monitoring include; vegetation, water quality, air quality, solid waste generation, occupational health and safety risks, accidents, AIDS/HIV incidence, Soil erosion and resettlement issues. Table 9.1 provides details of the attributes to be monitored, frequency, and institutional responsibility and estimated costs. These costs are only approximations and therefore indicative.

Table 9.1: Environmental and Social Monitoring Plan for the Proposed Dodoma Outer Ring road

Environmental Aspect	Parameters	Monitoring frequency	Sampling Area	Method / Equipment and Other Requirements	Responsibility	Annual costs estimates (Tsh)
Pre-Construction Phase (Baseline)						
Land Expropriation, Loss of Property and Resettlement	Fair compensation is paid to all PAPs before construction start	Continuous	Project area	*Observations, Inquires and Records*	TANROADS/ Contractor	4,000,000
Vegetation	Vegetation growth within the RoW track right of way to ensure consistence with EMP	Once	Along the Road track	*Observations and Measurements*	TANROADS/ Contractor	5,000,000
Water Quality	pH, Conductivity, Total Suspended Solids (TSS) and Total Dissolved Solids (TDS), COD, BOD and oils	Once	Boreholes and shallow wells along the project road	*Water Quality Accredited laboratory*	TANROADS/ Contractor	3,500,000
Air Quality	TSP, PM10, PM2.5, NOx, SO2, CO.	Once	All settlements along the road	*Ambient Air Measuring Equipment*	TANROADS/ Contractor	1,000,000
Noise and Vibration Baseline	Noise and vibration level	Once	All settlements along the road	*Noise Level Measuring Equipment*	TANROADS/ Contractor	2,000,000
Construction Phase						
Vegetation	Vegetation growth within the RoW track right of way to ensure consistence with EMP	Twice a Year	Along the Road track	*Observations and Measurements*	TANROADS/ Contractor	10,000,000
Water Quality	pH, Conductivity, Total Suspended Solids (TSS) and Total Dissolved Solids (TDS) , COD, BOD and oils	Once in Three Months	Boreholes and shallow wells along the project road	*Water Quality Accredited laboratory*	TANROADS/ Contractor	14,000,000
Air Quality	TSP, PM10, PM2.5, NOx, SO2, CO.	Once in Three Months	All settlements along the road	*Ambient Air Measuring Equipment*	TANROADS/ Contractor	4,000,000
Noise and	Noise and vibration levels	Once in Three	All settlements	*Noise and Vibration Level*	TANROADS/	8,000,000

Environmental Aspect	Parameters	Monitoring frequency	Sampling Area	Method / Equipment and Other Requirements	Responsibility	Annual costs estimates (Tsh)
Vibration		Months	along the road	*Measuring Equipment*	Contractor	
Safety and health risks	Safety training for workers, accident reports, Number and types of accidents, causes, etc.	Once in Three Months	Construction Site	Incidents Log Book	TANROADS/ Contractor	4,000,000
HIV AIDS Incidents	Training programmes, number of incidences, Numbers of condoms distributed, seminars, participants trained, etc.	Once in Three Months	Camp sites and Construction sites	*Health checks, Observations and Records*	TANROADS/ Contractor	12,000,000
Soil Erosion	Soils eroded, Turbidity in storm water, sources and causes, etc.	Once a Month	Steep slopes along the Road and cut sections	*Observation*	TANROADS/ Contractor	6,000,000
Waste Management	Spoils, waste rocks, slag, domestic refuse, metallic scraps, sludge, waste, composition, treatment methods, etc.	Monthly	Camp sites, Construction sites, Quarry sites	*Office Supplies Waste sampling bins/ plastic bags/ boxes Weighing machines*	TANROADS/ Contractor	12,000,000
Operational Phase						
Noise and Vibration	Noise and vibration levels	Once in Three Months	All settlements along the road	*Noise and Vibration Level Measuring Equipment*	TANROADS/ Contractor	8,000,000
Waste Management	Domestic refuse	Once in Three Months	Along the road	*Observation*	TANROADS	8,000,000
Total						105,000,000

Source: Consultant's Evaluation

10.0 RESOURCES EVALUATION

10.1 Introduction

This economic analysis contains an evaluation of the project road using the Highway Design and Management Model (HDM4 version 2.10). Version 2.10 is the latest version released on 17th January 2017.

The HDM-4 analytical framework is based on the concept of pavement life cycle analysis. The model analyses the project road with different investment and maintenance options, taking into account the associated costs and benefits projected annually over the analysis period, with a view to determining the economic and engineering viability of the project.

Once a road is constructed and opened to traffic, its pavement deteriorates as a consequence of several factors, most notably:

- Traffic loading
- Environmental weathering
- Effect of inadequate drainage systems

The rate of pavement deterioration is directly affected by the standards of maintenance applied to repair defects on the pavement surface such as cracking, ravelling, potholes, etc., or to preserve the structural integrity of the pavement (for example, surface treatments, overlays etc.), thereby permitting the road to carry traffic in accordance with its design function. The overall long-term condition of road pavements directly depends on the maintenance or improvement standards applied to the road. When a maintenance standard is defined, it imposes a limit to the level of deterioration that a pavement is permitted to attain. Consequently, in addition to the capital costs of road construction, the total costs that are incurred by road agencies will depend on the standards of maintenance and improvement applied to road networks.

The impacts of the road condition, as well the road design standards, on road users are measured in terms of road user costs, and other social and environmental effects. Road user costs comprise:

- **Vehicle operation costs** (fuel, tyres, oil, spare parts consumption; vehicle depreciation and utilization, etc.)
- **Cost of travel time –** for both passengers and cargo, and
- **Cost to the economy of road accidents** (that is, loss of life, injury to road users, damage to vehicles and roadside objects).

The social and environmental effects comprise vehicle emissions, energy consumption, traffic noise and other welfare benefits to the population served by the roads. Although the social and environmental effects are often difficult to quantity in monetary terms, they can be incorporated within the HDM-4 economic analyses if quantified exogenously.

Road User Costs in HDM-4 are calculated by predicting physical quantities of resource consumption and then multiplying these quantities by the corresponding user specified unit costs. It is necessary to ensure that the vehicle resource quantities predicted are in keeping with the range of values observed in the area of application.

Economic benefits from road investments are then determined by comparing the total cost streams for various road works and construction alternatives against a base case (without project or do minimum) alternative, usually representing the minimum standard of routine maintenance. HDM-4 is designed to make comparative cost estimates and economic analyses of different investment options. It estimates the costs for a large number of alternatives year by-year for a user-defined analysis period. All future costs are discounted to the specified base year. In order to make these comparisons, detailed specifications of investment programmes, design standards, and maintenance alternatives are needed, together with unit costs, projected traffic volumes, and environmental conditions.

10.2 The Project Road Characteristics

10.2.1 Road Sections

In HDM-4, the road network attribute defines physical characteristics of road sections to be analysed. The proposed Dodoma Outer ring road (100 km) has been divided into four road sections based on traffic levels and physical characteristics.
The existing main trunk roads through the Dodoma City have also been divided into four sections as shown in the schematic layout below.

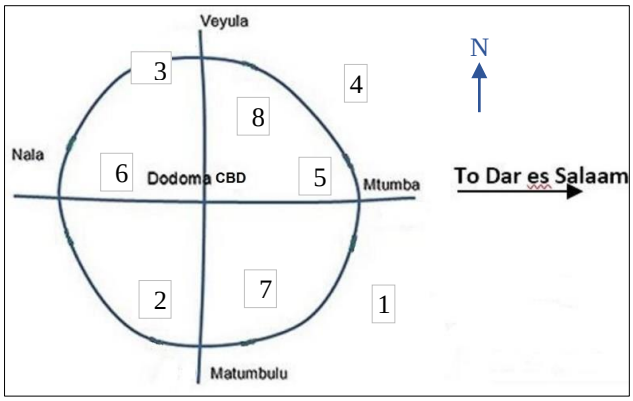

Figure 10.1: Layout of HDM Road Sections

10.2.2 Project Implementation

Project works implementation for the Dodoma Outer Ring road has been estimated to start in year 2019. Completion of the entire project is estimated to take 3-4 years. The Outer ring road construction works would therefore take place in years 2019, 2020, 2021 and 2022. Road opening to traffic has been assumed to be year 2023.

Table 10.1: Normal AADTs for Road Sections (Year 2017)

Group	Section No.	Road Section	Length (km)	Carriageway width (m)	Shoulder width (m)	AADT
New By-pass Ring Road	1	Mtumba - Matumbulu	25.2	7.0	1.5	-
	2	Matumbulu - Nala	26.1	7.0	1.5	-
	3	Nala - Veyula	23.9	7.0	1.5	-
	4	Veyula - Mtumba	24.8	7.0	1.5	-
Existing Trunk road through Dodoma Urban	5	Mtumba – Dodoma CBD	15.9	7.0	1.5	15,667
	6	Nala – Dodoma CBD	15.8	7.0	1.5	11,942
	7	Matumbulu – Dodoma CBD	16.1	7.0	1.5	4,901
	8	Veyula – Dodoma CBD	16.2	7.0	1.5	9,161

Source: Consultant evaluations

10.2.3 Base Year of the Economic Analysis

The base year for the economic analysis is defined as the year at which all costs and benefits are discounted to. The base year in this analysis is year 2017.

10.2.4 Analysis Period

Analysis period starts in year 2017 and ends 20 years after completion of implementation, in year 2042. Total analysis period is therefore 26 years i.e. 2017 to 2042 inclusive.

10.2.5 Traffic data

Input traffic data consisted of Normal, Generated, Diverted and Step-in traffic. Traffic figures derived in the Traffic study report are reproduced in the next four tables below.

Table 10.2: Year 2017 Normal Traffic

Road Section	Car	4WD+Pick Ups	LGV	MGV	HGV	VHGV	Minibus	Large Bus	3-Whe./ Bajaji	M/Cycle	TOTAL
Mtumba - CBD	3255	3202	509	202	106	2261	2413	382	973	2364	15667
Nala - CBD	891	1656	255	398	588	5402	1124	746	588	294	11942
Matumbulu - CBD	521	708	322	195	104	538	791	357	909	455	4901
Veyula - CBD	1302	1244	303	268	117	185	989	486	2845	1423	9161

Diverted Traffic

The Traffic study has identified that there would be Diverted traffic along the ring road upon its completion. Traffic flows along road section after construction of a by-pass (traffic after diversion) has been derived externally through traffic demand modeling. Traffic after diversion for three project alternatives considered in this study are shown in three tables below.

Table 10.3: Year 2023 Traffic after Diversion (for Project Alternative 2)

Sect. No.	Road Section Name	Cars	4WD+Pick Ups	LGV	MGV	HGV	VHGV	Minibus	Large Bus	3-Whe./ Bajaji	M/Cycle	TOTAL
5.	Mtumba - CBD	1152	1333	225	90	41	841	1356	159	391	950	6540
6.	Nala - CBD	315	690	113	177	229	2010	632	311	236	118	4831
7.	Matumbulu - CBD	185	295	142	87	41	200	445	149	366	183	2091
8.	Veyula - CBD	461	518	134	119	45	69	556	203	1144	572	3821
1.	Mtumba - Matumbulu	3334	3295	563	266	148	2047	2411	607	948	1459	15077
2.	Matumbulu - Nala	1078	1753	333	357	452	3980	1248	814	640	320	10976
3.	Nala - Veyula	1759	2127	346	396	409	3148	1408	895	1724	862	13073
4.	Veyula - Mtumba	2713	2536	379	219	109	1212	1742	495	1335	1324	12065

Table 10.4: Year 2022 Traffic after Diversion (for Project Alternative 3)

Sect. No.	Road Section Name	Car	4WD+Pick Ups	LGV	MGV	HGV	VHGV	Minibus	Large Bus	3-Whe./ Bajaji	M/Cycle	TOTAL
5.	Mtumba - CBD	1020	1180	205	82	38	765	1200	141	373	905	5907
6.	Nala - CBD	279	610	103	161	208	1827	559	275	225	113	4360
7.	Matumbulu - CBD	163	261	130	79	37	182	394	132	348	174	1899
8.	Veyula - CBD	408	458	122	108	41	63	492	179	1089	545	3506
1.	Mtumba - Matumbulu	3425	3406	583	276	152	2103	2532	628	968	1491	15562
2.	Matumbulu - Nala	1108	2076	316	393	465	3874	1364	892	1306	653	12446
3.	Nala - Veyula	1807	2199	358	410	420	3234	1479	925	1761	881	13474
4.	Veyula - Mtumba	2787	2621	392	227	112	1245	1830	512	1364	1353	12444

Table 10.5: Year 2021 Traffic after Diversion (for Project Alternative 4)

Sect. No.	Road Section Name	Cars	4WD+Pick Ups	LGV	MGV	HGV	VHGV	Minibus	Large Bus	3-Whe./ Bajaji	M/Cycle	TOTAL
5.	Mtumba - CBD	3524	3478	601	292	158	2138	2565	646	1182	1677	16262
6.	Nala - CBD	980	785	208	124	59	431	760	234	621	445	4647
7.	Matumbulu - CBD	-	-	-	-	-	-	-	-	-	-	-
8.	Veyula - CBD	-	-	-	-	-	-	-	-	-	-	-
1.	Mtumba - Matumbulu	2875	2900	472	239	115	1600	2358	487	1394	1893	14335
2.	Matumbulu - Nala	1526	2096	354	444	495	4013	1542	898	1556	778	13704
3.	Nala - Veyula	958	695	189	113	54	392	672	207	591	424	4295

4.	Veyula - Mtumba	1640	1962	371	397	343	2409	1482	813	2380	1190	12988

Generated Traffic

Any road development normally brings up generated traffic to varying extents depending on the economic setup in the project area of influence. This project is considered to be located in an urban setting. Activities expected to generate traffic include small and large industries within the Dodoma Municipality, extended new social services e.g. new health, educational, horticultural and religious infrastructure. This project study presents an economic analysis of a project to construct a bypass around the Dodoma Urban centre, the capital city of the United Republic of Tanzania. The HDM4 analysis for this type of projects does not allow generated traffic input. Generated traffic, if any, would be modelled as part of normal traffic growth. In this study, therefore, generated traffic has been modelled as part of normal traffic growth by treating it as enhanced percentage growth of normal traffic.

Traffic Annual Growth rates

Traffic growth for road upgrading studies is usually linked to GDP trends/ projections as recommended in the TANROADS Baseline Traffic study. The following are traffic growth factors recommended by the TANROADS study:

Table 10.6: Annual Traffic Growth Factors for Types of Vehicles (% pa)

	M/ Cycle	Car	4WD	Mini Bus	H-Bus	L-Truck	M-Truck	H-Truck	S-Trailer	F-Trailer
2010-15	8.3	8.3	8.3	8.3	8.3	6.22	6.22	6.22	6.22	6.22
2015-20	7.6	7.6	7.6	7.6	7.6	6.91	6.91	6.91	6.91	6.91
Beyond 2020	7.6	7.6	7.6	7.6	7.6	6.91	6.91	6.91	6.91	6.91

Source: TANROADS Baseline Traffic study

Typical Traffic growth trends for new Capital Cities in Africa

There are two good examples in Africa of shifting government seat from one city to a new centrally located town/ settlement. In order to draw a corollary of population growth trends for new capital cities in Africa which could be similar to Dodoma, let us look at two famous cities, Lilongwe, Malawi and Abuja, Nigeria.

a) City of Lilongwe, Malawi

Lilongwe stated as a small fishing village along Lilongwe River. It was declared as Malawi's new capital city instead of Blantyre in 1975. It was then when it stated developing at a fast pace from a small town to a capital city of the Republic of Malawi. The shift of Government seat was conducted in a gradual manner from 1975 to 2005 when the last government offices were relocated to Lilongwe. Lilongwe's population history is depicted in the table and chart below:

Table 10.7: Lilongwe Population History

Year	Population
1966	19,425
1977	98,718
1987	223,318
1998	440,471
2008	674,448
2015	1,077,116
2020	1,324,314

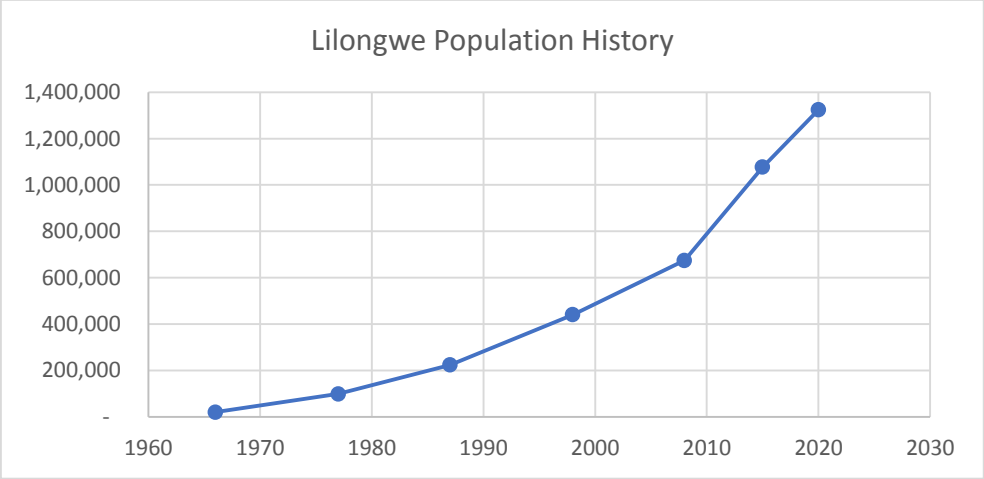

Figure 10.2: Lilongwe population growth trend
Source: (1) National Statistical Office, Zomba, Malawi
(2) https://en.wikipedia.org/wiki/Lilongwe

From the population table above, Lilongwe population growth rate for the period 2008 - 2015 averaged 6.92% per annum.

b) City of Abuja, Nigeria

Abuja is located in the centre of Nigeria, within the Federal Capital Territory (FCT). Abuja is a planned city, and was built mainly in the 1980s. It officially became Nigeria's capital on 12 December 1991, replacing Lagos. At the 2006 census, the city of Abuja had a population of 776,298. Abuja's population history is shown in the table and chart below:

Table 10.8: Abuja Population History

Year	Population
1971	52,460
1981	138,210
1991	107,070
2006	1,406,239
2015	2,440,240

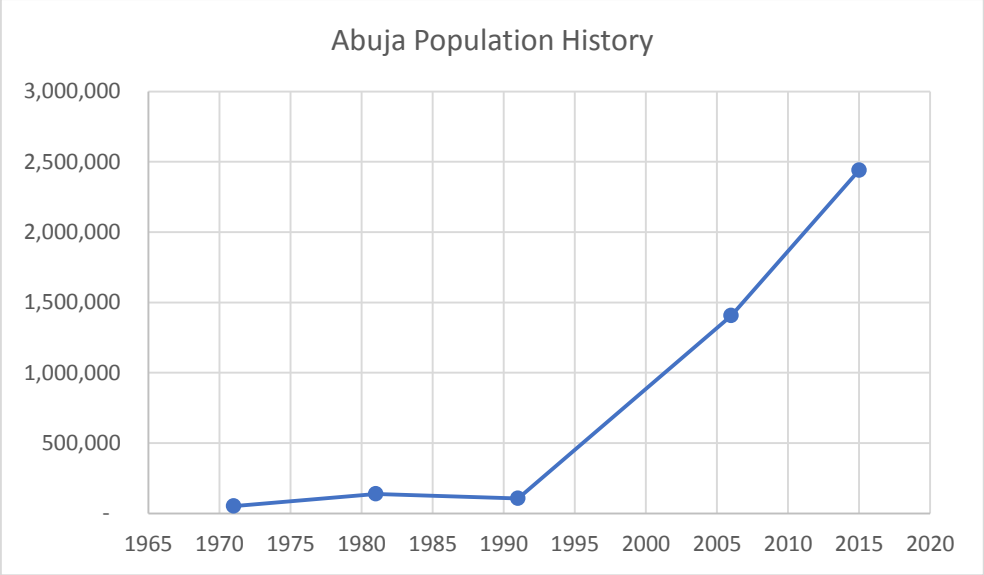

Figure 10.3: Abuja population growth trend
Source: (1) National Bureau of Statistics, Nigeria
(2) http://population.city/nigeria/abuja/

From the population table above, Abuja city's population growth rate for the period 1991-2015 averaged 13.91% per annum.

c) City of Dodoma, Tanzania

Dodoma was founded in 1907 by German colonists during construction of the Tanzania central railway. In 1973, the Government of the United Republic of Tanzanian announced that the capital would be moved from Dar es Salaam to a more central location to better serve the needs of the people. Due to the on-going transfer of government activities from Dar es Salaam to Dodoma, the population growth rate for Dodoma in the next decade is estimated to be more than double the current population growth rate of Dar es Salaam city whose rate stood at 5.6% per annum for the period 2002 to 2012. In this study, a population growth rate of 13% per annum, similar to Abuja's growth rate, has been adopted for Dodoma city for the next ten years.

Traffic growth rate, especially for passenger related vehicle types are said to be driven by population growth. In this study, traffic growth for Dodoma city has been assumed to be similar to population growth rate. The table below shows traffic growth rates adopted for different types of vehicles.

Table 10.9: Traffic Growth Rates

Vehicle Type	Car	4WD+Pick Ups	LGV	MGV	HGV	VHGV	MiniBus	LARGE BUS	3-Whe./ Bajaji	M/Cycle
Growth rate	13%	13%	10%	10%	10%	10%	13%	13%	5%	5%

10.3 Economic Parameters

All costs used in the analysis need to be expressed in economic terms, excluding taxes, in order to exclude transfer payments within the economy and correct for distortions between international and domestic prices caused by applications of duties and taxes on traded items.

10.3.1 Financial and Economic Costs

All costs used in the analysis need to be expressed in economic terms, excluding taxes from financial costs, in order to exclude transfer payments within the economy and correct for distortions between international and domestic prices caused by applications of duties and taxes on traded items. TANROADS recommends a Standard Conversion Factor (SCF) of 0.82 for adjusting financial prices on most common costs to economic costs.

10.3.2 Shadow Pricing

In performing economic analyses, it is requisite to use *economic costs* as opposed to *financial* costs. Prices of commodities and services in the market normally include taxes and duties which are transfer payments. Market prices therefore do not represent the actual resource cost. Financial costs need to be converted to economic costs by eliminating taxes and other transfer costs. This is what shadow pricing entails. For imported goods, the '*Cost Insurance and Freight'* (CIF) '*Free on Board'* (FOB) prices are used while for exported goods, '*Free On Board'* (FOB) prices are used. Market prices for foreign exchange and labour also need to be shadow priced in order to eliminate market distortions.

10.3.2.1 Foreign Exchange

Foreign exchange is normally subjected to market distortions due to imposition of trade barriers such as import quotas, tax barriers and tax on imports. In the evaluation, the foreign exchange need to be treated using a *shadow exchange rate* which eliminates the above mentioned market distortions from the *official exchange rate*. Foreign exchange has been liberalized in Tanzania, and the Tanzania shilling is, for practical purposes, a currency fully convertible at current market rates, the conversion factor applied to all expenditures in foreign currency is therefore equal to one.

10.3.2.2 Labour

Distortion in the labour market exist when the market wage payable for labour by the public institutions and large projects are higher than the marginal value product of labour elsewhere. In such situations, a shadow wage rate has to be calculated for unskilled and skilled labour. Tanzania has a widespread unemployment and underemployment in labour market. Market wages for skilled and unskilled labour can therefore be considered as shadow wages.

10.3.3 Conversion of financial to economic costs

An alternative method for shadow pricing is establishing a factor to convert financial to economic costs including construction and maintenance costs by using a Standard Conversion Factor (SCF) which is a ratio of economic cost to financial cost.

A conversion factor recommended by the TANROADS Economic Appraisal Manual is 0.83. The Consultant has used this SCF in this study. The foreign exchange rate used is in this study is 1 USD = 2,227.4 TZS (BOT 5 May 2017).

10.4 HDM Project Evaluation, Alternatives and Costs

10.4.1 The Urban Bypass Road Concept in HDM4

This project study presents an economic analysis of a project to construct a bypass around the Dodoma Urban centre, the capital city of the United Republic of Tanzania. Besides the general linkage around the fast growing capital city, the technical objective of the project is to relieve the main roads into the capital city centre of excessive traffic by providing an easy by-pass road skirting around it. This means part of traffic along the existing road sections (sections 5, 6, 7 and 8) will be diverted to the new bypass sections. The HDM4 analysis of bypass roads usually involves an analysis of the existing road sections by introducing a bypass consisting of new construction road sections. These are created in the 'New Construction Sections' folder in the HDM4 workspace.

10.4.2 Definition of Project Alternatives

In this study, three project alternatives have been analysed against the Base Alternative, *(Alternative 1)* which represents a 'without Bypass' case whereby the existing road sections 5, 6, 7 and 8 (refer Figure 6.1 above) continue operating without provision of any bypass road.
Project *Alternative 2* represents construction of a **2-lane** Bypass ring road around Dodoma City to AC standard.
Project *Alternative 3* represents construction of a **4-lane** Bypass ring road around Dodoma City to AC standard.
Project *Alternative 4* represents construction of a **Half-ring 2-lane** Bypass road around the Southern part of Dodoma City to AC standard. Under this 'hypothetical' alternative, the Northern half ring is assumed not to be implemented.

Below is a summary description of the analysed project alternatives:

Alternative	Description of Alternative
Base Alternative (Alternative 1)	Without project or Do minimum. The project road retains status quo and gets minimal maintenance.
Alternative 2	Construct a Bypass Ring Road (2-lanes) AC standard
Alternative 3	Construct a Bypass Ring Road (4-lanes) AC standard
Alternative 4	Construct a Southern Bypass Half-Ring Road (2-lanes) AC standard

10.4.3 Maintenance and Improvement Standards

The maintenance and improvement (new construction) standards for the different project alternatives are described in the table below.

Table 10.10: Maintenance and New Construction Standards

	Standard	Works Items	Intervention Criteria
Maintenance Standards	Paved Road Maintenance (Bituminous Surface)	Patch potholes	▪ Number of Potholes ≥ 40 (no./km)
		15 mm Reseal	▪ Cracked carriageway area > 15%
		50 mm Overlay	▪ 8 < IRI < 12.5
		Routine maintenance	▪ Fixed expenditure per annum
Construction to Bituminous Standards	2-lane AC	New 2-lane road construction to AC (50 mm)	Scheduled in year of project start
			▪ Duration 3 years
	4-lane AC	New 4-lane road construction to AC (50 mm)	▪ Scheduled in year of project start
			▪ Duration 4 years

10.4.4 Vehicle Fleet

Vehicle fleet data define characteristics of vehicles that operate on the project road network. These have been adopted from the *TANROADS Investment Appraisal Manual (2015)* with some updating for selected items as detailed below.

10.4.5 VOC Input parameters

In this study, vehicles have been categorized and named according to the TANROADS VOC study. A summary of vehicle characteristics and VOC data input used in this study are shown in *Appendices 2 and 3 of Traffic Study Report.*

(a) Road Works Items

The road works item input data defines road maintenance and construction standards together with their unit costs, which will be applied to different road sections being analysed. Unit costs for key maintenance work items were averaged from annual data obtained from TANROADS and converted to economic costs using the SCF of 0.83. These are shown in the table below.

Table 10.11: Economic Unit costs of maintenance work items

Work Item	Units	Economic Cost (US $)
Routine maintenance (Basic)	/km/year	984
Pothole Patching (AC)	/m3	615
Reseal	/m2	22.8

Overlay 50mm	/m2	36.9
New construction of 2-lane road to AC (50 mm)	/km	700,000
New construction of 4-lane road to AC (50 mm)	/km	1,260,000

A standard economic conversion factor (SCF) of **0.83** was adopted for all construction and maintenance costs in the present study.

10.5 Definition of Basic Economic Terms in the Evaluation

There are basic economic terms used in economic project appraisal that need to be specifically defined

10.5.1 Opportunity Cost of Capital (OCC)

Road projects are public investments. Opportunity cost of capital is the interest rate that reflects the return on investment in a national economy. This is sometimes termed as the project discount rate. In this study, an OCC of 12% was used.

10.5.2 Net Present Value

The NPV is equal to the savings in user costs (plus net exogenous benefits if any), less increase in Agency costs, all discounted in present value terms. For a project to be economically viable, its NPV has to be greater than zero, i.e. a positive NPV.

10.5.3 NPV/Cost Ratio

NPV/Cost ratio is the ratio of net benefits to net costs in present value terms. That is NPV/Capital. For a project to be economically viable, its NPV/Cost ratio has to be greater than zero, i.e. a positive NPV/Cost.

10.5.4 Economic Internal Rate of Return

Economic Internal Rate of Return (IRR) of a project is the economic discount rate which would result to NPV of zero. For a project to be economically viable, its IRR has to be more than 12%. The 12% is the opportunity cost of capital used in appraising public investments in most developing countries.

10.6 HDM4 Results and Analysis

As described earlier, the following project alternatives have been analysed against the base Alternative 1:

Alternative 1 (ALT 1)	Existing road retain a status quo (no bypass)
Alternative 2 (ALT 2)	Construct a Bypass Ring Road (2-lanes)
Alternative 3 (ALT 3)	Construct a Bypass Ring Road (4-lanes)
Alternative 4 (ALT 4)	Construct a Half-Ring Bypass Road (2-lanes)

Results of the HDM analysis by project at 12% discount rate are summarised in the table below.

Table 10.12: Results of Key HDM analysis Parameters

Alternative	NPV (US$ mio.)	EIRR	NPV/Cost
ALT 2 (2 lanes)	596.02	82.3%	11.51
ALT3 (4 lanes)	488.97	42.0%	5.29
ALT4 (Half-ring)	-1,368.18	No solution	-45.84

10.6.1 Quality Assurance Checks of the Analysis

In most computerised analyses, underlying software models are likely to give some form of output results regardless of integrity of data and veracity of the user in utilising the model. Some form of quality assurance for HDM4 analysis is necessary to ensure that project requirements have been correctly modelled by the analysis as intended. The quality assurance involves examining some of the key HDM4 output parameter trends to confirm that physical trends and works effects have been entered and modelled correctly. Failing to make such checks can lead to wasted effort. This also helps to get a 'feel' of model responses and relate them to real life experience. Traffic volumes for example, are always inextricably linked with project viability and therefore correct data and trends are of critical importance.

In this respect let us look at a few important parameters: Traffic progression and Volume/Capacity ratio, to get a feeling if project physical attributes have been entered and modelled correctly in this analysis.

(a) Traffic progression in the model

Four AADT charts for road are displayed showing AADT progression for the four alternatives (ALT1, ALT2, ALT3 and ALT2). AADT progression trends can be said to be correctly representing the modelled traffic for the existing road sections and new bypass cases.

(b) Volume/Capacity Ratio trends

The Volume/Capacity Ratio trends are reasonably reflecting practically possible traffic flow characteristics.

The above trends of AADT and Volume/Capacity Ratio are consistent with the input data and the expected practical trends for the type of bypass provision. This is an indication that the HDM4 inputs and analysis have been modelled correctly.

10.6.2 Economic Viability of Alternatives

A summary of economic evaluation results together with a verdict on economic viability of each alternative is shown in the table below:

Table 10.13: Economic Viability of Alternatives at 12% Discount Rate

Alternative	NPV (US$ mio.)	EIRR	NPV/Cost	Economic Viability
ALT2 (2 lanes)	596.02	82.3%	11.51	Viable
ALT3 (4 lanes)	488.97	42.0%	5.29	Viable
ALT4 (Half-ring)	-1,368.18	No solution	-45.84	Not viable

Alternatives 2 and 3 can be said to be economically viable as their NPVs are above zero and IRRs are above 12% discount rate. Alternative 4 on the other is not viable because its IRR is undefined and NPV is negative.

10.6.3 The Most Preferred Alternative

From the viability table above, based on IRR values, Alternatives 2 and 3 have IRRs greater than the project discount rate of 12%, but Alternative 2 has higher NPV than Alternative 3. From the economic point of view, therefore, ALT2 is the preferred option over ALT3.

Conclusion on the most preferred alternative

From the above observations, the economic ranking of alternatives is as follows:

Rank	Alternative	NPV
1	ALT2: 2 lanes Ring road	596.02
2	ALT3: 4 lanes Ring road	488.97

Note: ALT4: 2-lane half-ring road option is not recommended as it results in a negative NPV.

10.7 Conclusions and Recommendations

The principal conclusion of this study is that construction of the Dodoma Outer ring road to AC standard is economically viable, with positive NPV and IRR greater than the test discount rate of 12%. Two options (2-lane and 4-lane roads) are both economically viable, but the 2-lane option has higher NPV and IRR values than the 4-lane option. The DBST option is therefore recommended as the most preferred option. On the other hand, the volume/capacity considerations show that the 2-lane option is likely to get traffic jams before its economic life of 20 years while the 4-lane option is not likely to develop traffic jams during its economic life.

Based on the economic viability, it is recommended that the government should continue with project preparation and implementation activities.

11.0 DECOMMISSIONING

11.1 Introduction

As decommissioning is not anticipated to take place in the remote future, the specific conditions for mitigation are generally inherently uncertain. In view of this, specific mitigation measures pertaining to environmental impacts of decommissioning works cannot be proposed at the moment with a reasonable degree of certainty.

A detailed decommissioning plan that takes environmental issues into consideration shall be prepared by the developer prior to the decommissioning works. Should it be done, decommissioning may entail change of use (functional changes) or demolition triggered by change of land use. Therefore what is presented here is just a Preliminary Deccommissioning Plan which give light to what shall be done if the need for decommissioning arise.

11.2 Preliminary Decommissioning Plan

This Section provides a brief outline of the works required to demolish the Proposed infrastructures on the site incase it happen. This Plan will be used as a reference document that provides the framework to ensure that demolition activities on the site do not adversely affect the health, safety, traffic or the environment of the public and neighbouring properties.

The Contractor will be required to prepare a detailed Demolition Plan and Construction Management Plan to the satisfaction of the Proponent and relevant Authorities prior to the commencement of works on site.

11.2.1 Demolition Methods

It is anticipated that the Contractor will prepare a detailed Demolition Plan prior to the commencement of work on site, however, the indicative demolition methodology will be as follows:

- The strip out and removal of non-structural elements will be undertaken utilising manual labour and small plant including – bobcats, 3-5t excavators and dingo type loaders.
- The materials will be removed from site using small to medium sized trucks.
- The structures will be demolished using larger plant and equipment including 15-40t hydraulic excavators. These machines will be equipped with rock breakers, pulverisers and the like which would be used in a sequential manner.
- During the demolition process erosion control measures will be established. These will include treatment of dust and potential discharge into stormwater systems.

11.2.2 Materials Handling

Materials handling will be by mechanical plant (including excavators and bobcats) loaded into trucks (bogie tippers and semi trailers). The debris will be carted offsite to an approved waste facility or recycling centre.

The contractor shall submit a Demolition Waste Management Plan to TANROADS which outlines the objectives of:

- maximisation, reuse and recycling of demolition material
- minimisation of waste disposal
- evidence of implementation for specified arrangements of waste management

On-site storage of reusable materials will occur at Site. Recycling and disposal containers will also be accommodated at this location for collection vehicles. Hazardous materials will be treated separately. A hazardous materials inspection will be undertaken by an accredited consultant and a report issued. Hazardous materials will be removed in accordance with EMA 2004. A final clearance report will be provided by the hygienist which will include the provision of tip dockets from waste centres.

11.2.3 Proposed Sequence

The Contractor will be required to prepare the following documentation prior to the commencement of demolition and/or excavation works:

- Dilapidation Survey
- Construction Waste Management Plan
- Demolition Management Plan

11.2.4 Protective Measures

An A Class hoarding will be erected around the perimeter of the construction site prior to the commencement of demolition works. Additionally, wherever the risk arises of material falling into public areas, overhead protection will be provided in the form of a B Class hoarding. Scaffolding will be erected to facades where materials could fall in excess of 4m. The scaffolding will be clad with chainwire and shadecloth to enclose debris and dust onto the site. During the demolition, dust control measures will be used to minimise the spread of dust from site. The Contractor will have a senior representative on site at all times to ensure compliance with the safety guidelines and agreed work methods.

11.2.5 Traffic Management

The management of construction traffic during the deccommissioning phase will be subject to the provision of a detailed traffic management plan. This plan will be prepared by the Contractor for the various stages of demolition. During demolition, all traffic will be held within the site boundaries. The site will remain closed to pedestrian traffic and will be generally manned by security.

11.2.6 Ocupational Health and Safety

A detailed OH&S Policy will be provided by the Contractor prior to work commencement. A detailed Site Safety Plan will be prepared for the specific project.

11.2.7 Environmental Management Plan

A detailed Environmental Management Plan will be provided by the Contractor prior to the commencement of the work.

11.2.8 Potential Impacts and Mitigation Measures

Dust and Noise Pollution

The demolition activities for the remained part (foundation structure) shall be accompanied with emission of a lot of dusts since the demolition works are expected to be carried out by conventional method using mechanical breakers and jackhammers. However, alternative methods of demolition including explosive techniques can be used.

Mitigation Measures

- Water sprinkling shall be applied to open earth to reduce dust emission.
- Trucks transporting construction materials shall be covered if the load is dry and prone to dust emissions.
- The demolition area shall be fenced by iron sheets; this will prevent the dust at the ground to be picked up by the wind.
- Community notification shall be undertaken where appropriate where work is likely to cause dust impact on the public and nearby residents.
- Sound construction equipment, with noise sinks, shall be used
- Machine operators in various sections with significant noise levels shall be provided with noise protective gear.
- Construction equipment shall be selected, operated and maintained to minimize noise.

Increased Waste

A lot of demolition waste is expected as a result of the demolition of these blocks. These shall include blocks, concrete, reinforcements, pipes etc. Most of the block materials shall be salvaged and recycled.

Mitigation Measures

- All materials which can be reused shall be reused
- Materials that cannot be reused shall be sent to a the authorized dumpsite

11.2.9 Costs for Undertaking the Mitigation Measures

The cost for undertaking Mitigation measures during deccommissioning is estimated to be USD 40,000.

12.0 SUMMARY AND CONCLUSION

The EIA study results show that although there are some limited negative environmental implications of the project, the local roads will have high socio-economic benefits to the people of Dodoma City and Dodoma in totality. The associated negative impacts, to a large extent have been minimized through good engineering design and envisaged construction practices. Specific mitigation measures have been suggested in this report to offset some of the inherent adverse impacts. Implementing these mitigation measures would increase environmental soundness of the project road.

It is, therefore, concluded that, implementation of the proposed project will entail no detrimental impacts provided that the recommended mitigation measures are adequately and timely put in place. The identified adverse impacts shall be managed through the proposed mitigation measures and implementation regime laid down in this EIS. TANROADS is committed in implementing all the recommendations given in the EIS and further carrying out the environmental auditing and monitoring schedules.

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APPENDICES

Appendix I: Terms of References

1. INTRODUCTION

The detailed scope for undertaking Environmental and Social Impact Assessment is intended to guide the Consultant to address relevant environmental and social issues during the assessment process. Among others, the EIA and SIA shall be conducted in accordance with the requirements of the Environmental Management Act (2004). The Consultant shall do everything necessary to meet the objectives of the services and not less than the following task that should be undertaken during the Environmental and Social Impact Assessment. In the process of consultation (Scoping process) with relevant stakeholders like environmental authorities, the Consultant may further be required to finalize the TOR according the agreement with these stakeholders.

2. SCOPE OF WORK

Task 1: Description of the Proposed Project

The Consultant shall provide a brief description of the relevant parts of the project using maps of appropriate scale where necessary and include the following information:-

- Project justification;
- Location;
- General layout, size, and capacity;
- Area of influence of the road works
- Pre-construction activities
- Construction activities
- Schedule of project activities
- Staffing and support;
- Facilities and services
- Operation and maintenance activities
- Required offsite investments
- Life span

[Note: specify any other type of information relevant to the description of the project]

Task 2: Description of the Environment

Assemble, evaluate, and present baseline data on the relevant environmental characteristics of the study area. Include information on any changes anticipated before the project commences. Modify the lists below to show the critical information for this project category or which is relevant to it. Environmental characteristics of the study area shall be presented on a map to facilitate the understanding of the study area

(a) Physical environmental This shall cover geology; topography; soils; climate and meteorology; ambient air quality; surface and groundwater hydrology;

existing sources of air emissions; existing water pollution discharges; and receiving water quality.

(b) Biological environment: flora; fauna; rare or endangered species; ecologically important or sensitive habitats, including parks or reserves, significant natural sites; species or commercial importance; and species with potential to become nuisances, vectors, or dangerous (of project site and potential area of influence of the project).

(c) Socio-cultural environmental; population land use; planned development activities community structure; employment; distribution of income, goods and services; recreation; public health; Gender issues and HIV/AIDS, Cultural/ historic properties; tribal peoples and customs, aspirations, and attitudes to the project.

Task 3: Legislative, Policies, Administration Framework

Describe the pertinent regulations and standards governing environmental quality, health and safety, protection of sensitive areas, protections of endangered species, siting, and land use control at international, national regional and local levels, The Consultant shall undertake a review of policies, legislation and administrative framework within which the environmental management of the proposed road works will be carried out. The following and any other relevant legislation and policies shall be reviewed:-

- National Environmental Policy (NEP) of 1997
- National Transport Policy (2002)
- National Mineral Policy (1997)
- Construction Industry Policy (2003)
- National Land Policy (1995)
- National Gender Policy (2002)
- The National Water Policy (2002)
- Environmental Management Act No. 20 of (2004), Cap. 191
- The Land Act No. 4 of 1999 and the Village Land Act No. 5 of (1999)
- The Water Resources Management Act No. 11 of 2009
- The Water Supply and Sanitation Act No. 12 of 2009
- Energy and Water Utilities Regulatory Authority Act, 2001
- The Road Act, 2007
- The Urban Planning Act (2007)
- Land Use Planning Act (2007)
- Occupation Health Safety (2003)
- Local Government Acts No.7 & 8 of 1982
- The Land Acquisition Act 1967
- Employment and Labour Relations Act No. 6 0f 2004
- Engineers Registration Act and its Amendments 1997 and 2007
- The Contractors Registration Act (1997)
- The HIV and AIDS (Prevention and Control) Act of 2008
- The Local Government Laws (Miscellaneous Amendments) Act (1999)

Task 4: Assist in Interagency Coordination and Public/NGO Participation

Assist in coordinating the ESIA with other government agencies, in obtaining the views of local NGOs and affected groups, and in keeping records of meetings and other activities, communications, and comments and their disposition. Establish the views of the public with regards to the potential impacts of the proposed road works. Identify the different groups of stakeholders, and then use the most appropriate method to establish their vies. Particular attention shall be paid to the disadvantage groups (e.g. children, the elderly and women) that may be affected by the proposed road project.

The Consultant shall undertake an open and transparent consultation process to ensure that the views of interested and affected parties are and approximately incorporated in the project design.

Minutes of the meetings conducted during this public involvement should be recorded for submission as part of the report. At least one meeting with Environmental Committee of each district council shall be held to obtain their views on the project and its implication to the environment and social aspects.

Task 5: Analysis of Alternatives to the Proposed Project

Describe alternatives that were examined in the course of developing the proposed project and identify other alternatives, which would achieve the same objectives. The concept of alternatives extends to siting, design, technology selection, construction techniques and phasing, and operating and maintenance procedures. Compare alternatives in terms of potential environmental and social impacts; capital and operating costs; suitability under local conditions; and institutional, training, and monitoring requirements. When describing the impacts, indicate which are irreversible or unavoidable and which can be mitigated. To the extent possible, qualify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures. Include the alternative of not constructing the project to demonstrate environmental and social conditions without the project.

Various environmental and social criteria should be developed to select the best road alternatives.

Task 6: Identification, Analysis and Assessment of Potential Impacts

The Consultant shall identify, analyse and assessing the environmental and social impacts of the proposed road works. The Consultant shall distinguish between positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts. Identify impacts that are unavoidable or irreversible. Wherever possible, describe impacts quantitatively, in terms of environmental components affected (area, number), environmental and social costs and quality of available data, explaining significant information deficiencies and any uncertainties associated with the predicted impacts.

The assessment should also examine the potential for linear resettlement that usually involves projects producing linear patterns of land acquisition. An overview shall be provided of different groups of people and their cultural, ethnics and socio-economic characteristics, and how they are likely to benefit and / or be negatively affected by the project. Negative impacts may include but not be limited to physical relocation, loss of land or other physical assets, or loss of access to livelihood.

The significance of impacts of the proposed road works shall be assessed, and the basis of this assessment shall be specified. The Consultant should take into consideration existing by-laws, national and international environmental standards, legislation, treaties, and conventions that may affect the significance of identified impacts. The Consultant shall use the most up to date data and methods of analyzing and assessing environmental and social impacts. Uncertainties concerning any impact shall be indicated.

Task 7: Mitigation Measure

The Consultant shall suggest cost-effective measures for minimizing or eliminating adverse impacts of the proposed road works. Measures for enhancing beneficial impacts should also be recommended. The costs of implementing these measures shall wherever possible be estimated and presented. If compensation is recommended as one form of mitigation, the Consultant shall identify all the names and physical addresses of people to be compensated.

Proposed mitigation measures and cost estimates shall be grouped in a separate Bills of Quantities (BOQ) for the project and should also include cost of supervision for the implementation of mitigation measures.

Task 8: Environmental and Social Management Plan (EMP)

The Environmental Management Plan focuses on three genetic areas: implementation of mitigation measures, institutional strengthening and training, and monitoring. The Consultant shall prepare an Environmental and social Management Plan, Which will include proposed work programme, budget estimates, schedules, staffing and training requirements and other necessary support services to implement the mitigation measures. Institutional arrangements required for implementing this management plan shall be indicated. The cost of implementing the monitoring and evaluation including staffing, training and institutional arrangements must be specified. Where monitoring and evaluation will require inter-agency collaboration this should be indicated.

Identify institutional needs to implement environmental assessment recommendations. Review the authority and capability of institutions at local, regional, and national levels and recommend how to strengthen the capacity to implement the environmental and social management and monitoring plans. The recommendations may cover such diverse topics as new laws and regulations, new agencies or agency functions, inter-sectoral arrangements, management procedures and training, staffing, operation and maintenance training, budgeting, and financial support.

Prepare detailed arrangements to monitor the implementations of mitigating measures and the impacts of the project during construction and operation. Include in the plan an estimate of capital and operating costs and a description of other required inputs.

3. REPORTING

The ESIA reports should be concise and limited to significant environmental Issues. The Main text should focus on findings, conclusions, and recommended actions supported by summaries of the data collected and citations for any references used in interpreting data. Detailed or un-interpreted data are not appropriate in the main text and should be presented in appendices or separate volume. Unpublished documents used in the ESIA may not be readily available and should also be assembled in appendices. Organized the ESIA may not be readily available and should also be assembled in appendices. Organized the ESIA reports according to the outline in the Environmental Impact Assessment and Audit Regulations (2005). The main report contains separate an Executive Summary both in English and Swahili.

4. STAFFING

The Consultant should employ an Environmental Impact Assessment Expert, Socio-economist, Civil Engineer, to carry out the EIA study. In addition, the Consultant may wish to absorb other supporting staff to facilitate efficient expedition of the work.

Appendix II: List of Stakeholders Consulted

ESIA FOR THE PROPOSED DODOMA OUTER RING ROADS PROJECT (108 KM)

LIST OF STAKEHOLDERS CONSULTED

S/N	DATE/ TAREHE	NAME/ JINA	INSTITUTION/ TAASISI	POSITION/ CHEO	PHONE NO./ SIMU	SIGNATURE/ SAHIHI
1.	09/8/2017	REHEMA S. MADENGE	OFISI YA MKUU WA MKOA DODOMA	RAS	0784424686	
2	9/8/17	RESPICIUS NDYANABO	TANESCO_DOM	AG MENEJA WA MKOA	0787085854	
3	9/8/17	DANIEL MGUNDA	DUWASA	AG. TECHNICAL MANAGER	0757576621	
4.	10/08/2017	Eng. JAMES MDEE	UDOM	AG. Estates Manager	0656-518495	
5.	10/08/2017	Eng. Happiness Henry	TRL	DISTRICT CIVIL ENGINEER DODOMA	0625-086948	
6	10/08/2017	SILIMU P MAGILE	OFISA MADINI MKAZI DODOMA	AFISA MADINI MKAZI MKOA	0754449635	

ESIA FOR THE PROPOSED DODOMA OUTER RING ROADS PROJECT (108 KM)

LIST OF STAKEHOLDERS CONSULTED

S/N	DATE/ TAREHE	NAME/ JINA	INSTITUTION/ TAASISI	POSITION/ CHEO	PHONE NO./ SIMU	SIGNATURE/ SAHIHI
7	10/8/2017	DANIEL WANGEKA	ST. JOHN'S UNIVERSITY OF TANZANIA	DIRECTOR PLANNING & DEVELOPMENT	255752730004	
8	11/08/2017	BANAGA M. KATABAZI	MINISTRY OF TRANSPORT	PRINCIPAL HUMAN RESOURCES OFFICER	0688659235	
9.	11/08/2017	JULIUS K. MLUNGUMA	TANZANIA AIRPORTS AUTHORITY DODOMA AIRPORT	AIRPORT MANAGER	0756 615180	
10	11 Aug 17	NB Ngassa	JKT HQS		0755549420	
11.	11 August 2017	MABULA KAKILLA	834 KJ MAKUTUPORA	ADMN OFFICER	0784617200	
12.	11. Aug 2017	ARISTIDES S RUTTA	834 KJ MAKUTUPORA	COMMANDING OFFICER (CO)	0713325709 0784325709	

ESIA FOR THE PROPOSED DODOMA OUTER RING ROADS PROJECT (108 KM)

LIST OF STAKEHOLDERS CONSULTED

S/N	DATE/ TAREHE	NAME/ JINA	INSTITUTION/ TAASISI	POSITION/ CHEO	PHONE NO./ SIMU	SIGNATURE/ SAHIHI
13	11 Aug 17	Elias P	9115 IHUMWA	A/ Mahusiano	0717-319597	
14.	14/8/17	Habiya Maeda	Dodoma MUNICIPAL	Ag. MD	0717 693625	
15.	14/8/17	Eng. Lusaka Kilemba	Dodoma Mc	ME	0767828107	
16	14/8/17	Arch. Yusuf Nguzo	Dodoma MC	ARCHITECT	0713513336	
17	14/8/2017	Christina Mudeme	Dodoma DC's office	DC	0784371265	

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA MANISPAA YA DODOMA
(Barua zote zielekezwe kwa Mkurugenzi wa Manispaa)

MKOA WA DODOMA

Tel.: 2324817/2321550
Fax: 324817/2354817

Ofisi ya Mkurugenzi wa Manispaa
S.L.P.1249
DODOMA

E-mail:dm@dodomamc.go.tz.

Unapojibu tafadhali taja:

Kumb. Na. HMD/R.40/1/122 Tarehe: 15 Agosti, 2017

Watendaji wa Kata,
Ihumwa, Nzuguni, Makutupora, Nala,
Zuzu, Mbabala, Matumbulu na Ng'ong'onha,
Halmashauri ya Manispaa,
DODOMA.

YAH: **MATENGENEZO YA BARABARA ZA MZUNGUKO KATIKA MANISPAA YA DODOMA**

SOMO: KUMTAMBULISHA MHANDISI MSHAURI ANAYEFANYA KAZI YA USANIFU WA AWALI

Tafadhali rejea kichwa cha habari hapo juu.

Naitambulisha kwenu Kampuni ya M/S Crowntech – Consult Ltd, S.L.P. 72877 Dar-Es-Salaam ambayo imeingia Mkataba na Wakala wa Barabarani Nchini TANROADS kwa ajili ya kufanya usanifu wa barabara km. 108 kwa kiwango cha lami.

Kwa barua hii nawaagiza mtoe ushirikiano wowote utakaohitajika katika Kata zenu ili aweze kutekeleza majukumu kwa ajili ya manufaa ya Manispaa yetu na kwa Taifa kwa ujumla.

Nakutakia utekelezaji mwema.

(Godwin E. Kunambi)
MKURUGENZI WA MANISPAA
DODOMA

Nakala kwa:- Waheshimiwa Madiwani wa Kata husika,
Halmashauri ya Manispaa,
DODOMA

" " :- Wenyeviti wa Mitaa/Vijiji husika,
Halmashauri ya Manispaa,
DODOMA

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO

WILAYA DODOMA (M) TAREHE 18/08/2017

TARAFA KIKOMBO

KATA NGHONG'ONHA ~~KIJIJI~~ MTAA NGHONG'ONHA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	VIOLET C. MAJALIWA	A/ MIFUGO	NGHONG'ONHA	0787 667275	[signature]
2	THERESIA NTUI	CDO	NGHONG'ONHA	0982 774339	[signature]
3	ISACK WILLIAMU MPALI	MJUMBE S/MTAA	NGHONG'ONHA	0762919235	Mpali
4	JACOBO SIMILI	mjumbe s/mtaa	NGHONG'ONHA	0674077918	Simili
5	JOHN MARUKO	mjumbe/mtaa	NGHONG'ONHA	0764478078	Maruko
6	ALPHRED MASAKA	mjumbe/mtaa	NGHONG'ONHA	0626774689	[signature]
7	LAZARO MOMBO		NGHONG'ONHA	0684 322936	Mombo
8	REVISON MLULU	-	NGHONG'ONHA	076565504	[signature]
9	VENUS ENOCK	-	NGHONG'ONHA	0763318313	V. Enock
10	JACKSONI SIMILI		NGHONG'ONHA	0752882143	J. Simili
11	GIVENI KUTAMICA	—	NGHONG'ONHA		[signature]
12	JONAS MACEJEHE		NGHONG'ONHA	0735099990	[signature]
13	ABDIEL A. IDD	—	NGHONG'ONHA	0752-598272	[signature]
14	DAVID C. PAULO	—	NGHONG'ONHA	0757384404	D. Paulo
15	EMANUEL MATENGO	-	NGHONG'ONHA	0768627572	[signature]
16	DAUDI MHUTA		NGHONG'ONHA		Daudi
17	PHILIMON MTIUMA		NGONG'OH	06240601	
18	Zaliru		NGONG'H	067590909	
19	ISACK E. LUHINDA	MJUMBE	NGHONG'ONHA	0676176168	Luhinda
20	BARAKA MUSSA	MJUMBE	NGHONG'ONHA	0766226566	B. Mussa
21	Benjamin Matonya	〃	〃	0788780205	[signature]
22	GODFREY S. LOMABI	M. Kuhima	NGHONG'HONHA	0754838896	G. LOMABI
23	MANYEZEZI MASIMA	〃 〃	NGHONG'HONHA	- - -	M. MASIMA
24	SAULO Gabuliel		NGHONG'HONHA		Saulo
25	AMON O. SAIDI		NGHONG'HONHA		[signature]
26	EMANUEL Mogewa		NGHONG'HONHA		E. [signature]
27	Wilson J. Yohana		NGHONG'ONHA	0752516277	W. Yohana
28	Mussa Zakaria		NGHONG'ONHA		Zakaria
29	Richard Yohana		NGHONG'ONHA		R. Yohana
30	AMan Yohana		NGHONG'ONHA		A. Yohana
31	ALFRED MAGANGA		NGHONG'ONHA	0764040359	[signature]
32	GASPAR MYLIMBILWA		NGHONG'ONHA	0766240808	[signature]
33	AIWAN Mbogodi		NGHONGONHA	—	[signature]
34	HABEL SEP		N		H. Sepu
35	JUMANE M.		N		J. —
	AMANI CHIMESELA	MKULIMA	NGHONG'ONHA	0756312395	[signature]

AFISA MTENDAJI
MTAA WA NGHONG'ONHA
DODOMA M.

CROWN TECH CONSULT LTD
MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)
MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.........................

WILAYA..................................

TARAFA........................

KATA....................................... KIJIJI............................

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	Enka Maganga	Mkulima	Ngh'ong'honha	0757-971710	[signature]
	Elizabeth Masaka	11	11	—	E.Masaka
	Julia Masaulwa	11	11		J. Masaulwa
	Dorothea Lengata	11	11		D. Lengata
	Gladis Daudi	11	11	0710-412679	G. daudi
	Rehema Seni	11	11	0759259597	R. Seni
	Stela John	11	11	—	S. john
	Mbeleje Mnyanzi		11	—	M. mnyanzi
	Stepha Myeji	11	11	—	S. Myeji
	Lameki Mpali	11	11	0766878387	[signature]
	Samwel Simili	11	11	0711936680	[signature]
	NOEL MARCO	—		0746557783	[signature]
	Stivin Malale	11	11	11	S.Malale
	Zakaria Simili	11	11	0759200121	[signature]

AFISA MTENDAJI
MTAA WA NG'HONG'ONHA
DODOMA MJ

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE...........................

WILAYA...................................

TARAFA.........................

KATA... KIJIJI..............................

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	Olivia Matandu	Mkulima	Nghongonha	—	
	PENDO KUSHOKA		NGHONG'ONHA		
	MEHEA DAUDI				
	Thomas Mpali		NGHONGONHA		[illegible]
	Donard Lemabi	Mkulima	Nghongonho	0776765451	[illegible]
	Emanuel Nhonya	"	"		EN
	YASONI MASAULWA	KATI	" "		Y. Masaulwa
	ALAN S. PILLA	—	—	0759813436	[illegible]
	DENIS G. MAZENGO			0756004019	D-Mazengo
	ELISTO D. MOSHOKA		"	0755266905	[illegible]
	EMANUEL JELEMIA	Mkulima	NGHONGONHA	0753779982	[illegible]
	SOSPETER NYAMBUA	MKULIMA	NGHONGONHA	0768336207	[illegible]
	LAULENDI NDALILA	MKULIMA	NGHONGONHA	0752502159	[illegible]
	VALERD MBEJE	MKULIMA	NGHONGONHA		V. MBEJE
	UEMAS CHISUNUNI	—	NGHONGONHA	0769737339	[illegible]
	NOEL J HOSEA	Mkulima	NGHONGONHA	0718358788	NHosea
	WELOS SEM	MKULIMA	NGHONGONHA	0762605978	[illegible]
	JAIROS CHINDELI	MKULIMA	— // — //		[illegible]
	Hosea Dauli	mkulima	"	0759814170	Hdaul
	SOSPETE MBUNGA	mkulima	— —	0759017444	SCM
	MASHAKA BAHIYO	MKULIMA			
	CHARLES MASAMLA	MKULIMA		0754297754	Charles
	TIMOTHEO MKULO	MKULIMA		0759700860	
	PETRO MLYOMI	MKULIMA			
	YOHANA KUTIMANYA	MKULIMA			
	YOHANA FILIMONI	MKULIMA		0753417061	[illegible]
	EMANUEL Mfumbuki	Mkulima	'	— — —	
	Kusuku BAIYO	Mkulima	. . . .	0678871[illegible]	[illegible]
	David Lusindo	Mkulima	Nghongonha	0684235050	[illegible]

AFISA MTENDAJI / MTAA WA NGHONGONHA DODOMA MJ

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO

TAREHE 18/08/2017

WILAYA DODOMA (M)

TARAFA KIKOMBO

KATA NGHANG'ONHA

MTAA/KIJIJI MAPINDUZI 'A'

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	WILLY F. JOSEPH	M/KITI	MAPINDUZI "A"	0782316986	JOSEPH
2	STANELY KKOMONDA	MJUMBE	"	0626990319	S KOMONDA
3	PHILEMONI M. MAKALI	MJUMBE S/M	MAPINDUZI "A"	0757685600	Makaly
4	PHILEMON A. SAMILLA	"	"	0782814624	
5	E. MICHAEL LA MKOKAMTO	"	"	0765071003	E. MKOKAMTO
6	ZABRONI CHEDEGO	P. JAMII	"	0627 606344	
7	ZAKAYO E. MGOGOLO	KAIBU/K/SHIRIKISHI	"	0627 989150	
8	STEFANO MGOMOLE	P/JAMII	"	0784 006678	
9	STEFANO CHEDEGO	MKULIMA	"	0787398602	Chedego
10	JAMOSI CHILONGANI	Mkulima	"	0756531478	
11	SAIMONI MAZUGUNI	MKULIMA	"	—	S. MAZUGUNI
12	WILLY CHEDEGO	MKULIMA	"	0767 861981	W. CHEDEGO
13	YOHANA KATANILA	MKULIMA	"	—	Y. KATANILA
14	ROJASI BUSSA	MKULIMA	MAPINDUZI	0683 258077	
15	ROJASI SADALA	"	"	0786604151	R. SADALA
16	BATI MWANO	"	"	0621 197587	B. MWANO
17	GILIBATI NGOLIGA	"	"	—	G. NGOLIGA
18	PETER MADIMO	"	"	—	P. MADIMO
19	EZEKIECI SEMBETI	"	"	0622 543994	E. SEMBETI
20	FEDRICK NJOLIBA	MKULIMA	"	0626044070	
21	MATEI MALUJA	MKULIMA	"	0789142338	
22	PETER NELI	MKULIMA	"	0686886646	
23	STIVINI MADIMO	MKULIMA	"	0763017671	
24	PETER KIMOLO	"	"	—	
25	RAMSON HOSEA	"	"	0626024141	
26	ALEX SANGO	"	"	0756294707	
27	CHALES CHISUMBILI	"	"	0762 937091	C. CHISUMBILI
28	MASALIWA NDAHANI	"	"	0622 558320	M. NDAHANI
29	KULFA SEMBETI	"	"	0627 988184	K. SEMBETI
30	JAFET TIBU	"	"	0622 555949	J. TIBU
31	ANTONI CHIMULI	"	"	0785528176	A. CHIMULI
32	FESTO MALYAMHA	"	"	0762913201	F. MALYAMHA
33	CHALES MKUYA	"	"	0622559885	C. CHEDEGO
34	ELIAS CHEDEGO	"	"	0785 533553	E. CHEDEGO
35	NHALESI NYHELIGA	"	"	0717 293053	W. NYHELIGA
36	HALODI SAMWELI	"	"	—	H. SAMWELI

MWENYEKITI S/MTAA
MAINDUZI "A"
MANISPAA YA DODOMA

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO

TAREHE. 18/05/2017

WILAYA. DODOMA (M)

TARAFA. KIKONGO

KATA. NGHONGHONHA

KIJIJI. MAENDELEO 'A'

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
37	ISUMAILI CHEDEGU	MKUU WA KIJIJI	MAENDELEO	—	E. CHEDEGU
38	ALEX MALYAMBA	"	"	—	A. MALYAMBA
39	DINA MATENTEGO	"	"	—	D. MATENTEGO
40	RUTH. MATAYO	"	"	—	R. MATAYO
41	ISAMBA NYHELIGA	"	"	0755453183	I. NYHELIGA
42	SIMONI TABAYO	"	"	0759 814370	S. TABAYO
43	ISEDIMONI SEMBET	"	"	0765007671	K. SEMBET
44	JONI WAMI	"	"	—	J. W.
45	JAILOSI MAZUGWI	"	"	0783997769	J. M
46	PETER. LEBANA	"	"	0718 717343	P. LEBANA
47	NOHAMA MOGOSHO	"	"	0786591326	N. MOGOSHO
48	STEFANO TABAYO	"	"	0755182319	S. TABAYO
49	GODENI MATAYO	"	"	0766 841379	
50	EZEKIELI BUSA	"	"	06849 64815	E. BUSA
51	ALIKO YONA	"	"	—	A. YONA
52	ELIA SEMBET	"	"	0765 281575	E. SEMBET
53	ROBATI BUSA	"	"	—	R. BUSA.
54	MATAYO MATANDO	"	"	—	M - MATANDO
55	ADAM CHIKUSI	"	"	0746631937	A. CHIKUSI
56	YONA CHUMILA	"	"	—	Y. CHUMILA
57	MUSA KUCHINGA	"	"	0620777285	M. KUCHINGA
58	MELSONI NOHA	"	"	0629 557637	N. NOHA
59	BAHATI CHEDEGU	"	"	0621 195449	B. CH.
60	DANIFODI MAPUSA	"	"	0759 065121	D. M.
61	GILIBATI CHUSUMBA	"	"	0757 018707	G. CHUSUMBA
62	LENADI SUBETI	"	"	—	L. S.
63	ELASTO MALIMA	"	"	—	E. MALIMA
64	CHALESI MALIMA	"	"	—	CH. MALIMA
65	SIMONI DAUDI	"	"	0627 606336	S. DAUDI
66	ELIA MALIMA	"	"	—	E. MALIMA
67	LUKASI PETRO	"	"	0621 284021	L. PETRO
68	GIDIONI ISAYA	"	"	—	G. ISAYA
69	HAMISI SIMONI	"	"	—	H. SIMONI
70	HASSAB ALIMASI	"	"	—	H. ALIMASI
71	HAMISI AMONI	"	"	0692 477922	H. AMONI
72	MUSA SINGO	"	"	0768860800	M. SINGO

MWENYEKITI S/MTAA
MAENDELEO "A"
MANISPAA YA DODOMA
JOSEPH

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.........................

WILAYA..................................

TARAFA........................

KATA....................................... KIJIJI.............................

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
73	RASHIDI NYANZWA	MKULIMA	MAPINDUZI	0766613554	RASHIDI
74	NHEMO CHEDEGE	11	11	0685007465	Chedego.
75	DAUDI MTANDI	11	11	076928300[illegible]	[illegible]
76	DANIEDI CHEDEGE	11	11	—	Chedego
77	MOSESI BEGU	11	11	—	[illegible]
78	YOHANA MUNDO	11	11	0784 502543	Y. mundo
79	MSAFIRI ENESTI	11	11	0746312711	M.E.
80	CHALESI MUSA	11	11	0744 335634	Cmusa
81	ALFANI MTEMBWE	11	11	—	[illegible]
82	FESTO MGOMOLE	11	11	0654519430	F. mgomole
83	DICKSON O. DAUDI	11	11		Daudi
84	MSA BEGU	11	11	—	Mbegu
85	AYUBU BUSA	11	11	0683 395359	[illegible]
86	LAZARO MAGUO	11	11	0759297650	[illegible]
87	OMARI CHAMBALA	11	MJINI	0715-331222	[illegible]
88	SAIMONI CHOMOLA	11	11	—	[illegible]
89	CHALESI MATANDO	11	11	—	Chalesi
70	ENOKI JOMI	11	11	—	Johar
71	BALAKA	11	11	0718 367400	B. [illegible]
72	AIDANI MAJAYO	11	11	—	AIDAN
73	MADOLE JOSEFU	11	11	—	Josefu
74	IMANI SAMILA	11	11	—	Samila.
75	JAKOB NDAHANI	11	11	0685 005548	Ndahani
76	JEREMIASI NDAHANI	11	11	—	[illegible]
77	JALOSI CHISUMBA	11	11	0622537327	Jalosi
78	KILIOPA SEMBEI	11	11	0756594524	[illegible]
79	ELIAH MANYAM	11	11	0620811255	[illegible]
80	NAFTARI MAPUGA	11	11	—	N. Mapuga
81	JULIASI MBANDE	11	11	—	[illegible]
82	BAHATI MTIMA	11	11	0621163336	[illegible]
83	ZEPHANIA LAZARU	11	11	–	Z. Lazalo
84	STANELY MTIMA	11	11	-	Mtima
85	WILSON CHITEMA	11	11	–	W. chitema
86	ROJASI SEMBET	11	11	0755102225	R SEMBETI
87	MOSES NYAWAJE	11	11	0622546805	[illegible]
88	JENIVA MGOGOLO	11	11	0754522803	J. mgogolo

3

MWENYEKITI S/MTAA
MAPINDUZI "A"
MANISPAA YA DODOMA
JOSUPH

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.....

WILAYA.....

TARAFA.....

KATA..... KIJIJI.....

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	DAMALISE EZELA	MKULIMA	MAPINDUZI 'A'	0752-939689	D. EZERA
	JULIA MTENDA	MKULIMA	MLIONGOZO		J. MTENDA
	ELIZABET LUSINDE	MKULIMA	MLIONGO'ZO	0620778376	E. LUSINDE
	JOIS MPANDUKA	MKULIMA	NYELELE		JOIS
	OLIVIA CHEDEGO	MKULIMA	LUSINDE		O. CHEDEGO
	VAILETH KWAY	MKULIMA	MALECHELA		V. MKWAY
	MASA MALYAMPA	MKULIMA	LUSINDE	076642 0797	M MALYAMPA
	GRITA CHEDEGO	MKULIMA	LUSNIDE	0768 288108	G. CHEDEGO
	NEEMA MACHAKA	MKULIMA	LUSINDE		N. MACHAKA
	ELIZABET MPALANGA	MKULIMA	MLIONGOZO	0626022131	E. mkaringa
	MASA WILISONI	MKULIMA	NYELELE	0756830607	M. WILISON
	DIMA MATEMYELO	MKULIMA	NYELELE		D. MATEMYELO
	PASSI NDAHANI	MKULIMA	LUSINDE		P. NDAHANI
	MALIA JOSEFU	MKULIMA	NYELELE		
	ESTHER LUGANU	MKULIMA	NYELELE		
	JEMIMA CHEDEGO	MKULIMA	LUSINDE		J. CHEDEGO
	HALIA KAYAMBA	MKULIMA	LUSINDE	0622567596	H. KAYAMBA
	LUSY YONA	MKULIMA	NYELELE	0745 88371	L. YONA
	SOFIA YONA	MKULIMA	NYELELE		S YONA
	HALIA DAUDI	MKULIMA	NYELELE	0763623479	H. DAUDI
	JULIA MTENDA	MKULIMA	MLIONGOZO		J. MTENDA
	ROZA CHEDEGO	MKULIMA	LUSINDE		R. CHEDEGO
	AMA MPUGA	MKULIMA	LUSINDE		A. MAPUGA
	ESTA CHEDEGO	MKULIMA	LUSINDE		E. CHEDEGO
	EDINA KAYAMBA	MKULIMA	LUSINDE		E. KAYAMBA
	DOLIKA PETRO	MKULIMA	LUSINDE		D. PETRO
	GRADIS SAMIR	MKULIMA	LUSINIDE	0758415914	G. SAMILA
	MASA MAGUO	MKULIM	" "	0621167704	M. MAGUO
	RAHELY DAUDI	"	NYELELE	0626601232	R. DAUDI
	STELLA SINGO	"	LUSINDE	0755917768	S. Singo
	VAILETH DAUDI	"	" "		V. daudi
	JOICE MBUNDA	"	MALECHELA	0763 269419	J. mbunda
	EMILIA ATANASIYO	"	" "	0672 570423	E Atanasiyo
	PERESIA CHIMYOLOGA	"			
	GRITHA NGOLIGA	"	LUSINDE		G. NGOLIGA
	ELIZABETH. CHEDEGO	"	LUSINDE		E. CHEDEGO

4

MWENYEKITI S/MTAA
MAPINDUZI "A"
MANISPAA YA DODOMA

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.....

WILAYA.....

TARAFA.....

KATA..... KIJIJI.....

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	CHRISTINA NADO		MAPINDUZI A		
	GURUANDIAN NAFIAL		MAPINDUZI A		
	VALETI MAGUU				V. MAGUU
	JOINA BAUDI				
	BEATRICE BUSA				B BUSA
	CHRISTINA CHIMULI				
	BERTH MGUTUSA				B. Mgutu
	JOSEPH ALFAI				G Malyamba
	GOMA MANIAHA				J. ALFAIO
	ROSE NGOLIGA				
	ELIZA TUMILA				
	ROSE AGELA				
	GRESS OBED				G OBED
	JESLA KASILE				
	JOICE SAMUEL				
	Teresia Nwabuga	Mkulima		0784-143271	TERESIA
	Salome Leonard	11			
	ACKISA LENYETA	11			
	HAGUWA BUSA	111			
	EKALEM MGORIGA	11 11			
	RABEKA NJOLIBA	11 11			
		MWENYEKITI S/MTAA			
		MAINDUZI "A"			
		NISPAA YA DODOMA			
		JOSEPH			

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 17/08/2017

WILAYA... DODOMA (M)

TARAFA... ZUZU

KATA... ZUZU KIJIJI... CHIDIDIMO

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
01.	PASCHAL C. MASALE	MJUMBE	MTAA-CHIDIDIMO	0626-624371	
2.	AUGUSTINO M. MTEMI	— " —	— " —	0680-133490	
3.	BONIFACE MKATALO	— " —	— " —	0755-971406	
4.	MABROUK A. SEIF	WEO-ZUZU	ZUZU	0028615867	
5.	DAVID MALUGU	MJUMBE	MTAA-CHIDIDIMO	—	
6.	LUKASI MACHITE	— " —	MTAA-SOKOINE	—	
7.	AMOSI MANYAJI	— " —	— " —	0752-564921	
8.	JAROME M. NJAMASI	— " —	MTAA-CHIDIDIMO	0759-802087	
9.	ISAYA S. BWEDO	— " —	— " —	—	
10.	JOSEPH A. MADUMA	— " —	— " —	0765-373743	
11.	JOHN SWAYAGA	— " —	— " —	0768-468403	
12.	JACKSONI A. MADUMA	— " —	— " —	—	
13.	DAMIANI N. MWALUKO	— " —	— " —	0622-326421	
14.	ONOLASCO J. LWAMBE	M/KITI WA MTAA	— " —	0758-789193	
15.	RENARD JUMBE	MJUMBE	MTAA-SOKOINE	—	
16.	STEPHANO N. MWALUKO	— " —	MTAA-CHIDIDIMO	0763-902951	
17.	AMOSI B NKHAMBI	— " —	— " —	0763-689214	
18.	DAUDI L. MTUGA	— " —	— " —	—	
19.	MSAFIRI B. NKHAMBI	— " —	— " —	—	
20.	BONIFACE L. CHINGULA	VEO. CHIDIDIMO	CHIDIDIMO	0745119360	
21.	EMANUEL J. NKHAMBI	MJUMBE	MTAA-CHIDIDIMO	0754-510921	
22.	GEORGE E. ZENGAYEKA	— " —	MTAA-SOKOINE	—	
23.	MWAJA M. MUDA	— " —	— " —	0764-813796	
24.	MILIMO M. MACHITE	— " —	— " —	0759-078258	
25.	STANLEY M. LIGOHA	— " —	— " —	—	
26.	OBADIA G. MANYAJI	— " —	— " —	0764-936967	
27.	ISAYA MWIBALA	— " —	— " —	—	
28.	PASCHAL B. MKATALO	— " —	MTAA SOKOINE	0756-988118	
29.	RICHARD MATAMBAZI	— " —	MTAA-CHIDIDIMO	0762-945060	
30.	CHRISTIANI MATHEW	— " —	— " —	0752-922477	
31.	FAUSTINO NOLLO	— " —	MTAA-SOKOINE	—	
32.	STANLEY A. MTEMI	— " —	CHIDIDIMO	0621-180824	
33.	ELIASI C. ELIASI	— " —	— " —	0659-726036	
34.	MICHAEL M. MUDA	— " —	SOKOINE	—	
35.	GABRIEL YONADHANI	— " —	— " —	0754-264413	
36.	MWINJE MCHIWA	— " —	— " —	0768-221143	

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 17.08.2017

WILAYA. DODOMA (M)

TARAFA..... ZUZU.....

KATA..... ZUZU..... KIJIJI.....

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
37.	MATHIASI CHIMOMO	MJUMBE	MTAA-CHIDIDIMO	—	Mathias
38.	JAKSONI N. NHONYA	—u—	—u—		
39.	MICHAEL LABANI	—u—	MTAA-SOKOINE	0626606279	Mabani
40.	JULIASI. D MWALUKO	MJUMBE S/MTAA	CHIDIDIMO	0655-818836	Duwo
41.	JUMA M. MGOMI	—MJUMBE	—u—	0620-892574	Juma
42.	AMOSI A. NYAMBUYA	—u—	SOKOINE	0758-950688	A. Nyambuya
43.	BENJAMINI A. MKATALA	—u—	CHIDIDIMO	—	Benny
44.	JACKSONI MADUMA	—u—	SOKOINE	0768-433780	
45.	ANDREA M. MUDA	—u—	—u—	—	Andrea.
46.	JUMA MATONYA	—u—	SOKOINE	—	Juma
47.	JOSIA WAMI	—u—	CHIDIDIMO	0652-739351	
48.	MICHAEL A. CHIDOBI	—u—	—u—	0656-310997	
49.	YOHANA SUTE	—u—	SOKOINE	—	Sute.
50.	GEORGE MAJATI	—u—	—u—	—	Majabo
51.	JULIASI CHITONDOLE	—u—	CHIDIDIMO	0682-205908	Chitondole.
52.	JACKSONI MYOLWA	—u—	—u—	0763-760037	JACKIAW
53.	PETER S. MBAGO	—u—	—u—	—	
54.	ROBERT HOYA	—u—	SOKOINE	0655-881760	
55.	HAMISI MANYAJI	—u—	—u—	—	H. manyaji.
56.	SARAH LYDIA	—u—	CHIDIDIMO	0752-936947	Lyota
57.	SAMWEL M. MIEMI	—u—	—u—	—	
58.	LUJEJA LYOTA	—u—	—u—	—	Lujeja
59.	MYOYI LWABE	—u—	—u—	—	Myoyi
60.	KAMANDO NDYOLI	—u—	—u—	—	
61.	SEVELINI N. MWALUKO	—u—	—u—	0756-087322	S. Mwaluko
62.	SADIKI BOZZI	—u—	SOKOINE	—	
63.	ZACHARIA P. LAURENTI	—u—	CHIDIDIMO	—	Lawrent
64.	EMANUEL A. NYAMBUYA	—u—	SOKOINE	0622-449691	Nyambuya
65.	FESTO MASANJA	—u—	—u—	—	Festo
66.	JUMANNE MALYO	—u—	—u—	—	Jumanne.
67.	PETER N. NCHYASI	—u—	CHIDIDIMO	—	
68.	AGOSTINO A. MADUMA	—u—	—u—		
69.	FELIX MDACHI	—u—	—u—	—	Mdachi
70.	AINEA MWIBALA	—u—	SOKOINE	0764-967366	
71.	VERONICA M. CHIDOBI	—u—	CHIDIDIMO	0710-381864	V. M. Chidobi
72.	MAJALIWA YOHANA	—u—	—u—	0713-457025	

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO

TAREHE 17.08.2017

WILAYA Dodoma (M)

TARAFA 2020

KATA 2020/NZINDE

KIJIJI MTAA CHIDIDIMO/SOKOINE

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
73	MATHIAS CHALIBE	M/MTAA	SOKOINE	0753788671	
74	LUCIA NHONYA	MJUMBE	SOKOINE	—	
75	MARTINO ODILO	—11—	CHIDIDIMO	0787-315143	
76	JAILOSI L. NJAMASI	—11—	SOKOINE	0748-440240	

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE..........................

WILAYA..................................

TARAFA........................

KATA...................................... KIJIJI.............................

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	JASMINI HAMISI ALY	MJUMBE	CHIDIDIMO	0679724509	JASMIN
2	LEYA GATIANI	—	CHIDIDIMO		LEYA
3	JOIS JONI	—	CHIDIDIMO	0745894425	JOIS
4	LOZA LAMEKI	—	CHIDIDIMO	— —	LOZA
5	STELA MWAKO	—	CHIDIDIMO	0769000858	STELA
6	KIRISTINA JOPHUF	—	CHIDIDIMO	—	CHIRISTINA
7	AGINES SITEFANO	—	CHIDIDIMO	—	AGINES
8	SOPHIA MBAGO	—	CHIDIDIMO	—	S. Mbago
9	KIRISTINA SITENDI	—	CHIDIDIMO	—	KIRISTINA
10	VEISI MWAKO	—	CHIDIDIMO	—	VEISI
11	MARIYAMU WILSON	—	SOKOINE	—	MAR
12	VIKI MAJALIWA	—	CHIDIDIMO	—	VIKI
13	STA CHINGONO	—	CHIDIDIMO	—	STA
14	PAULINA ISAYA	—	CHIDIDIMO	—	PAULINA
15	MAGADALENA MATE	—	CHIDIDIMO	—	MAKE
16	MARIA JOSPHU	—	CHIDIDIMO	—	MARIA
17	ANASTAZIA CHINOTO	—	SOKOINE	—	ANAS
18	VERONIKA MBASA	—	CHIDIDIMO	—	VERONIKA
19	MONIKA ELIASI	KABALOZI	CHIDIDIMO	—	M. ELIASI
20	ANA JOSEPHA	—	CHIDIDIMO	—	ANA
21	AKISA TOMASI	—	CHIDIDIMO	—	AKISA
22	LEYA JOSAPHU	—	CHIDIDIMO	—	LEYA
23	KIRISTINA JOSEPH	—	CHIDIDIMO	—	KIRIS
24	ESTA AGOSTINO	—	CHIDIDIMO	—	ESTA
25	SUZANA JONI	—	CHIDIDIMO	—	SUZANA
26	ESTA MAICHI	—	CHIDIDIMO	—	ESTA
27	KIRISTINA LAZALO	—	SOKOINE	—	KIRISTINA
28	EZEREDA MANYAL	—	CHIDIDIMO	—	EZEREDA
29	MONIKA RASHIDI	—	CHIDIDIMO	—	MONIKA
30	SIKOLO JUMO	MJUMBE	CHIDIDIMO	0755877127	SIKOLO
31	PAULINA HAMISI	—	SOKOINE	— —	PAULINA
32	SABINA MKAMBA	—	CHIDIDIMO	— —	SABINA
33	SABINA GABU	—	CHIDIDIMO	—	SABINA
34	SALA DAMIYAN	—	SOKOINE	—	SALA
35	ELIZABET MBAGO	—	CHIDIDIMO	—	ELIZABETH
36	LEJINA TADEI	—	CHIDIDIMO	—	LEJINA

MTENDAJI WA KATA ... S.L.P ...

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO

TAREHE.....

WILAYA.....

TARAFA.....

KATA.....

KIJIJI.....

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	MARIAMU MUKADI	—	SOKOINE	—	
2	SOFIA JUMA	—	SOKOINE	—	
3	ROZA MAMBA	—	SOKOINI	—	
4	JENIFA MWALUKO	—	CHINDIMO	— —	
5	EVERINA LUAMI	—	CHINDIMO	—	
6	RETHEMA CHILYO	—	CHINDIMO	0755502495	
7	ELIZABETH SAMA	— —	CHINDIMO	— —	
8.	ROZA BONIFASI	MJUMBE	CHINDIMO	0765559668	R. Bonifas
9	ANA CHIURUNGA	—	CHINDIMO	— — —	
10	JENIFA SIMONI	— —	CHINDIMO	— —	
11	SARA NYASI	MJUMBE	CHINDIMO	0754192690	
12	LUINI ZAKAYO	— —	CHINDIMO	0755629675	
13	JEMA CHIMOMO	MJUMBE	CHINDIMO	—	
14	ELIZA MNACHI	MJUMBE	CHINDIMO	0756987175	
15	EZEKIA MYUKE	— —	CHINDIMO	— — —	
17	AGNORA LIKISONI	— — —	SOKOINE	— — —	
18	VIKI ADAMU	— —	SOKOINE	0710492377	

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MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE..17/08/2017

WILAYA..DODOMA (M)

TARAFA..KIKOMBO

KATA..KIKOMBO ILIUMWA

MIAA

KIJIJI..CHANGÓMBE

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
01	SAMWELA MASAKALIA	M/KITI	CHANGÓMBE	0628405380	
1.	BWIRE TUNHARAZA	DIWANI	CHANGÓMBE	0759-777876	
2.	EMMANUEL MBARA	MKULIMA	CHANGÓMBE	–	
3.	JOYCE MAJOLI	MKULIMA	CHANGÓMBE	–	
4	MORENI MUSA	MKULIMA	CHANGÓMBE	0678900172	
5	LISTER NDUMIZI	MKULIMA	CHANGÓMBE	0752525854	
6	MICHAEL KIBERA	MKULIMA	CHANGÓMBE	0684331266	
7	NHGWANGULE M. NALI	TPDF	CHANGÓMBE	0713-422580	
8	LAUNU GEORGE	MKULIMA	CHANGÓMBE	0755161548	
9	FRANCIS ZAKARIA	MKULIMA	CHANGÓMBE	0714476895	
10	AFRED GADIE	MKULIMA	CHANGÓMBE	0653976918	
11	MAJUTO MURU	MKULIMA	CHANGÓMBE	–	
12	SALUMU CHINOJE	MKULIMA	CHANGÓMBE	–	
13	JOB MSangila	Fundi	Changombe	0754016856	
14	YOHANA MASAKALIA	MKULIMA	CHANGÓMBE	–	
15	ANDREA GABESI	MKULIMA	CHANGÓMBE	–	
16	ANDERSON JOB	MKULIMA	CHANGÓMBE	0658 426322	
17	SELEMANI HAMAD	MKULIMA	CHANGÓMBE	0755652992	
18	SAMWEL MULE	MKULIMA		0755290640	
19	JOHN MASAKALIA	MKULIMA		0718443468	
20	BENJAMIN HAULE	MKULIMA		0742 255420	
21	YONA JUMA	FUNDI		0719 252875	
22	NOHA ELIA	MKULIMA		0718115101	
23	BENARD SHILAH	ASKARI		0688430315	
24	LUCY SILVESTER	MJASIRIMALI		0766056686	
25	SOPHIA MBARA	MKULIMA		–	
26	MAGRETH MADIMO	MKULIMA		0716914536	
27	ALI HASSANI	MKULIMA		0716826732	
28	CHRISINA MAKAME	MKULIMA		0652774325	C. Makame
29	JOSE JONE	MKULIMA		0675801644	
30	YOHANA CHITUNDA	MKULIMA		0656506068	
31	EZEKIEL MUSHI	MKULIMA		0754 268939	
32	BAHATI SANGA	MKULIMA		0766 619 700	
33	ABU AYUBU	MKULIMA		0717116232	
34	KULWA NSOJE	MKULIMA		0628128794	KULWA
35	ABEL NGHANBI	MKULIMA		0655648338	
36	ANNA SWENYA	MKULIMA		–	ANNA

AFISA MTENDAJI
MIAA WA MJUMWA
DODOMA

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 17/8/2017

WILAYA.................................

TARAFA.........................

KATA IHUMWA KIJIJI CHANG'OMBE

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
37	ASIBENANSI MIOVE	MKULIMA	CHANG'OMBE	065585149	
38	MICHAEL MARWA	MKULIMA	CHANG'OMBE	0688663036	
39	IRIZA SAMIRA	MKULIMA		0653362751	T.S.
40	ZACKARIA MAKAMBA	MKULIMA	"	0783102868	
41	DANIEL MASANJA	MKULIMA	CHANG'OMBE	0678385280	
42	KAREBI CHARLES	MKULIMA		0713082796	
43	RONEY CHARLES	MKULIMA		0655898667	
44	BENSON FREDRICK	MKULIMA		–	
45	RAMADHAN KHALIK	MKULIMA		076160529	
46	ROBERT MAGANGA	BIASHARA	CHANG'OMBE	067B220318	
47	MASUMA DOITO	MKulima	CHANGOMBE	07691-7789	
48	NALAILA BERNARD	MKULIMA	– " –	0719546266	
49	JULIA NADO	MKULIMA	– " –	07103844 11	
50	DAILU CHARLES	Mkulima	– " –	0677742425	
51	JEREMIA NDUMIZI	MW.KT.SHINA	CHANGOMBE	0718621267	J.Ndumizi
52	ADOLPH PAUL	MLANGAFU	CHANGOMBE	0657046166	
53	FRANCIS DIDAS	Mwanafunzi	CHAN'GOMBE	0755442429	Didas
54	CHARLES MBOGAMBA	MKULIMA	CHANGIOMBE	–	C.Mbogamba
55	BARIKI RUBEN	MKULIMA	CHANG'OMBE	0675470786	
56	BONIPHACE NDUMIZI	MKULIMA		0653251762	
57	SHEIZA SHEIZA	MKULIMA		0621005455	
58	PETER FUKUNYI	MKULIMA		0620763322	Peter
59	MOHAMED MALANGA	JWIZ		0752994287	
60	SALAMU MAHUKUTUKU	MKULIMA		0628860282	
61	JUMA LIMBU	JWIZ		0788625386	
62	RAHEL YACOBO	BIASHARA		0717421894	
64	JEMIMA MASIMBA	AFISA MAENDELEO	CHANGOMBE	0713539363	
65	OMARY AYUBU	BIASHARA		0756492237	
66	DICKSON NGARLYA	MKULIMA		0768125221	
67	SINKLA KIBASYA	MKULIMA	CHA	0787464241	
68	ROGATI TARIMO	MKULIMA	CHA	0755228774	
69	RAJABU HASSANI	MFANYABIASHARA		0652149545	
70	JACKSON SAMWEL	MKULIMA		–	
71	HOSEA MUHEMBANO	MKULIMA		0655748971	Hosea
72	YOHANA MUHIBIMYA	MKULIMA		0717720710	
73	PENDO MLEMELWA	M/shina		0752029327	P. mlemelwa

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AFISA MTENDAJI MTAA WA IHUMWA DODOMA

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO

TAREHE 17.8.2017

WILAYA.....

TARAFA.....

KATA. IHUMWA

Mtaa CHANGÓMBE

KIJIJI.....

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
73	GAUDENCIA KAMBINGWA	MKUU WA	CHANGÓMBE	–	G. Ambilikile
74	ANATORY SILVESTER	MKULIMA	CHANGÓMBE	0678165706	Anatory

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AFISA MTENDAJI
MTAA WA IHUMWA
DODOMA

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 17/08/2017

WILAYA DODOMA (M)

TARAFA KIKOMBO

KATA IHUMWA KIJIJI IHUMWA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1.	VICKILES JOSEPH	M/KITI	IHUMWA	0758-873474	[signature]
2	LISTER SAMALANI	VEO	IHUMWA	0759155142	[signature]
3.	HALIMA MNG'ENDE	A/MIFUGO	IHUMWA	0785800126	[signature]
4	SWAIBA R MSATI	A/KILIMO	IHUMWA	0757924363	[signature]
5.	HAWA R SWALEHE	MWANANCHI	IHUMWA	0782900061	[signature]
6.	AGNES DAUDI	MWANANCHI	IHUMWA	—	A. DAUDI
7.	SARA S JUMA	MWANANCHI	IHUMWA	0666183939	S. JUMA
8	AMINA S. RASHIDI	MWANANCHI	IHUMWA	0658-475350	[signature]
9	JAIROSI M. MOTO	MWANANCHI	IHUMWA	0674101044	J. S. M.
10	JOHN MATOTA	MWANANCHI	IHUMWA	0718965360	J. M.
11	FESTO MAGANGA	MWANANCHI	IHUMWA	0652562419	F. M
12	MUSSA CHARLES	MWANANCHI	IHUMWA	0687499380	M. C
13	festo william	Mwananchi	Ihumwa	— — —	f. w
14	bohal bohal	Mwananchi	Ihumwa	------	b. b
15	alfa obedi	mwananchi	Ihumwa	— —	a. o
16	baraka ruben	mwananchi	Ihumwa	— ---	b. r
17	BARACHEDEKMETILACHEBOMA	Mwananchi	IHUMWA	—	B. T
18	ELIA MAZENGO	MWANANCHI	IHUMWA	0752919232.	E. Mazengo
19.	HAMISI CHIBWANA	MWANANCHI	IHUMWA	0766166640	H. C.
20	LEONARD MKOMOCHI	MWANANCHI	IHUMWA	—	L Mkomochi
21	ACHIHO HUSSEIN	Mwananchi	Ihumwa	0716700014	[signature]
22	WILSON NDYAMI	MWANANCHI	M. Ihumwa	0789-974769	[signature]
23	YORAM NGALYA	— // —	IHUMWA	0782672281	[signature]
24	AMOSI S MSENZI	MKULIMA	IHUMWA	0658796633	[signature]
25	JULIUS MWALUKO	MWANANCH	IHUMWA	— —	J. Mwaluko
26	SAMWELI MTANGA	MWANANCHI	IHUMWA	0716961373	[signature]
27	CHARLE MGUNWA	"	IHUMWA	0768156184	[signature]
28	NISKONI MBAJIU	" "	IHUMWA	0768349206	[signature]
29	OSCAR ENOCK	MWANANCHI	IHUMWA.	— —	[signature]
30	MATHAYO AEMEROYE	MWANANCHI	IHUMWA	—	M. A
31	EZEKIA CHIDAWARI	MWANANCHI	IHUMWA	—	E. C
32	MANENO SEMSI	MWANANCHI	IHUMWA	0657586624	[signature]
33	ELIAS IDAB MBALAYI	MWANANCHI	IHUMWA	0678760801	[signature]
34	YALEDI CHONYE	MWANANCHI	IHUMWA	—	Y. C
35	JOSHUA MTOSIMI	Mwananchi	IHUMWA	0659659596	[signature]
36	YESE MSIPUKA	MWANANCHI	IHUMWA	—	[signature]

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AFISA MTENDAJI MTAA WA IHUMWA DODOMA

CROWN TECH CONSULT LTD
MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)
MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 17/8/2017
WILAYA DODOMA (MJ)
TARAFA KIKOMBO
KATA IHUMWA KIJIJI IHUMWA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
37	HERIMASA VALLENTINE	FIELD/MWANANCHI	IHUMWA	0684307111	[illegible]
38	ROBERT CHINOLO	MWANANCHI	IHUMWA	—	R.C
39	JUMA CHIBONHA	Mwananchi	Ihumwa	— —	J.CH
40	Cathbeth mbogoli	Mwananchi	Ihumwa	—	C.M
41	Teli Sabe	Mwanachi	Ihumwa	—	J.S
42	Chombo ya fundi	Mwananchi	Ihumwa	—	C.F
43	Amos Ziganika	Mwananchi	Ihumwa	—	A.Z
44	Jois Sadala	Mwananchi	Ihumwa	—	J.S
45	Julieta Njemeli	Mwananchi	Ihumwa	—	J.N
46	SAMWEL CHID	MWANANCHI	IHUMWA	0659594149	S.C
47	SAMWEL CHIBONHA	MWANANCHI	IHUMWA	—	S.C
48	KENETH CHIDOLE	MWANACHI	IHUMWA	0716190120	K.C
49	JOSHUA NTANDU	Mwananchi	IHUMWA	—	J.N
46	NYEMO MBINDA	MWANANCH	IHUMWA	0655280960	N.Mbinda
47	PILIS JOSEPHY	MWANANCHI	IHUMWA	0714823784	P.J
48	EIERSON MHAMBA	MWANANCHI	IHUMWA	0763431986	E.M
49	HAIDANI DOTONI	MWANANCHI	IHUMWA	0755986452	H.D
50	STEPHEN MBATA	ASKOFU	IHUMWA	0766526202	[illegible]
51	BARAKA SILVESTER	MWANANCH	IHUMWA	0657021627	[illegible]
52	LAZARO S.	K/KIJIJI	—	0754458237	[illegible]
53	IVAN NDUMIZI	Mwananchi	IHUMWA	0717550123	I.Ndumizi
54	SHUKHILU AMOS	MKULIMA	IHUMWA	0673698562	S.Amos
55	JUMA NGOPO	MFANYA KAZI	IHUMWA	0653636237	Ngopo
56	SARAFINA MLENGA	MKULIMA	IHUMWA	0766070831	[illegible]
57	ASHURA ZAKARIA	MKULIMA	IHUMWA	—	A.ZAKARIA
58	GAUDANCE AMBINGIKE	MKULIMA	IHUMWA	—	G Ambingike
59	CHRITINA MWALUKO	MKULIMA	IHUMWA	—	C mwaluko
60	CHILEWA MTORO	MKULIMA	IHUMWA	—	C. MtORO
61	MECKSON CHISANJA	MKULIMA	IHUMWA	0755182263	[illegible]
62	MARIAM MATHIAS	MKULIMA	IHUMWA	0657145795	M-Mathias
63	SAMWELY MATONGA	MKULIMA	IHUMWA	—	[illegible]
64	JUNISI MHANDO	MKULIMA	IHUMWA	0626552722	J.Mhando
65	JANETH PETRO	MKULIMA	IHUMWA	— — —	JPeta
66	SALA MHAMBA	MKULIMA	IHUMWA	— — —	S
67	ADRA SAJIRA	MKULIMA	IHUMWA	—	A.S
67	EZRA CHIBILE	MKULIMA	IHUMWA	—	EZR

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AFISA MTENDAJI
MTAA WA IHUMWA
DODOMA

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO

TAREHE..17/8/2017

WILAYA..DODOMA (M)

TARAFA..KIBAIGO

KATA..IHUMWA

KIJIJI..IHUMWA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
68	JOSHUA ALFAN	MWANACHI	IHUMWA	—	
69	ISAKA NTIMO	MWANANCHI	IHUMWA	—	
70	EMANUELY ISAYA	MWANACHI	IHUMWA	—	
71	EMANUELY CHELESA	MWANANCHI	IHUMWA	—	
72	ISAYA MOSSESI	mwananchi	IHUMWA	0766733215	
73	MATHIAS MAYALA	MWANANCHI	IHUMWA	0710-366161	
74	MOSES BALEGGE	Mwananchi	IHUMWA	0759-852409	
75	SAIMONI -[illegible]	mwananchi	IHUMWA	—	
76	FAIRDS SASAWE	mwananchi	IHUMWA	—	
77	HAMISI TOL	mwananchi	IHUMWA	0756044442	
78	MOSES MAKOMELO	MWANANCHI	IHUMWA	0766 235524	
79	JONAH NZANGA	MWANANCHI	IHUMWA	0712510058	
80	NOAH MUMBA	MWANANCHI	IHUMWA	0716498080	
81	DAUDI MANGUKELA	MWANANCHI	IHUMWA	0712 029936	
82	LAMECK MBINDA	MWANANCHI	IHUMWA	0712422987	
83	MUSSA MBITHA	MWANANCHI	IHUMWA	0713072495	
84	SOLISTENESI [illegible]	MWANANCHI	IHUMWA	—	
85	JUMA MKOBA	MWANANCHI	IHUMWA	0626044317.	
86	THOMAS PITER	MWANANCHI	IHUMWA	0755460301	
87	STIVENE NYIGE	MWANANCHI	IHUMWA	0753755253	
88	PAULO MKOYI	MWANANCHI	IHUMWA	07x3692826	
89	JOSEFI SEGE	MWANANCHI	IHUMWA	0758952517	
90	ATOSI MWAITITO	MWANANCHI			
90					

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AFISA MTENDAJI MTAA WA IHUMWA DODOMA

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 17/08/2017

WILAYA DODOMA (M)

TARAFA KIKOMBO

KATA IHUMWA MTAA ~~KIJIJI~~ CHILWANA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
01	EMANUEL MANYIKA	MJUMBE	CHILWANA	0757025112	[illegible]
02	STANLEY MTONYI	VEO	IHUMWA	0712-151414	[illegible]
03	DONARD YAREDI	Mkulima	CHILWANA	0768156181	[illegible]
04	CONSOLATA ISAKA	MKULIMA	CHILWANA	0673044882	[illegible]
05	JOSHUA MASANYIKA	MKULIMA	CHILWANA	—	[illegible]
06	ABELI MALECHELA	MKULIMA	CHILWANA	—	[illegible]
07	RICHARD SANGULA	MKULIMA	CHILWANA	0754227335	[illegible]
08	SAMWELI MWALIKO	MKULIMA	CHILWANA	0765441550	[illegible]
09	JULIETH SAMBAYI	MKULIMA	CHILWANA	0743450816	J Sambai
10	OBEDI MAGAWA	MKULIMA	CHILWANA	0756744910	[illegible]
11	MOSES NGHAGOWA	MKULIMA	CHILWANA	0762384540	[illegible]
12	EMMA FANDE	MKULIMA	CHILWANA	0710384273	[illegible]
13	KENEDI MATATA	MKULIMA	CHILWANA	0658796622	Matata
14	PETER JAIROSI	" "	CHILWANA	0657637713	[illegible]
15	YONATHANI NDAHANI	" "	CHILWANA	0769217241	Y. Ndahani
16	DONARD MASULUALI	" "		—	[illegible]
17	YUSTADHI MGOGODI	" "		0712696864	Y. M
18	MARKO MASINGA	" "		0616132802	[illegible]
19	JOYCE NGHAGOWA	" "		0769104683	[illegible]
20	BENJAMENI LEMWAI	" "		0679162998	B. Lemwai
21	JOHN MWALUKO	" "		0678710063	J. mwaluko
22	ABDALLAH HASHIM	MFANYABIASHARA	CHILWANA	0716441522	A. Ashim
23	MIWA MASINGA	MKULIMA	" "	0718362316	M. Masinga
24	MWALUKO ZAKARIA	" "	" "	0764599678	[illegible]
25	AINEAH LUGUNYALE	"	"	0715750646	[illegible]
26	GABRIEL AITDO	" "	" "	0769533614	[illegible]
27	MICHAEL MANG'ATI	" "	" "	0629170394	[illegible]
28	HONOLI MANGWELA	" "	" "	0762829854	[illegible]
29	MAPUTO ABELI	" "	" "	0672105546	[illegible]
30	EMANUELI RICHARD	" "	" "	0765287701	[illegible]
31	DORA SAJILOO	" "	" "	—	[illegible]
32	RIYA SANGULA	" "	" "	0712516860	R Sangula
33	MOSES EDWARD	" "	" "	0712077309	[illegible]
34	DAVID DEDE	" "	" "	—	D. dede.
35	ALOSI MWALUKO	" "	" "	0756403119	A. M
36					

AFISA MTENDAJI MTAA WA IHUMWA DODOMA

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CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE..16/05/2017

WILAYA..DODOMA (M)

TARAFA...HOMBOLO

KATA..MAKUTUPORA

MTAA/KIJIJI..MAKUTUPORA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
37	PELLS YOHANA	MKULIMA	MAKUTUPORA	-	P. YOHANA
38	TALED KANYAMALA	MKULIMA	MAKUTUPORA	-	
39	MANSUROOR KISOME	MKULIMA	MAKUTUPORA	0717792675	
40	HALIMA KISOME	MKULIMA	MAKUTUPORA	-	
41	HALIMA HOYA	MKULIMA	MAKUTUPORA	-	M. HOYA
42	BENARD WILSON	MKULIMA	MAKUTUPORA	0678903922	B. WILSON
43	AIDAN RAZALO	MKULIMA	MAKUTUPORA	-	
44	MIKAEL MASIMAMI	MKULIMA	MAKUTUPORA	-	
45	MATHIYO CHIDING'ATI	MKULIMA	MAKUTUPORA	-	
46	PILI DEDE	MKULIMA	MAKUTUPORA	-	
47	MANENO DEDE	MKULIMA	MAKUTUPORA	-	
48	ROY MASUKA	MKULIMA	MAKUTUPORA	-	
49	BERITA ANDREA	MKULIMA	MAKUTUPORA	-	
50	CESILIA THOMAS	MKULIMA	MAKUTUPORA	-	
51	MARIET CHILEWA	MKULIMA	MAKUTUPORA	-	
52	MICHAEL KAYEGA	MKULIMA	MAKUTUPORA	-	M. KAYEGA
53	JUMA MGAJI	MKULIMA	MAKUTUPORA	-	J. MGAJI
54	MILCA LUNGWA	MKULIMA	MAKUTUPORA	-	
55	RICHARD ALUFANI	MKULIMA	MAKUTUPORA	-	
56	SILVANUS MALIMA	MKULIMA	MAKUTUPORA	-	
57	JAMHURI LUNGWA	MKULIMA	MAKUTUPORA	-	
58	ELIA ILAMBA	MKULIMA	MAKUTUPORA	-	
59	SARAH MBALA	MKULIMA	MAKUTUPORA	-	
60	NOAH MSONGALEDI	MKULIMA	MAKUTUPORA	-	
61	AISHA RAMADHANI	MKULIMA	MAKUTUPORA	-	
62	DICKSON MIKAEL	MKULIMA	MAKUTUPORA	-	
63	NATANAEL DEDE	MKULIMA	MAKUTUPORA	-	
64	NICKSON PETER	MKULIMA	MAKUTUPORA	-	
65	SARA KALOBO	MKULIMA	MAKUTUPORA	0766508361	
69	MODESTA JOHN	M.KULIMA	MATUPORA	0653811970	
70	HALIMA HASSAN	M.KULIMA	MATUPORA	-	H. K.
71	ELIZA RUNGWA	-"-	-"-	-	
72	NAOMI MAHUNGA	-"-	-"-		
73	RAHAGI MAHUNGA	ASKARI			
74	HAPPY MAHUNGA	MJASIRIMALI			
75	AGRIPINA MAHUNGA	ASKARI	-"-		

AFISA MTENDAJI WA MTAA
MJUMPYA KATA YA MAKUTUPORA
DODOMA

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 16/08/2017

WILAYA DODOMA (M)

TARAFA HOMBOLO

KATA MAKUTUPORA MTAA/KIJIJI MAKUTUPORA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	KAZENI MRONGA	MKULIMA	MAKUTUPORA	0754616590	
2	JEMIMA MKUNI	MKULIMA	MAKUTUPORA	0716835117	
3	KIHEMBA A. KIHEMBA	MKULIMA	MAKUTUPORA	0714584223	
4	ZEBEDAYO DAYO	MKULIMA	MAKUTUPORA		
5	MARTIN MGIMBA	MKULIMA	MAKUTUPORA	0784369391	
6	SARA KAROBO	MKULIMA	MAKUTUPORA	0682433655	
7	GABRIEL DEDE	MKULIMA	MAKUTUPORA		
8	MICHAEL CHIBINGATI	"	"		
9	ZAKARIA NYATI	"	MAKUTOPORA	0715128905	
10	ENOCH MASIGATI	"	"	"	
11	MATIASI MAHIYA	"	"	"	
12	LAZARO DEDE	"	"		
13	MICHAEL KANYAMALA	MKULIMA	MAKUTUPORA	0652701151	
14	KELVIN AMKINDI	BIASHARA	MAKUTUPORA	0769776715	
15	ATHANASIA DEO	MWANAFUNZI	MAKUTUPORA	0769776715	
16	KELVIN DEO	MWANAFUNZI	MAKUTUPORA	0784332815	
17	RASHID [illegible]	OFISI	MAKUTUPORA	0659503189	
18	STELLA MATEMU	BIASHARA	MAKUTUPORA	0658397909	
19	RAZALO CHIZENGA	MKULI	MAKUTUPORA		
20	WILLIAMU CHITURO	MUKULIMA	MAKUTUPORA		
21	ANTONY BOCHELA	MKULIMA	MAKUTUPORA	0	
22	MATIASI HOYA	MKULIMA	MAKUTUPORA		
23	DEO CHILEWA	MKULIMA	MAKUTUPORA		
24	STEEVE KATANGA	M/UMMA	MAKUTUPORA	—	
25	STANLEY KATANGA	MKULIMA	MAKUTUPORA	—	
26	IDDY KISOME	MKULIMA	MAKUTUPORA	—	
27	ISSAYA MALIMA	MKULIMA	MAKUTUPORA	0687907	
28	YOHANA CHILEWA	MKULIMA	MAKUTUPORA	—	
29	NHAMBI LUMBO	MKULIMA	MAKUTUPORA	—	
30	JOSEPH PETRO	MKULIMA	MAKUTUPORA	0677202231	
31	ALLY SHABANI	MKULIMA	MAKUTUPORA	—	
32	HAPPY KAYEGA	MKULIMA	MAKUTUPORA	—	
33	YONA MKOBALO	MKULIMA	MAKUTUPORA	—	
34	MUSSA MKOBALO	MKULIMA	MAKUTUPORA	—	
35	HEZERONI MKOBALO	MKULIMA	MAKUTUPORA	—	
36	PENDO MUSSA	MKULIMA	MAKUTUPORA	—	

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AFISA MTENDAJI WA MTAA
MPYA KATA YA MAKUTUPORA
DODOMA

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE. 16/08/2017

WILAYA. DODOMA (M)

TARAFA. HOMBOLO

KATA. MAKUTUPORA MTAA/KIJIJI. MAKUTUPORA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	GUILLAMU KULWA	ASKARI	MAKUTUPORA	0714-590200	
	AMINA SALEHE	ASKARI	MAKUTUPORA	0714-382443	A. SALEH
	MUSSA MASOUD	ASKARI	MAKUTUPORA	0717-020234	
	ASHRAF RAJABU	ASKARI	MAKUTUPORA	0655-766765	
	VAILETI MTUNDU	MKULIMA	MAKUTUPORA	0768-768915	
	MELIJEDE JOHANSPAN	MKULIMA	MAKUTUPORA	0655-797579	M. Jothan
	MARIAMU GINATIO	MKULIMA	MAKUTUPORA		
	NEEMA MUHAMED	MKULIMA	MAKUTUPORA	0757-354753	N. MOHAMED
	ELIZABETH MAGANGA	MKULIMA	MAKUTUPORA	0718-548420	
	NORBERTH MASALA	MKULIMA	MAKUTUPORA	0656-505716	
	LUCAS RUWANDA	FUNDI	MAKUTUPORA	0676-393847	
	RASHIDI JUMA	MKULIMA	MAKUTUPORA	0712-593490	
	MUHAMEDI ABDAM	MKULIMA	MAKUTUPORA	0656-898394	MOBI
	MUSSA ZEBEDAYO	FUNDI	MAKUTUPORA	0711-693733	
	MUSSA MKORALO	MKULIMA	MAKUTUPORA	0769-730062	
	JAMBO KANYORA	MKULIMA	MAKUTUPORA	0757-263371	
	ENDWIKE ANDASON	MKULIMA	MAKUTUPORA	0756-248528	
	REHEMA MUZANDA	MKULIMA	MAKUTUPORA		
	NIVAJUMA MATONYA	MKULIMA	MAKUTUPORA	0754025500	
	GRESSI KATEGA	MKULIMA	MAKUTUPORA		G. K. G.
	MMIANI ELIA	MKULIMA	MAKUTUPORA		E N Z.
	SAMALI GANDAMEGA	MKULIMA	MAKUTUPORA		
	ELIZA CHILEWA	MKULIMA	MAKUTUPORA		E. Chilewa
	ANTHON MATAYO	MKULIMA	MAKUTUPORA		A. MASSARY
	ABUBAKARI KULWA	MKULIMA	MAKUTUPORA	0678-747521	
	SAIDI OMARY	MKULIMA	MAKUTUPORA	0758-053242	
	TELEZIA MAHIJA	MKULIMA	MAKUTUPORA		T. Mahiya
	VESSI SINDE	MKULIMA	MAKUTUPORA		V. SINDE
	ROSSE SIMONI	MKULIMA	MAKUTUPORA	0757-491613	R. SIMONI
	KAMEKI JOSEPH	MKULIMA	MAKUTUPORA	0713-639358	
	AMMONI DEDE	MKULIMA	MAKUTUPORA	0677-734387	A. dede
	NESPHOLI MAGEMBE	MKULIMA	MAKUTUPORA	0754-014527	
	SHIJA MASASI	ASKARI	MAKUTUPORA	0654-502639	
	JELADI KISWAGA	MKULIMA	MAKUTUPORA	0688853650	J. KISWAGA
	JUMA MATULA	MKULIMA	MAKUTUPORA	0794-592439	J. MATULA
	PHILIPO EZEKIEL	MKULIMA	MAKUTUPORA	0756 736519	

MICHAEL CLUSINISE MKUTUPORA

AKIBWASIYO -3- MAKUTUPORA

AMOSI CHIMALE. MKULIMA. MAKUTUPORA. 0753561226.

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 16.08.2017

WILAYA DODOMA

TARAFA HOMBOLO

KATA MAKUTUPORA MTAA ~~KIJIJI~~ SEKONDARI

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1.	JOSEPH ANTHONY NCHAMA	M/Kiti mtaa	Sekondari	0673737450	[signature]
2.	EDINA PAUL MWIDAMBO	Mkulima	-"-	–	
3	FRANCSCA DEO	BIASHARA	"	0784331681	[signature]
4	PHILIPO EZEKIEL	MKULIMA	"	0756736519	[signature]
5	MPINA SHIGOBELO	Mkulima	—	0782363686	[signature]
6	SARAI OMARI MASAO	Mkulima	–	0788-053242	[signature]

AFISA MTENDAJI WA MTAA
MJI MDOGO YA KATA YA MAKUTUPORA
DODOMA

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CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 16.08.2017.

WILAYA Dodoma (m)

TARAFA Hombolo

KATA Makutupora

Nima KIJIJI Kambarage

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	MUSSA SUGUJA	Mkulima	Kambarage	0657963709	Mugute
2	TIMOTH MASOKO TWIGO	Mwalimu	11	0784-773026	
3	MAIKO MLIMA	Mkulima	11	0677737242	
(4)	AIDAN NGILANGWA	Mkulima	11	0764728333	Angilangwa
(5)	PATROKILI TOMASI	Mkulima	11	0756234288	

OFISA MTENDAJI WA KIJIJI
KATA YA MAKUTUPORA
DODOMA

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CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 16.08.2017

WILAYA Dodoma Mji

TARAFA Hombolo

KATA Makutupora KIJIJI Mtaa Nyhemianga

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	MSTAPHA JUMA	Mkulima	Nhyemianga	0621199974	[illegible]
2	EMANUEL JONASANI	Mkulima	Nhyemianga	0713346386	E.J
3.	TULEZIA MBOGA	—"—	—"—	0763309816	[illegible]
4.	WILIAM KABUTELANYA	—"—	—"—	0766297623	[illegible]
5	JACKSON MWANJELA	—"—	—"—	0763877613	Nyujela
6.	GERALD MTAMPELA	—"—	—"—	0712442840	[illegible]
7.	CHRISTINA MALONGE	—"—	—"—		[illegible]
8.	HAMISI RAMADHANI	Mkulima	—"—	0757263689	[illegible]
9.	OMERI A. KAGIYE	—"—	—"—	0718417292	[illegible]
10	WILIAMU MWANJELA	—"—	—"—	0627557243	[illegible]
11	YUNGE MTEKELA	—"—	—"—	0762515234	[illegible]
12	JOISI MB. MASOKOLA	—"—	—"—	———	Joi S.
13	HABIBA ISUMAIL	—"—	—"—	0714494906	[illegible]
14	KAHILIKO KANAEL	—"—	—"—	0715511087	[illegible]
15	NOLOBETI D. KAHILIKO	—"—	—"—	0758276457	N.Kahiliko
16	JENI TWEVE	—"—	—"—	0755649920	[illegible]
17	EDWARD KAMANGALE	—"—	—"—	0763-642908	Camangole
18	NELSON S. ARON	Mwkiti Mtaa	Nhyemiyanga	0756284382	[illegible]
19	DEO A KIMARIO	—"—	—"—	0784332818	Kimario
20	JENY KIDAMISI	Mkulima	—"—	0719405479	[illegible]
21	SALEHE MBONDE	Biashara	—"—	0754497281	[illegible]
22	ADO-ROMAN	Mfanyakazi	—"—	0788493644	[illegible]
23	ESTA ISUJA	Mkulima	—"—	07	Esuja
24	YUSEPHU KAHILIKO	Mkulima	—"—		[illegible]
25	LENIFRIDA MAHANGA	Mkulima	—"—	0716935886	[illegible]
26	EMANUEL KAHILIKO	Mkulima	—"—		Ema
27	SATAI OMAR MADODO	Mkulima	—"—	0788053242	[illegible]
28	TIMOTHEO MNDEWI	Mkulima	—"—	0786045992	[illegible]
29	SEBASTIAN KAHA	Mkulima	H.	———	Kaha V

AFISA MTENDAJI WA MTAA
KATA YA MAKUTUPORA
DODOMA

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CROWN TECH CONSULT LTD
MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)
MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE...........................

WILAYA..................................
TARAFA...HOMBOLO....................
KATA...MAKUTUPORA.................. ~~KIJIJI~~ MTAA ...MAKUTUPORA...

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	FLORA MAHWAGA	MJASIRIAMALI	MAKUTUPORA	0652701978	F.Mahwaga
2.	ATUPOKILE GODFREY	MKULIMA	MAKUTUPORA	0655975077	[signature]
3	PATRICK -MABWAY	MKULIMA	MAKUTUPORA	0755297469	Mabway.
4	JANO SHELEMBI	MKULIMA	MAKUTUPORA	0620040[illegible]	[signature]
5	MATAIAS DEDE	MKULIMA	MAKUTUPORA	0756670401	[thumbprint]
6	EMERENSIANA MKAMOSA	MKULIMA	MAKUTUPORA	0655683573	[signature]
7	MARKO ERNEST	MAKU	Hausa	065558[illegible]	[signature]
8.	DICKSON MICHAEL	MKULIMA	MAKUTUPORA	0719252470	D.MICHAEL
9.	MWASUMA KAYEGA	MKULIMA	MAKUTUPORA		[thumbprint]
10	PHILIPO EZEKEL	MKULIMA	MAKUTUPORA	0756736519	P. EZEKELI
11	JAPHEGI A. SINDE	MKULIMA	"	-	[thumbprint]

[signature]
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... KATA YA MAKUTUPORA
DODOMA

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 16/8/2017

WILAYA Dodoma (m)

TARAFA Hombolo

KATA MAKUTUPORA

MTAA/~~KIJIJI~~ MBANDE

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	ALLY MKOTYA MACHEMBA	M/KITI	MBANDE	0657767332	

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JIMBO LA MAKUTUPORA
DODOMA

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE..16/08/2017.....

WILAYA...Dodoma (m).....

TARAFA...Dodoma (m)

KATA...NZUGUNI.....

MTAA KIJIJI - KITELELA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	STEPHEN M. MASINE	Mkuu mtaa	KITELELA	0757090143	
	ANJELINA, NZIJE	MWANCHI	KITELELA		Anzije
	ROZA, CHILEWA	"	KITELELA	—	
	REHEMA, MASAGAS	"	"		
	HILDA, TOIBA	"	"	—	
	ESTER. YAKOBO	"	"	-	
	ELIKA. JOAB	"	"		
	REHEMA. NGOHOLA1	"	"		
	SOIS. KUSHOKA	"	"		J. Kushoka
	MARIA. MCHIWA	"	"		
	VEIS CHIGONELA	"	"		
	VERONIKA, MICHAEL	"	"	0658207436	V. MICHAEL
	MONIKA, CHIMATAA	"	"		
	ELIKA, MKWAWI	"	"		
	PAULINA, PETRO	"	"		
	ANNA, CHAPA	"	"		
	GLES, CHINOTO	"	"		
	MARIA. MBUJE	"	"	0765828725	M. MBUJE
	JANETH MCHODO	"	"	0750107?8	J. MCHODO
	ASHA, ABDUL	"	"		
	EDDA, CHITEMA	"	"		
	EDDA. MHEHWA	"	"		
	SALOME, MBINDO	"	"		
	OLIPA. NGOHOLA1	"	"		
	SUZANA. CHINOTO	"	"	0769736040	
	REHEMA, CHINOTO	"	"	0714647801	
	MONIKA, TOIBA	"	"		
	EVELINA. MATONYA	"	"	—	EVELINA
	ESTA. MASINJILA	"	"	0755365439	
	MAGRETH. NDUBAA	"	"		Ndubaa
	NYABWANA RUMO	"	"	0754365406	
	SOPHIA JUMA	"	"	0765110995	S.
	TELEZIA, MCHIWA	"	"		T. Mchiwa
	AKSA, MLISHO	"	"		
	ASHA, JUMA	"	"	0765235796	A. Juma
	AGNES, SIMON	"	"		

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KATA YA NZUGUNI

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE. 16/08/2017.

WILAYA. Dodoma (m).

TARAFA. Dodoma (m)

KATA. NZUGUNI

~~KIJIJI~~ MTAA. KITELELA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	EZELENI MASAUKU		KITELEZA	0658-810791	
	KENES TOIBA		11	0710-862845	K. Toibo
	PETRO MALTIN		KITELELA	—	
	SAMWEL NGOHOLAI		11	—	
	ZUBEDA M. MAHIMBO	MJUMBE	11	0767-030948	Mahimbo
	BAKARI JUMA	M/KITI ISIMA	11	0652-990174	[illegible]
	EMANUELI MAGONGO	MJUMBE	11	0756-175434	[illegible]
	OBADIA E. MWALIKO	MK. ISHINA	KITELELA	0754-084811	Omaliko
	YOHANA MBUNGA				[illegible]
	EMANUEL NGOHOLAI				[illegible]
	PITA CHILEWA				[illegible]
	MHAMEDI HASANI		—	—	P. Chile
	LICHADI SOLYA				[illegible]
	EDUADI CHITEMA				[illegible]
	[illegible] MLAKA	MKAZI	KITELELA		[illegible]
	KRISTOFA MESHAKI	"	11		K. MESHACK
	MJELE PITIA	"	11		[illegible]
	MELKIORY J. MAGJA	"			[illegible]
	JAROME CHIMBE				[illegible]
	WILSON msigak				Wmsigales
	FRANSIS KADETE				Kadete
	MILIDADI MGENI				M. MGENI
	PETRO M. NGOHOLAI				PNgoholai
	MESHACK NGHUMBI				MNghumbi
	SADICK SAIDI				[illegible]
	IBRAHIM HASSAN				IHassan
	MOHAMED ABDALL				[illegible]
	KILISITOFA SAIMONI				[illegible]
	TANU Mades				[illegible]
	FILIMONI MLAKA				[illegible]
	MADIGA LEMBELO				[illegible]
	JUMA MABULA				[illegible]
	MUSA CHITEMA				M CHITEMA
	SAMSON MWALUKO				Smwaluko
	CHALES NGAHOLAI				[illegible]
	MAIKO SEDHU				SEDHU

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 16/08/2017

WILAYA...................................

TARAFA.........................

KATA NZUGUNI KIJIJI KITELELA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	OMAR ABDALLAH	MKAZI	KITERE	065310	[signature]
	MOSES SHAMBA	〃	KITELELA	—	[signature]
	AMONI BATONI	〃 〃	〃	—	AMON
	ELIYA MAGINA	〃 〃	〃	—	[signature]
	CHALES TOIBA	〃 〃	〃	—	TOIBA
	BILES MAHENGE	〃 〃	〃	〃	[signature]
	LUCIANI ANDREA	〃 〃	〃	0659743099	[signature]
	SIMON CHALESI	〃 〃	〃	0711380500	SIMONI
	MAIKO HABELI	MW/SHINA	KITELELA	0766529099	HABELI
	SAMSON	Lusulo	〃 〃 〃	0753806566	[signature]
	CHIMONGOJEGOLO	MKAZI	KITELE	0753401841	[signature]
	JOHN TOIBA	〃 〃	〃	—	TOIBA
	KENGSI LOMANI	〃 〃	〃	—	K-ROMAN
	JOSEF CHIWAJE	〃 〃	〃	〃	[signature]
	MATIASI CHIPOSA	〃 〃	〃	0765595684	[signature]
	FILILI CHIHAMBA	〃 〃	〃	0624233354	[signature]
	SIMON KAZI	〃	〃	0769121661	[signature]
	HASSANI I. HANCHA	MKAZI	KITERERA	0787316964	Hancha
	YUSUPH SAIBU	〃 〃	〃	0787314594	[signature]
	HAMUD MOHAMED	〃	〃	0784425123	[signature]
	MADI HUSENI	〃			[signature]
	YUSUFU N. MUSA	MKAZI	KITERERA	0754-572113	[signature]
	HAMADI SWAI	MKAZI	KITERERA	0767399050	[signature]
	YAHAYA S. MAKUTA	MKAZI	KITERERA	0784-547675	[signature]
	ISSA I. SALUM	MKAZI	KITERERA	0754-364236	[signature]
	MOKSARDI LUHANDA	MKAZI	KITELERA	0753648457	[signature]
	MUSSA ISAKA	MKULIMA	〃	0689414546	MUSSA
	YOHANA P. SOLYA	MKAZI	KITELELA	0764268159	[signature]
	PAULI MASAGA	〃	〃	—	[signature]
	WILIAMU MUSHO	〃	〃	—	[signature]
	JELEMIA MELE				[thumbprint]
	YOHANA CHEMI	〃	〃	〃	[signature]
	AMON NJAMAS	〃	〃	〃	[signature]
	ELIYA NGOHOLAI	〃	〃	〃	[thumbprint]
	ANDARSON M. LUHAMO	MKAZI	KITELELA	0755-014406	[signature]
	MATIASI SEIFU	MKAZI	KITELELA	—	[thumbprint]

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.....

WILAYA.....

TARAFA.....

KATA..... KIJIJI.....KITELELA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	STELA . STEPHANO	MWANANCHI	KITELELA	0710273838	S. STEPHANO
	DOLA . KEDIMON.	"	"		D. Kedimon.
	HALIMA . IBRAHIM	"	"		
	AKSA . CHILUKA	"	"		
	ELIZABETH. MBOGOLI	"	"		E Mbogoli
	MOLENI NGOHOLAI	"	"	—	
	BERIA . LUPEMBE	"	"		
	MWANAHAMIS. MAHIMBO	"	"	—	m. mahimbo
	JESKA . NGOHOLAI	"	"		
	ESTER, MATALIGANA				
	CHRISTINA MBOINA	"	"		
	EDINA . CHIMANA	"	"		
	PAULINA . MOSES	"	"		
	HILIDA . MANGULA	"	"		
	ANASTAZIA . MAJONYA .	"	"		
	SALA CHITEMA	"	"		S. chitema
	JUDITH . MGANGA .	"	"		
	ANA ELIAS	"	"		
	TAUS CHIMAJE	"	"		
	MARIA CHIMAJE	"			
	PILINENA . SEPH.	"	"	0756527858	SEPH
	DINA MATEWA	"	"		
	NEEMA . KAZI	"	"		
	MAGRETH . ELIUD	"	"		M. Eliud
	ROY, TOIBA				
	RAHEMA PAURO	"	"		R. PAURO
	MERINA MASAGASI	"	"		M. MASAGAS
	REHEMA . STANEL	"	"		
	ELIKA . NDUMKA	"	"		
	RUS , SOLYA .	"	"		
	VICTORIA . KUSELYA	"	"		V. KUSELYA
	ELIKA . MAVUNDE	"	"		
	HILIDA . MKAKA	"	"		H . MKAKA
	AGNES . MALENGA	"	"		
	MALIAM, NDACHI	"	"		
	RAHEL, PAULO	"	"	0765440596	

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KATA YA NZ..GIINI

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MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.....

WILAYA.....

TARAFA.....

KATA..... KIJIJI...KITELELA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	JULIETH. G MALE	MWANANCHI	KITELELA.	0766055247	
	MARIAM. MKARA	"	"	0755928466	M.MKARA
	MAYASA. MAHIMBO	"	"		M. MAHIMBO
	SELINA, TOIBA	"	"		
	RAMADHANI J MKOKO	"	"	0759450152	
	Costantine S. Mgaya	"	"	0686585647	
	LUKAS. TOIBA	"	"	-	LUKAS
	ALOIS, MALOGO	"	"	0653252703	
	FESTO, TOIBA	"	"		
	WILIAM. JOHN.	"	"	0652341405	
	CLINTON MGAYA	"	"	0692455390	
	JONAS ROBERTH	"	"		
	VICENT, JOHN	"	"	0754742 6	
	TELEMIA, MALOGO	"	"		
		AHISA MTENDAJI KATA YA NZUGUNI			

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 16/08/2017

WILAYA DODOMA

TARAFA

KATA NZUGUNI KIJIJI MAHOMANYIKA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	ZEBEDAYO CHILEKA	M/KITI MTAA	M/NYIKA	0755570330	
2	ALOYCE M. KUHERA	MWANANCHI	NZUGUNI	0756-316921	
3	HAMISI S. JILUMA	WEO	NZUGUNI	0767666823	
4	YORAM J. SANYA	MJUMBE	MAHOMANYIKA	0758100852	
5	MOSES CHASULUMI	MJUMBE	MAHOMANYIKA	0765894083	
6	SUZANA NYAMBURA	MJUMBE	M/NYIKA	0716904502	
7					
8					
9	SALAH BWANAKOO	M/NYIKA BC	NYIKA		S-BWANAKOO
10	SUPER MLUGU	M/KAZI	MAHOMA	0752885[illegible]	
11	DAUDI SHANI	M/KAZI	M/NYIKA	0765993061	
12	ALEX NDAMA	M/KAZI	M/NYIKA	- - - -	
13	DANIELI SAJU	M/KAZI	M/NYIKA	0766363529	
14	AIRAN BAGGO	M/KAZI	M/NYIKA	0655024615	Bago
15	GLIBETH MLUGU	11	11	- - - - - -	
16	SAMWEL MANGULA	11	11		
17	STAMILEI MALIMA	11	11		
18	RICHARD RICHARD	11	11		
19	ELIAS MAJEMAJI	11	11		
20	RANI MASENYA	11	11		
21	MUSSA MAYAMITA	11	11		M-NYAWASE
22	EMA MTIMA	11	11		
23	TUMAINI CHALENGE	11	11		CHALENGE
24	MUSSA MNAWASE	11	11		
25	MESHAK MTATI	11	11		M. Mtati
26	RAMECK MAHINDA	11	11		
27	MASUMBUKO	11	11	0713 327838	M. Manghati
28	JOSEPH MBIJIMA	11	11		
29	SIMION ELISHA	11	11		S Elisha
30	MSOTE MWANGHWA	11	11	0753557772	M. Malecela
31	MUPANI CHOSE	11	11		
32	NICO KUJOTA	11	11		
33	MADUKU MANGATI	11	11		
34	MAKTAU SHANI	11	11		
35	YOHANA MZANJE	11	11		
36	TUMAINI MPUTA	11	11		

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KATA YA NZUGUNI

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.....

WILAYA.....

TARAFA.....

KATA..... KIJIJI. MAHOMANYIKA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	ALVATH DALURI	M/KAZI	M/NYIKA	0764727393	
2	JACOB SONYO	K/TAOA	M/NYIKA	0755678068	
3	AFRED MNIGONJE	M/KAZI	M/NYIKA	0713579411	
4	COSMAS GANDAWEGA	MKUU/TAWI	MAHOMANYIKA	0755404468	
5	ISAYA LYAMOTA	MKAZI	M/NYIKA		
6	JASTIN MATEMANI	MKAZI	M/NYIKA		
7	BAKARI LYAMOTA	MKAZI	M/NYIKA	0717193649	
8	JONAC GANDAWEGA	MKAZI	M/NYIKA		
9	ELIA CHISOMEKO	MKAZI	M/NYIKA		
10	Thomas Maope	Mkazi	M/Nyika	0759436176	
11	SOSTENS CHOMOLA	M/KAZI	M/NYIKA		
12	CHARLES SILITI	M/KAZI	M/NYIKA		
13	GODI NYAWAJE	M/KAZI	M/NYIKA		
14	RABECA NYAWAJE	M/KAZI	M/NYIKA		
15	PELI CHOMOLA	M/KAZI	〃		
16	MARIA WOWA	〃	〃		
17	RUSI CHITOJO	〃	〃		
18	SCOLA NDAMA	〃	〃		
19	REHEMA WOWA	〃	〃		
20	MARIA WOWA	〃	〃		
21	EVELINA WOWA	〃	〃		
22	CONSO MBUYOMA	〃	〃		
23	HAGAI WOWA	〃	〃		
24	SABA MAGAWA	〃	〃		
25	JOHN CHITOJO	〃	〃		
26	KEPHA NYAUMBA	〃	〃		
27	TANO CHANALA	〃	〃		
28	MATH. MKOBALO	〃	〃		
29	TIMIA CHISWAGALA	〃	〃		
30	EMELE NDAMA	〃	〃		
31	MEN NYAWAJE	〃	〃		
32	HAPPY MKWEYA	〃	〃		
33	GEOGLE KUTOA	〃	〃		
34	JOHN MSOTE	〃	〃		
35	HABELI BAGO	〃	〃		
36	HAMORI KUJOMA	〃	〃		

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KATA YA NZUGUNI

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.....

WILAYA.....

TARAFA.....

KATA..... KIJIJI.....MAHOALANYIKA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
37	STEVIN PAMHOM	M/KAZI	M/MYIKA		
38	MASI-IAI MDAMA	M/KAZI	M/MYIKA		
39	RAMADHANI GOLI	M/KAZI	M/MYIKA		
40	GODFREY MUSSU	M/KAZI	M/MYIKA		
41	MDACHI NRAMA	M/KAZI	M/MYIKA		
42	KEDIMON KONE	M/KAZI	M/MYIKA		
43	ELIABU MENU	M/KAZI	M/MYIKA		
44	PAUL ZAKARIO	M/KAZI	M/MYIKA	0657023895	
45	STANISLAUS KUSEKA	M/KAZI	M/MYIKA	0656531[illegible]	
			AFISA MTENDAJI KATA YA NZUGUNI		

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 15/08/2017

WILAYA DODOMA

TARAFA ZUZU

KATA MATUMBULU KIJIJI MATUMBULU

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	ALFRED MACOLO	M/kiti S/kijiji	MATUMBULU	0782882772	[signature]
2	STANLEY JOHN	VEO	MATUMBULU	0757-677822	[signature]
3	ROBERT KISHIKI	Social Expert	CROWN TECH CONSULT	0784-781180	[signature]
4	LEONIA MASAKA	M/H/Kijiji	Kaunda	0686004343	[signature]
5	CHARLES HOBE	MJUMBE	MATUMBULU	0789780440	[signature]
6	KEZIAH LUHAMO	M/KITI	KUSENHA	0786510185	[signature]
7	YONA L. MHAHA	MJUMBE	MUUNGANO	0786-512751	[signature]
8	Michael Mgugi	" "	" "	0754733477	[signature]
9	JEREMIA MUHUMH	" "		0780502784	[signature]
10	TWALHA ISSA	" "	" "	0786206048	[signature]
11	JOSEPH P. SAMILO	M/kitongoji	CHIKOLA	0688751265	[signature]
12	ELIA B. CHAMHENE	M/kitongoji	KAUNDA.	0687249030	[signature]
13	ALLY RAMADHANI	MJUMBE	UKOMBOZI	0685857700	[signature]
14	SAIDI LADA	MJUMBE	KUSENHA	0788474464	[signature]
15	JACKSON NDAGAWA	MJUMBE	KUSENHA		[signature]
16	JC' DOLINA TIMOTHO	MJUMBE	KUSENA		D. TIMOTHO
17	JAHA WAASI	AKIWIMA	UKOMBOZI	0687386260	[signature]
18	HARUNY MNYAKUSSA	"	UKOMBOZI	+	H. M.
19	MOSES CHITOJO	MJUMBE	UKOMBOZI	0689369164	M. Chitojo
20	NOEL Mazengo	DS	Kaunda	0713881692	[signature]
21	MOSES MAZENGO	MJUMBE	KAUNDA		Mosesi
22	JOSHUA NOAH	MJUMBE	UKOMBOZI	0686211428	Noah
23	ARON	ATANASI	KUSENHA	0684031632	
24	Banjamini Chitojo		Ukombozi	.	[signature]
25	Philimon Kuyagla	mjumbe	Kusenha	0782815433	[signature]
26	Lameck Mahujilo	mjumbe	Ukombozi	0685121862	[signature]
27	LUSTER LAGANGA	LFO	MATUMBULU	0686-797721	[signature]
28	GLADYS NOAH	Mjumbe	Matumbulu	0784124583	[signature]
29	Dickson Magagho	Mjumbe	Matumbulu	—	[signature]
30	Silvano Molonda	[signature]	MATUMBULU	0683608446	[signature]
31	Fransis Mtoze	Mjumbe	Kusenha		[signature]
32	Jarome Simeli	Mjumbe	Ukombozi		[signature]
33	Charles Palingo	—"—	Ukombozi	0655764651	[signature]
34	TITO J. MNYAMBOGA	mjumbe	Muungano	0782090540	[signature]
35	LEMBILE JOAB	—"—	UKOMBOZI	0788590524	[signature]
36	JACKSON MGALE	MJUMBE	UKOMBOZI	0787455077	Jmgale

MWENYEKITI WA SERIKALI YA KIJIJI CHA MATUMBULU DODOMA (M)

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 15/08/2017

WILAYA DODOMA

TARAFA ZONE

KATA MATUMBULU KIJIJI MATUMBULU

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	SILVANO Mathuma	Mkulima	Ukombozi	0784469307	
	Eudia Sunyai	mkulima	Kaunda	0688389460	Sunyai
	EDINA GEORGE	MKULIMA	KUSENHA		E. george
	DAWA ROJAS	MKULIMA	Ukombozi		
	AMANI WILIAM	MKULIMA	Ukombozi	0782-247381	Wiliam
	GRAYSON GEORG	MKULIMA	MNSANO	0738778303	G. Graham
	MONIKA MWENES	MKULIMA	KUSENHA		
	SUZANA NGOIMA	MKULIMA	KAUNDA		
	JOSEPH W. NGOIMA	MKULIMA	KUSENHA	0784026698	Ngoima
	WILL W. ANANIA	MKULIMA	KUSENHA		
	Johana P. NJIKE	MKULIMA	KUSENHA	0785102344	J. njike

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 15/08/2017

WILAYA DODOMA

TARAFA ZUZU

KATA MATUMBULU KIJIJI MATUMBULU

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	EMMANUEL CHIBAGO	DIWANI	MATUMBULU	0784116947	[signature]
	NATHANAEL CHISEBE	KATIBU MTAA	MATUMBULU	0687853378	[signature]
	MUSA HOBE	M/KITI MTAA	MATUMBULU	0688147811	[signature]
	JOSTINA MBALY	MJUMBE	—11—	0688934380	[signature]
	FEDRICK SANGA	MJUMBE	—11—		Mbaga
	TADAYO HOBE	MJUMBE	—11	0682499187	[signature]
	AMOREA JOHN	—11—	11	0686781192	[signature]
	ZAKARIA HOBE			06593036	Hobe
	EMANUEL WANJIE				[signature]
	SALATIEL NGHAMBI				[signature]
	JOBU NDAHANI				[signature]
	EMMANUEL JACOBO			0688747291	[signature]
	SAMWEL SIMON			0683244448	[signature]
	PETRO NGHAMBI			—	[signature]
	JECEMIA NGHAMBI			—	JECEMIA
	VICTA JAKSON				VICTA
	PHESTO SIMON			0683306313	[signature]
	ASSA WANJIE	M/U.VCCM		0679543507	A.Wanjie
	RISTA SIMON	Mjumbe			L Samon
	GIDONI MTITU	MJumbe			[signature]
	POLINA MTITU	—11—			P.MTITU
	ALES NGHAMBI	—11—			ALES
	EUNICE NGHAMBI	—11—			Eunice
	BITRICE NGHAMBI	—11—			BITRICE
	ANETH HOBE	—11—			A.HOBE
	HANA ZAKAYO	—11—		0689223675	Hana
	MOLENI NDOLE	—11—		0689223673	M. NDOLE
	BITRICE JAKOBO	—11—		0689223673	B. YAKOBO
	AMUKA MBEJE	—11—		—	m. mbeje
	JOS. MWELULO	—11—			J. mwelulo
	ELIS. LAZARO	—11—			E. Lazaro
	RUTH MLUBU	—11—		0688584613	R. MLUBU
	Eliza zakayo	—11—			E zakayo
	Rahabu ELIYA	—11—		0788994188	R. ELIYA
	AGNES SIMON	—11—			ASIMON
	AGNES HOBE	—11			A. HOBE

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MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 18/08/2017

WILAYA DODOMA

TARAFA ZUZU

KATA MATUMBULU KIJIJI MATUMBULU

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	ANA MWALUKO	MJUMBE	MATUMBULU		A. MWALUKO
	JULIET WANJIE	—11—			J. wanjie
	RUTH HOBE	—11—			R. HoBe
	REHEMA MLENGA	—11—			K-Melega
	SUZANA MTITU	—11—		068439708[illegible]	S. MTIZI
	NOWADIA NDAHANI	—11—			N. NDAHANI
	ELIZA ZAKAYO	—11— —11—			Eliza
	SAMWEL SAIMON	—11—		0685765014	SAIMON
	KILISITI SP nyumbalo				Nyambalo
	EZEKIEL YUSUFU	—11—		0717785047	E. Yusufu
	JOSEPHY AINEA	—11—		0689902892	Ainea
	STANLEY MWACHA	—11—	0678374971	~~0717785047~~	Stanley
	RIYOA CHISEBE	—11—		0685855540	R. Chisebe
	DAISY KANYANGA	SEDO	[illegible]	0754994843	[illegible]

MWENYEKITI ... SERIKALI YA KIJIJI CHA MATUMBULU DODOMA (M)

CROWN TECH CONSULT LTD
MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)
MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE 15/08/2017
WILAYA DODOMA MUNICIPAL
TARAFA ZUZU
KATA MBAMBALA KIJIJI BIHAWANA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	ARBOGAST MCHETE	M/KITI	BIHAWANA	0752528002	[illegible]
2	SOSPETER BRUNO	M/KITI	MTAA BIHAWANA	0755757855	[illegible]
3	JASIN M. SIMAIYA	M/KITI	KIVUKONI	0768372727	[illegible]
4	RENATHA G. MSANJILA	M/S/KIJIJI	BIHAWANA	0763009248	R. Msanjila
5	AGUSTA MHEPWA	M/S/KIJIJI	BIHAWANA	0784406932	A. Mhepwa
6	AMOS MCHETE	M/S/KIJIJI	BIHAWANA	0684742916	[illegible]
7	JULITHA STEPHANO	M/S/KIJIJI	BIHAWANA		J. S[illegible]
8	ANDREA SABUGO	MJUMBE	BIHAWANA		A. Sabugo.
9	PASKAL L. MJINE	MJUMBE	BIHAWANA	0769120446	[illegible]
10	CHALO MSAKA	MJUMBE	BIHAWANA		Chalo
11	JOHN M. Mzela	Mjumbe	BIHAWANA		[illegible]
12	AMAR[illegible]	Mjumbe	BIHAWANA	0688975348	[illegible]
13	Driscus Pele	mjumbe	Bihawana		Pele
14	PETER MHILA	MJUMBE	CHIKOLA	- -	- -
15	PETRO ISAKA	MJUMBE	CHIZOMA	- -	- -
16	FLORENTINI REMI	MJUMBE	BIHAWANA	- -	Remi
17	SOSTENES	BALOZI	Bihawana	- -	- -
18	BRUNO MNYAMHA	MJUMBE	BIHAWANA	- -	- -
19	[illegible]	MBUJA	BIHAWANA	- -	- -
20	Donat Chihoma	Balozi	Kivukoni		Chihoma
21	FELIX [illegible]	[illegible]	BIHAWANA	-	[illegible]
22	BONIFACE MCHAMBI	MKULIMA	BIHAWANA		[illegible]
23	Elias D - Komba	[illegible]	BIHAWANA	—	[illegible]
24	RICHARD MSAKA	P.J	BIHAWANA	—	[illegible]
25	AGUSTINO	Mjumbe	BIHAWANA	0718752489	[illegible]
26	JEMSI mture	Mjumbe	BIHAWANA	0759867336	Mture
27	RICHARD MASAKA	Mjumbe	ChiKola	0755631[illegible]	[illegible]
28	ERNEST CHMYA	mjumbe	Bihawana	- -	- -
29	FRANSIS PAUL	Mjumbe	Bihawana	— —	[illegible]
30	[illegible] CHIAXPILE	MJumbe	Bihawana	- -	- -
31	HAMIS LUPETA	mjumbe	Bihawana	- -	- -
32	JACSON MAKAGO	MJumbe	ChiKola	- -	- -
33	Albet Chilewa	mfanyabiashara	BIHAWANA		[illegible]
34	Jaspisio	mfanyabiashara	BIHAWANA	- - -	[illegible]
35	Pascal	M Kulima	Bihawana	— —	[illegible]
36	Ernest	M. P	Bihawana	0744466190	[illegible]

M/KITI [illegible] BIHAWANA

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE..15/08/2017

WILAYA..DODOMA MUNICIPAL

TARAFA..ZUZU

KATA..MBANDEGA KIJIJI..BIHAWANA

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	SOSPETER BRUNO	M/KITI MTAA	BIHAWANA	0755757855	
	JASTIN M. SIMAIYA	M/KITI/KIVULE	BIHAWANA	0768372717	
	PAUL P. MTWE	M/KITI/CHIKO	CHIKOWA	0769218185	
	MONICA B. MNYANYIK	MTUMBE	BIHAWANA	0762987598	
	BELITHA KAPANDE	BIHAWANA	BIHAWANA		
	EMILIA JOSEPH	BIHAWANA			
	TAILI CHIDABILO				
	JUSTINA MPAGALE		BIHAWANA	0654363688	J. m
	SESILIA MUCHIA		Bihawana		S. Muchia
	AGRIPINA J. MLEWA		BIHAWANA	0758133366	A. Mlewa
	ESTER SOLOMON		BIHAWANA		E. Solomon
	ROZABINA DAMIAN		BIHAWANA		R. Damian
	MARIA TEODOLI		BIHAWANA		M. Teodoli
	TELESIA SILVESTER		BIHAWANA		T. Silvester
	AMINA MANGI		BIHAWANA		A. Mangi
	SESILIA ZENO		BIHAWANA		S. Zeno
	VAIKETI JACKSON		BIHAWANA		V. Jackson
	Rakel PASKAL		BIHAWANA		R. Paskali
	VELONIKA MASAKO		BIHAWANA		V. Masako
	MOLENI MAZENGO		BIHAWANA		M. Mazengo
	MONIKA KAMUNYA		BIHAWANA		M. Kamunya
	KATALINA KAKA		BIHAWANA		K. Kaka
	MAGDALENA SAMANI		BIHAWANA		M. Samani
	EMELESIANA ERNEST		BIHAWANA		E. Ernesti
	CHRISTINA MWALUKO		BIHAWANA		C. Mwaluko
	STELLA AIDAN		BIHAWANA		S. Aidan
	EMELECIAN KUSAJA		BIHAWANA		E. Kusaja
	SALOME NDONDO		BIHAWANA		S. Ndondo
	CHRISTINA REMI		BIHAWANA		C. Remi
	KATALINA JOHN		BIHAWANA		K. John
	HAMCHA ALY		BIHAWANA		H. Aly
	TELESIA MAKASI		BIHAWANA		T. Makasi
	DONATELA LUKAS		BIHAWANA		D. Lukas
	ELIZABETH MDONONDO		BIHAWANA		E. Mdenondo
	AGATHA SEMEDA		BIHAWANA		A. Semeda

2.

V/KITI S/KIJIJI BIHAWANA
S.L.P 1249
DODOMA
TAR----------

CROWN TECH CONSULT LTD

MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)

MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE.....

WILAYA.....

TARAFA.....

KATA..... KIJIJI.....

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
	SALA FIDELIS		BIHAWANA		S-Fidelis
	SUZANA PETER		BIHAWANA		S-Peter
	NONADIA MACHEO		BIHAWANA		N-Macheo
	MARIA EXVALI		BIHAWANA		M-Exvali
	YUDITA CHOTA		BIHAWANA		Y-Chota
	FELISTA ANDASON		BIHAWANA		F-Andason
	TELESIA LEONADI		BIHAWANA		T-Leonard
	SUZANA BEATUS		BIHAWANA		S-Beatus
	SAVELA MUHEPWA		BIHAWANA		S-Mhepwa
	MARTHA JAJI		BIHAWANA		M-Jaji
	EVELINA MWALUKO		BIHAWANA		E-Mwaluko
	MARIAM MASHAKA		BIHAWANA		M-Mashaka
	LUCIA TADEY		BIHAWANA		L-Tadey
	IKESIA PETER		BIHAWANA		K-Peter
	GAUDENSIA NGAILA		BIHAWANA		G-Ngaila
	MARIA SEVELINI		BIHAWANA		M-Sevelini
	ANGELINA AMOSI		BIHAWANA		A-Amosi
	KATALINA MASAKA		BIHAWANA		K-Masaka
	JULIANA WILLIAM		BIHAWANA	0689606277	J-William
	JENI PAULO		BIHAWANA		J-Paulo
	VERONIKA MAIKO		BIHAWANA		V-Maiko
	MARIA CHENI		BIHAWANA		M-Cheni
	MORIS JEREMIA		BIHAWANA		M-Jeremia
			MKITI S/KIJIJI BIHAWANA S.L.P 1249 DODOMA TAR----------		

3.

CROWN TECH CONSULT LTD
MRADI WA BARABARA, (DODOMA OUTER RING ROAD PROJECT KM 108)
MKUTANO NA WADAU KUHUSU TATHIMINI YA MAZINGIRA NA JAMII

MAHUDHURIO TAREHE...........................

WILAYA..................................

TARAFA.........................

KATA....................................... KIJIJI.............................

SN	JINA	CHEO	ATOKAKO	NAMBA YA SIMU	SAHIHI
1	CHALES MBUWA	mjumbe	BIHAWANA	0658363684	[signature]
2	ANAMALIA MASALE	MJUMBE	Bihawana	- - -	- -
3	ELIZABET BOGA	mjumbe	Bihawana	0687356878	- -
4	SAFARY SIMONY	MJUMBE	BIHAWANA	- - - -	S. Saf
5	PAULENT MCHAFU	AMOS	BIHAWANA	- - -	[signature]
6.	Paul Chuli	a. amos	Bihawa	- - -	[signature]
7.	Peter Ainyele	Mjumbe	bihawana	- - -	[signature]
8.	Marino Erenest	Mjumbe	bihawana	- - - -	
9	KELVIN LUCIAN	mjumbe	bihawana	- - - -	
10	CHRISTOPHA GEORGE	PAULO	BIHAWANA	- - - -	Paulo
11	AIDAN PIUS	MJUMBE	Bihawana	- - - -	- - -
12	CRISTIAN MATIAS	MJUMBE	Bihawana	- - - -	- - -
13	SEBASTIAN P. PLACID	MJUMBE	BIHAWANA	0714303297	Placid
14	MANASE P. PLACID	MJUMBE	BIHAWANA	0710395766	M. Placid
15	JOSEPH P. PLACID	MJUMBE	BIHAWANA		J. Placid
16	SEVERIN CH MACHIJI	MJUMBE	CHIKOA		S. Machiji
17	SIMON L. MGANGA	MJUMBE			
18	POLI J. WILLIAM	MJUMBE	BIHAWANA	- - - -	P. William
19	ELIAS SABUGO	MJUMBE	BIHAWANA	- - - -	[signature]
20	Efulem Antoni	MJUMBE	BIHAWANA	- - - -	Efulemu
21	MATHIAS MASAKA	MJUMBE	BIHAWANA	- - - -	M. Masaka
22	MAHESABU	MJUMBE	Bihawana	- - -	[signature]
23	BLAISE M. MBWANA	- 11 -	BIHAWANA	0786262601	[signature]
24	PETER KAZI	mjumbe	Bihawana	- - -	- - -
25	WILLIAM PALA	mjumbe	Bihawana	- - -	- - -
26	GERALD S	MJUMBE	BIHAWANA	- -	[signature]
27	STEPHAN MKWALALA	mjumbe	Bihawana	- - -	- - -
28	Alfred MARA	mjumbe	Bihawana	- - -	- - -
29	CHRISTOPHER CHIPESWA	Mjumbe	Bihaw	- - -	- -

M/KITI S/KIJIJI BIHAWANA
S.L.P 1249
DODOMA
TAR........

4.

Appendix III: Minutes of Meetings

9.

18/08/20

MRADI WA BARABARA MZUNGUKO/DODOMA OUTER RING ROAD PROJECT KM 108 TATHMINI YA MAZINGIRA NA JAMII - MKUTANO NA WADAU MIAA WA NGHONG'ONHA - KATA YA NGHONG'ONHA

AJENDA:

1: KUFUNGUA MKUTANO
2: MAELEZO KUHUSU MRADI
3: MADAI YA WADAU
4: KUAHIRISHA MKUTANO

AGENDA NO 1: KUFUNGUA KIKAO.

Mwenyekiti alifungua kikao mnamo saa 12.34 Mchana. Kwa kuwashukuru wananchi wote waliohudhuria.

AGENDA NO 2. MAELEZO KUHUSU MRADI.

- Ndugu ROBERT KASHIKI kutoka kampuni ya CROWN TECH CONSULT LTD alimuelezea wananchi kuwa wanefanya usanifu wa barabara yenye K.m 108 ambayo itaizunguka Dodoma. Na barabara hiyo itakuwa na barabara 2 ambayo barabara moja itapita magari 2.
- Pia alimuelezea wananchi kuwa watalam watapita kwa ajili ya kupima na wananchi ambao watapitiwa na mradi kwa watalipwa.
- Na kazi ambazo hazitaji ujuzi watapewa wazawa.
- Pia Ndugu Robert Kashiki alimuelezea wananchi kuwa kutakuwa na matamasha

AGENDA No 3. MAONI YA WADAU.

- Ndugu DAVID Lusinde alihoji kuwa je wakati wa zoezi hilo kutakuwa na njia ipi ya upimaji ili mwananchi aweze kuelewa ~~upim~~ eneo lake lina ukubwa gani
- Ndugu Robert Kashiki alisema kwamba masaveya ndio watakuja kupima kuna alama watakaweka na baada ya kupima watamjulisha kila mwananchi ambaye eneo lake litaguswa na madi.
- Baada ya hapo atakuja mtathimini na atakapokuja. Kila mdau ambae madi unampitia lazima awepo. Na baada ya hapo Mdau atasaini. na taarifa zake zitachukuliwa. na kupelekwa kwa Mtathimini Mkuu wa Serikali.
- Baada ya zoezi la upimaji, namalipo Mdau atapewa miezi sita kupisha madi.
- Ndugu DAVID LUSINDE Alihoji kuhusu rate ya malipo na Ndugu Robert Kashiki alijibu kwa kusema kwa mujibu wa Sheria yeye hawezi kulisemea hilo.
- Ndugu Rosina Bebwa aliwaeleza wananchi kuwa wawape ushirikiano masaveya ili kusiwepo na uhalifu wowote utakaojitokeza na wananchi wawe na ushirikiano na wakuu
- Ndugu Dickson Mnyamazi alihoji je-kama mtu alikuwa analima shamba lake na akaamua kulipumzisha je? shamba hilo litajulikana kama pori?
- Ndugu Robert Kashiki aliwaeleza kuwa kama shamba ni lako kweli na hata uongozi wa Mtaa unafahamu hilo haina shida.

- Afisa Maendeleo ya jamii alimueleza wananchi kuwa wasiwe na wasiwasi kwa sababu yeye ya sasa iko nakini Sana

AGENDA NO 4. KUAHIRISHA KIKAO

- Kaimu mwenyekiti wa Mtaa ndugu Isacka Mpali aliahirisha kikao mnamo Saa 13.10 mchana. Pia aliwashukuru wananchi kwa utulivu na usikivu wa walionuonyesha.

KAIMU MWENYEKITI

Mpali / mwenyekiti

ISACK WILLIAMU MPALI

KAIMU MTENDAJI

Magdalena

VIOLET C. MASALU

AFISA MTENDAJI
/ MTAA WA NG'OMBUNHA
DODOMA M/

8.

MRADI WA BARABARA MZUNGUKO (DODOMA OUTER RING ROAD PROJECT 108 KM) TATHMINI YA MAZINGIRA NA JAMII - KATA YA NGHONG'ONA MTAA WA MAPINDUZI 'A'. 18/08/201

AGENDA:

1: KUFUNGUA MKUTANO
2: MAELEZO KUHUSU MRADI
3: MAONI YA WADAU
4: KUAHIRISHA MKUTANO

MWENYEKITI S/MTAA
MAPINDUZI "A"
MANISPAA YA DODOMA
JOSEPH.

MUHTASARI WA MKUTANO

AGENDA NO 1: KUFUNGUA MKUTANO

Mwenyekiti alifungua Mkutano wa Dharula wa wakazi wa Mtaa wa Mapinduzi "A" Saa 10:45 Asubuhi Kwa Kuwashukuru wananchi Kuhudhuria.

AGENDA NO 2: MAELEZO KUHUSU MRADI

Mwenyekiti wa Mtaa wa Mapinduzi "A" alisoma barua Elekezi Kwa Watendaji wa Kata inayotambulisha barua ya Kampuni M/S crown tech alipomaliza kuisoma ndipo alianza Kutoa maelezo Kuhusu mradi Kuwa barabara itakuwa na Km 108 inayoanzia Ihumwa na itaizunguka Mji hadi Ihumwa tena Hatua iliyopo wanaenda Kuanda mchoro Ukikamilika Hatua itakayofuata ni Fidia Wakazi ambao barabara itapita Watalipwa Fidia, Wakazi wajiandae Kwa zoezi hilo wataalamu wa Survey wakija wakazi wasishangae; Lakini tukumbuke na Ukimwi upo mkusanyiko wa watu unapoongezeka na magonjwa yanakuwepo kama Ukimwi. Ndipo alimaliza Kutoa maelezo ndipo mwenyekiti akakaribisha wakazi wachangia, ndg Rojasi busa aliuliza swali kuwa mtamo shamba langu likawa na mpango wa mda mrefu kwa mfano,

Nimepande Zabibu Je itakuwaje? Jibu ni kwamba ni kweli Savey ya Awali ilishafanyika kutokana na utendawazi ni kuwa sehemu ya Juu ilishapigwa sasa ndipo wanakuja wale masavey wa chini na watakuja wiki ijayo wakishapita watawaelimisha watu kuwa mtu kama ulikuwa unataka kuandaa shamba acha, Na kwa vitu vya muda mfupi tutaendelea kutenga :-

Ndugu Rojasi Bussa aliuliza tena, Unaponiambia sasa nisiendeleze Je utakuwa umenitendea haki? Atisa Crown tech alijibu kuwa maeneo ya muda mrefu yatamilikiwa tu pengo ni tahadhari tu, na kama tunu maeneo yamepangwa kwa plani hata fathmini itaendeliwa hivohivo ila tukienda tuje tukute majengo yamepangwa au yamejengwa mradi hautakuwepo.

Bwana GODENI MATHAYO alisema kuwa anaomba watu wa uchorayi wakija waisogeze kidogo huku kijijini siyo huko kwenye mpaka wa chuo, Pembezoni. Mwenyekiti aliwahoji wakazi bado kuna maswali?

Pia Atisa Project Rosina alisema tuwekeze kujenga Gesti na tutege vitega uchumi kwenye ya mradi wa barabara kwani kutakuwa kuna wageni wengi sana kwani hata muingiliano wa watu na magonjwa yatakuwa mengi sana wasije wakafika wakiondoka kijiji chote kikipata maradhi, Pia alisema watu wakija kutenga savey wakiweka Alama wakazi wasizitoe ili mradi ukamilike kwa wakati Ndipo mwenyekiti alimkaribisha Atisa Crown tech ili aweage wakazi. Ndipo Alisema mradi ukija huku hata thamani ya Ardhi itapanda na akawaaga wakazi.

AGENDA NO 4: KUFUNGA MKUTANO.

Mwenyekiti wa Mtaa wa Mapinduzi "A" alichirisha mkutano saa 11:25 asubuhi kwa kuwashukuru wakazi/wananchi kuhudhuria mkutano.

MWENYEKITI S/MTAA
MAPINDUZI "A"
MANISPAA YA DODOMA

[signature]

7.

MRADI WA BARABARA MZUNGUKO/DODOMA OUTER RING ROADS PROJECT 108KM) TATHIMINI YA MAZINGIRA NA KIJAMII. MKUTANO WA WADAU CHIDIDIMO 17/08/201

AJENDA.

1: KUFUNGUA MKUTANO
2: MAELEZO KUHUSU MRADI
3: MAONI YA WADAU
4: KUAHIRISHA MKUTANO

AGENDA NO: 1: 2017 KUFUNGUA MKUTANO

Mkutano Wa Wanachi Mitaa ya CHIDIDIMO na Sokoi Ulifunguliwa Mnamo Saa. 10.9 na M/kiti Mtaa CHIDIDIMO kwa kuwa Shukuru Wanachi Waliojit

AGENDA NO: 2: 2017 MAELEZO KUHUSU MRADI.

Kiongozi Wa MRadi wa Barabara alijitambulisha na Baadae kutambulisha Wenzake alio fuatana nao na Baadae Akaanza kutoa Maada.

Mradi wa Barabara ni Mzunguko wa Dodoma Mjini Utaanza, Udom hadi Maneo ya Chididimo, na Sokoine, kwa kijiango cha (Romi) hivyo Mradi Utakapo pita ni Muku pemberi, Watakuja kufanya Savei — kwani Bihawana itakuwa Ndani. Wakipita Watu Wa SAVEI Mtapata Majibu.

Ficha Zite Kuwepo kwa Mali Zisizohamishika — Lakini Mpaka Masavea kupitani Mradi Mpya.

P.T.O.#

-2-

SAVEY - BARABARA - CHINDIMO/SOKOINE

Mtoa Maada alieleza kuwa Wananchi Msi Uze-Maeneo yenu - Msiuze ovyo najua Watakuja Watu Kununua Maeneo kwani Wanajua Barabara itapita-

Wananchi ~~Walibe~~ Walikubali Kupokea Mradi Wa Barabara ila Walihoji Kuhusu - Barabara Itapita Wapi? na Kama itapita Walipwe Fidia ya Maeneo yao.

Watoa Maada Walishauri Wananchi Wajenge-nyumba nzuri Kwa ajili ya Wafanyakazi Wata kao, Kuwa Wafanya kazi Wa MRADI Wa Barabara Kwa Mradi ni Mkubwa Kutakuwa na AJIRA.

AZIMIO LA MWISHO:- WANANCHI

Wananchi Wote Kwa Pamoja Walipokea Mradi Kwa Asilimia Mia Moja, Mradi ni Mauri Sana Kwa Ujumla Mradi ni Mauri Sana Wa Barabara.

Pia Wananchi Waliagiza Migogoro ya ARIDHI isi-Wepo, Kwani Mradi Tumeupokea.

Tusubiri Waje Wapimaji Wa Barabara Kutoka Mradi Wa Barabara.

Upana Wa Barabara Mita (150) Mia na-Hamsini

AG. NO: 3 MAONI YA WADAU

-3- WEO- NZINJE /ZUZU

Wananchi Mnatakiwa kuwa Makini hasa - Maeneo yenu Mnayo yamiliki, Picha Ziwepo - Za Maeneo ili Mpate Fidia Ila manatakiwa Muupokee Mradi kwani ni Fursa nzuri.

VEO - SOKONE.

Mnapo Itwa kwenye Mikutano Mnatakiwa kuwahi, Kwenye Mikutano yetu.

AGENDA NO: 4: 2017 - KUAHIRISHA MKUTANO

M/kiti Mtaa aliahirisha Mkutano mnamo - Saa 11.00jioni Kwa kuwa Shukuru Wananchi Wote Kwa kupokea Mradi Wa Barabara Kiwango cha (RAMI).

Katibu Wa Mkutano

BONIFACE L. CHINGNLA

M/kiti - Mtaa CHIDIDIMO

ONOLASCO LWABE

17/08/017

6.

MRADI WA BARABARA MZUNGUKO DODOMA (DODOMA OUTER RING ROAD 108 KM) TATHMINI YA YA JAMII NA MAZINGIRA - KATA YA IHUMWA MITAA YA CHANG'OMBE, IHUMWA NA CHILWANA 17/08/17

AJENDA:

1: KUFUNGUA MKUTANO
2: MAELEZO KUHUSU MRADI
3: MAONI YA WADAU
4: KUAHIRISHA MKUTANO

1. KUFUNGUA MKUTANO

Mkutano ulifunguliwa na mh: Diwani kata ya Ihumwa ndugu BWIRE COSTANTINO TUNGALAZA ambaye alifungua mkutano saa 11:10 Am

(2) MAELEZO KUHUSU MRADI

Mradi wa barabara mzunguko Dodoma. barabara hii itaanzia Ihumwa na itaishia Ihumwa barabara itakuwa na km 108. mapendekezo kwa na upana wa mita 150.

Kwa sasa tumekuja kutambulisha mradi baada ya sisi kupita watakuja watalaamu wa upimaji baadae tutachora michoro.

Baada ya michoro kukamilika tutakuja kufanya mikutano ya pamoja.

AFISA MTENDAJI
MTAA WA IHUMWA
DODOMA

1 No 3 MAONI YA WANANCHI

(1) YORAM NGALYA
Baada ya ~~Ha~~ Tathimini malipo yatafanyika baada ya muda gani?

(2) ANATOLY SERVESTER
Barabara itapita maeneo gani hapa Ihumwa.

(3) WILSON NDYANI
Tufafanuliwe kuhusu huo upana wa mita 150.

MAJIBU

3- Mapendekezo ni mita 150
2- Mradi utapita maeneo ya Raheo
1- Huwezi kupima bila kufanya tathimini.

(2) MAONI KWA WANANCHI
1) HENRY LUHUNYALE
Kwa nini baada ya kupimiwa TANROD wanachelewa kulipa.
2) JOHN KUSADUKA.
Tupokee mradi tusitengeneze malalamiko
3) JOYCE CHUHU
Mawazo ya mtu yaheshimiwe

AFISA MTENDAJI MTAA WA [illegible]

(4) GIDION MBIGATA.
Upimaji baada ya kufika Raheo
2 nani atanilipa Raheo au Tanrod.
— Malipo yatatolewa na mradi husika.

GADI LAZARO

Barabara hiyo inavigezo gani inavyoviti
gta?

* Huu ni mradi mpya haufuati vigezo
labda barabara ze zamani hapana huu
ni mradi mpya.

JOYCE CHUHU

- Baada ya kupima mita 150, mwananchi kujenga
aache hatua zipi kutoka kujenga
mita 150.

* mita miahamsini ni panopo na hifadhi
ya barabara.

* baada ya mita mia hatuna tena mkatapa

*

KUFUNGA MKUTANO.

Diwani wa kata ya Ihumwa alifunga
mkutano saa 12:12 AM.

[signature]
MWENYEKITI

[signature]
KATIBU

AFISA MTENDAJI
MTAA WA [illegible]

3

5.

MRADI WA BARABARA MZUNGUKO <DODOMA OUTER RING ROADS PROJECT 108 KM> TATHMINI YA MAZINGIRA NA JAMII - MKUTANO NA WADAU MAKUTUPORA, NHEMYANGA, KAMBARAGE, MBANDE, NA SEKONDARI - KATA YA MAKUTUPORA

16/08/2017

AJENDA:

1: KUFUNGUA MKUTANO
2: MAELEZO KUHUSU ~~MRADI~~
3: MAONI YA WADAU
4: KUAHIRISHA MKUTANO

AFISA MTENDAJI WA MTAA
KATA YA MAKUTUPORA
DODOMA

AGENDA I. KUFUNGUA MKUTANO

Mwenyekiti wa kikao mh. Diwani Ndugu Elia Lenjiko Aliwakaribisha wananchi wote waliohudhuria na kuwaomba wawe wasikivu na wawe tayari kuuliza swali mahali ambapo hawajaelewa huyo mwenyekiti alifungua mkutano saa 9.30 Alasiri

AG 2. MAELEKEZO KUHUSU MRADI

M/kiti aliwakaribisha wageni waliofika kwa ajili ya utambulisho. hivyo viongozi wa kata walijitambulisha na wageni wakuhudhuria kwa ajili ya mradi Robert kisiki na ndugu hapa walieleza kuwa Barabara inaanza Ihumwa, matumbulu mbabala, wala na itatokea makutupora kl 108 na hapa inatokea Ihumwa. kazi hii ni kuleta kuduma katika jamii. Sisi tumekuja ili kuonesha mapendekezo ya kupitisha barabara

Alisema kuwa makutupora ni makutano ya barabara. maseva watakuja kupima kule kwenye maeneo ambapo watapima na kuweka Alama. baada ya hapo tutakuja kuandaa mpango wa fidia kwa walengwa. na hapo waliohusika na mradi watakubaliana. wale watachora maeneo, wananchi wasiondoe. watapima na kuona walipopim isipokuwa kwenye mashamba watalimo mpaka watakapoanza kujenga. Lakini nyumba zisijengwe mpaya na watu wasipend miti sasa kwenye maeneo hayo maana upana utakuwa mita 150.

AG 3. MAONI YA WADAU

Baada ya hapo alisema baada ya kusikia haya tunaomba maswali kutoka kwenu ili tuweze kuelewa vizuri.

Swali I:- mjumbe alisema nyumba yangu ipo kwenye lenta Je! nifanyeje?

Jibu - mwananchi anaweza kumalizia ila mtu asijenge nyumba mpya mpaka asubiri usanifu

Mwezeshaji alisema kwa maeneo mengi mradi unapita porini hasa mashambani.

Alisema wale masever watakapopita watapiga picha hivyo mtu akijenga wakati Ramani inachora ile nyumba haikuwepo Je! nitakuteteaje? ndio maana tunawambia mapema ili msijemkaingia kwenye mgogoro.

Tutaunda kamati kuanzia ngazi ya mtaa kwa ajili ya malipo mpaka wilayani mpaka mkoani ili kusikiliza malalamiko ya wananchi lla miezi 6 ikipita basi malalamiko yatakuwa batili hayo.

Swali:- wakati wakifanya tathimini Je! hiyo fidia utapewa kiwanja ama vipi?

Jibu:- Utapewa hela yako ili ujue ni mahali wapi utajenga isipokuwa kwenye makaburi na Taasisi ila huwa tunajitahidi kukwepa maeneo haya. Aliendelea kusema kuwa wakati wakipima hapo utachukua hatua ya kusogea mbali na eneo lililopimwa

Swali:- Mjumbe alisema kama nyumba yangu ipo kwenye msingi Je!. niendelee kujenga?

Jibu:- Mwelimishaji alimwambia kama nyumba ya biashara usijenge tafuta kwingine isipokuwa kama nyumba ya kuishi ujenge ili ukae.

Wananchi waliomba tathimini itakapokuja tunaomba iwe makini sana ili mwananchi apewe fedha inayoweza kusaidia kujenga pamoja na kununua uwanja

Mwelimishaji aliwaasa kuhusu watakapopata ile fedha. Aliwaomba ile fedha waifanyie maendeleo ambayo watafaidika nao.

Baada ya hapo Mh. Diwani Aliwaambia wananchi kuwa huu ni mwanzo tu, watarudi tena ili tufanye mkutano ili mradi huu iwe wazi kwa wananchi wale ambapo mradi utapitia. na wale wanaohusika kupimwa hawatakiwi kuja. watakuja mwishoni mwa mwezi au mwanzoni mwa mwezi wa 9/2017.

AG: 4. KUFUNGA MKUTANO

Mwisho M/kiti wa mkutano aliwashukuru sana wananchi kwa kuwa wameelewa yale ambayo waliyajia. Hivyo mkutano ulifungwa saa 10.30 jioni.

ELIA G. LENJILA
M/KITI
16/8/2017

BEATANA NTAIKA KINTINGA
AFISA MTENDAJI.

(4) 1

MRADI WA BARABARA MZUNGUKO (DODOMA OUTER RING ROAD PROJECT KM 108) TAFSILI YA MAZINGIRA NA JAMII – MKUTANO WA WADAU KATA YA NZUGUNI – MTAA WA KITELELA 16/08/2017.

AJENDA ZA MKUTANO

1. KUFUNGUA MKUTANO
2. MAELEZO KUHUSU MRADI
3. MAONI YA WADAU
4. KUAHIRISHA MKUTANO.

ALISA MTENDAJI KATA YA NZUGUNI

AJENDA NA: 1: KUFUNGUA MKUTANO

Mkutano ulifunguliwa rasmi saa 7:28. Mchana na Mwenyekiti wa Mkutano Ambaye ni Mwenyekiti wa Mtaa wa Kitelela Kwa kuwashukuru Wananchi wote waliohudhuria Katika Mkutano huo na kuwaeleza Wananchi kutaa Maoni yao ili kufikia Malengo ya Mkutano.

AJENDA NA: 2. MAELEZO YA MRADI.

Mwenyekiti wa Mkutano alimkaribisha Mtaalamu wa barabara ili kuwaeleza Wananchi lengo lao ni nini kwa Wananchi wa Mtaa wa Kitelela, Mtaalamu huyo alianza kwa kuwaeleza Wananchi Katika Mkutano huo Kwa, lengo la kukutana Katika Mkutano huu wa Mtaa ni kuwatambulisha Mradi wa ujenzi wa barabara ya Mzunguko wilaya ya Dodoma mjini, Ambayo itaanzia Ihumwa,

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Mahomanyika, Veyula, Nala, Mbabala, Matumbulu, Ngongwa, Nghongonha, Mafindugi na Kusudi Ilumwa tena.
Katika hatua hizi za awali kuna mambo mbalimbali ambayo yataanza kufanyika katika mradi huu wa ujenzi wa barabara, mambo hayo ni kama ifuatavyo:
• Kufanya mikutano katika maeneo ambayo mradi utapita kama inavyofanyika hivi leo hapa Kitelela.
• Kufanya tathimini ya Mazingira kwa maeneo ya mradi unapopita.
• Kufanya uthamini wa maeneo yote ambayo yatapitiwa na mradi ili waweze kulipwa fidia.
Mtaalamu aliendelea kuwaeleza wananchi hao katika mkutano huo, baada ya hatua hizi za awali, watu wa survey watapita kufanya hiyo kazi na ameomba wananchi wa Kitelela kutoa ushirikiano kwa watu wote watakao kuwa wanafanya kazi ya mradi huo wa ujenzi wa barabara.
Baada ya maelezo hayo. Mafupi ya Mtaalamu, aliomba Mwenyekiti wa mkutano kuwauliza wananchi kama wana maswali au maoni.

AJENDA NA: 3. MAONI YA WADAU.
Maoni ya wadau yalitolewa kama ifuatavyo:
1 OBADIA ERNEST MWALUKO.
Yeye alishukuru kwa ujio wa barabara maana utarahisisha usafiri.

3

2 YOHANA PIUS SOLYA
Yeye aliuliza kuwa, ni faida gani itakuwepo hapa wakati wa utekelezaji wa mradi wa barabara.
Jibu - faida ni nyingi ambazo zitapatikana wakati wa utekelezaji wa mradi huu, mfano, ajira za muda mfupi zitapatikana kwa watu kufanya kazi, mama lishe watapika chakula na kuwauzia watu, usafiri utapatikana kwa urahisi n.k

3 JARONE SEIF.
Je? Katika mradi huu, wananchi tunatakiwa kuhamishwa na kupelekwa maeneo mengine?
Jibu - Hakuna mwananchi yeyote atakaehamishwa kama hatapitiwa na mradi.

4 ANDERSON LUHAMO.
Yeye aliuliza kuwa, hayo malipo ya fidia kwa watakao pitiwa na mradi ~~wa~~ wa barabara.
Jibu - kwa sasa hatuna jibu la malipo ya fidia ila suala hilo litatolewa wakati wa kodi watakao fanya tathmini.

AGENDA NA: 4: KUAHIRISHA MKUTANO
Mkutano uliahirishwa mnamo saa 8:40 mchana na Mwenyekiti wa mkutano huo.

STEPHEN M. MASINE
MWEKITI WA MKUTANO
16/08/2017

HAMISI S. JILUWA
KATIBU WA MKUTANO

SERIKALI YA MTAA WA KITELELA DODOMA

AFISA MTENDAJI KATA YA NZUGUNI

M (3)

MRADI WA BARABARA MZUNGUKO (DODOMA OUTER RING ROAD PROJECT KM 108) TATHMINI YA MAZINGIRA NA JAMII - MKUTANO NA WADAU.
KATA YA NZUGUNI - MTAA WA MAHOMANYIKA.

16/08/2017

AJENDA:
1: KUFUNGUA MKUTANO
2: MAELEZO KUHUSU MRADI
3: MAONI YA WADAU
4: KUAHIRISHA MKUTANO

AFISA MTENDAJI KATA YA NZUGUNI

AGENDA NA. 1: KUFUNGUA MKUTANO

Mkutano ulifunguliwa mnamo saa 5:39 Asubuhi na Mkiti wa Mkutano huo Ambaye ni Mwenyekiti wa Mtaa wa Mahomanyika Kwa Kuwashukuru Wananchi wote waliohudhuria Katika Mkutano huo na Kuwaomba Kuwa Watulivu na Wachangie Maoni yao bila ya Wasiwasi wowote.

AGENDA NA. 2: MAELEZO ~~YAA~~ MRADI

Katibu wa ~~Ko~~ Mkutano Ambaye ni Mtendaji wa Kata alimkaribisha Mtaalamu wa Mradi wa barabara Kuwaeleza Wananchi juu ya Mradi huo wa barabara; Mtaalamu alianza Kuwaeleza Wananchi Kuwa, wao Wamefika hapa Mahomanyika Kwa ajili ya Kuwaeleza

=2=

juu ya mradi huo wa barabara, na barabara hiyo itaenzia Ihumwa, itapindua yaani mpaka ya Udom, Ngh'ong'onha, Matumbulu, Mbabala, Nala, Veyula, Kikelela, Mahomanyika na kurudi Ihumwa tena.
Katika ujenzi huo wa barabara, hatua ya kwanza ni ya kumtambulisha mradi kwa wananchi kupitia mikutano mbalimbali kama ilivyofanyika leo hii katika mtaa wa Mahomanyika, pia kazi zingine zitakazofanyika kwa hatua za awali ni za wataalamu kufanya utafiti wa hali ya mazingira maeneo yote ambayo mradi unapita, kufanya uthamini wa maeneo yote ambapo mradi wa barabara utapita, kwa wale wote ambao watapitiwa na mradi watapatiwa fidia kulingana na ukubwa wa maeneo yao, Mtaalamu huyo alimweleza wananchi kuwa, barabara hiyo itakuwa na ukubwa mita 150 za upana, huyo aliwaomba wananchi kutoa ushirikiano kwa wale wote watakaofika kwa ajili ya kufanya mradi huo.
Baada ya maelezo hayo mapumziko ya mtaalamu, aliwaomba viongozi wa mkutano huo kuruhusu za wananchi kama kuna mtu ana maswali au maoni aweze kueleza.

~~AIDANI~~ CHARLES ~~BAGO~~.

AFISA MTENDAJI
KATA YA NZUGUNI

AGENDA NA 3: MAONI YA WADAU.

Maoni yalitolewa kama ifuatavyo

1. AIDANI CHARLES BAGO.

Yeye alitoa Shukurani kwa kuleletea mradi wa barabara na hakuna anaepinga suala hili la Maendeleo.

2. JOSEPH MUHAWI MBIJIMA

Sisi kama wakazi wa Mahali ambapo mradi unapita tunaomba kupewa kipaumbele cha ajira, wapewe Vijana wetu hasa zisizo na ujuzi maalumu.

3 ALOYCE LUHEGA (MH: DIWANI KATA YA NZUGUNI)

Yeye alisema tathimini iliyofanyika, ulipaji wa fidia huwa unachukua muda mrefu sana, hivyo basi; tathmini iliyofanyika malipo yafanyike kwa wakati. Lakini pia elimu ya Maambukizi ya VVU na ukimwi ilitolewa katika mkutano huu na kusisitiza elimu hiyo iwe inatolewa mara kwa mara ili mradi ukikamilika basi Maambukizi yawe chini.

AGENDA NA 4: KUAHIRISHA MKUTANO.

Mkutano uliahirishwa muamo saa 6:20 Mchana na Mwenyekiti wa Mkutano huo

ZEBEDAYO CHILEWA
Mwenyekiti wa Mkutano

MWENYEKITI WAMTAA MAHOMANYIKA

HAMISI S. JILOWA
Katibu wa Mkutano

AFISA MTENDAJI KATA YA NZUGUNI

(2)

15/08/2017

MRADI WA BARABARA MZUNGUKO (DODOMA OUTER RING ROAD 108 KM) TATHIMINI YA MAZINGIRA NA JAMII - MKUTANO NA WADAU - KATA YA MATUMBULU KIJIJI CHA MATUMBULU

AJENDA:
1: KUFUNGUA MKUTANO
2: MAELEZO KUHUSU MRADI
3: MAONI YA WADAU
4: KUAHIRISHA MKUTANO

AGENDA NA I: KUFUNGUA MKUTANO.

Mwenyekiti alisimama mnamo saa 8:35 Mchana na kutoa maelezo juu ya mradi huu wa barabara ndani ya kijiji chetu na kumkaribisha muluwika wa mrad

AGENDA NA II MAELEZO KUHUSU MRADI

Mwezeshaji alisimama na kutoa maelezo ya dhumuni la mradi huo ambao lengo lake ni kupunguza msongamano wa barabara ndani ya mji na wingi wa magari, barabara hiyo itakuwa na upana wa mita 150. Pia mradi huu ni mpya ambao umefuata mwana nehi na utatokea eneo la Bihawana kupitia Matumbulu kwenda Ihumwa. Sambamba na hilo aliomba kutoa ushirikiano wa watu ambao watapita / Wataalamu wenye ambao watakweka alama ambazo zitadumu sisi tolewe na wala msingoe miti, nyumba mara kuta kuwa na malipo ya kila kitu kitakacho kuwa ndani ya barabara kwa mujibu wa sheria.
Pia alitoa nafasi ya kutoa maoni kwa wananchi

AGENDA YA III MAONI YA WADAU.

Ndugu Philimon Daudi alisimama na kutoa shukrani za mradi huo na kuomba vijijitokeze kama Iringa Mvumi, pia tutatoa ushirikiano na kila mwana nchi katika kufikisha ujumbe

Mr Job alishukuru manispaa kwa kutu(?) tea mradi huo na kutoa muda wa maoni ya wananchi.

Mwezeshaji ali toa maelezo juu ya hat(?) za mradi kama tathmini na Usanifu na ujenzi sambamba na kwa na eneo la hifadhi la barabara.

Mr Job ali elezea juu ya nini kitakac(?) fanyika kama faida ya vijana ndani ya kijiji kw(?) Ihingo kwa Ibuni walingo jitoa katika stadi za kazi

Mwezeshaji alisema juu ya taaluma amb(?) zo zitahusika kama kuendesha mitambo, kama una nafasi ya kwenda kusoma au una cheti chochote uta faidika kupata kazi.

Mr Lameck ali uliza juu ya rambo za maji je zitakuwepo juu ya kuhifadhi maji

Mtaalamu ali sema kwa kama mashimo yale ya ta baki ya takuwa faida kulingana na eneo ila ya na takiwa ku fukiwa ila yana weza kubaki.

Mr Silvano ali uliza juu ya mazao ya tabuyo kimwa ni ya kudumu au laa.

Mtaalam ali shauri juu ya kulima mazao ya muda usipande miti na kujenga nyumba.

Pia miundombinu yote ya maji itatolewa fidia kwa kila kitu ambacho mradi umepitia.

Mr Joseph ali toa maoni juu ya kuwa sikiliza wananchi juu ya hali ya uoto wa asili hasa maporom(?) ko ya maji na kuweka madaraja

ambayo yana weza kusababisha mafuriko kijijini kama ilivyo tokea Mpunguzi kwani mkandarasi na kutaka ushauri wa wananchi na kumpa diraya eneo. Hivyo waje wawasikilize wananchi.

MAAZIMIO.

Wajumbe /wananchi wali azimia kwa pamoja juu ya kuukubali mradi na kutoa ushirikiano kwa wataalamu.

AGENDA NA IV KUFUNGA MKUTANO

Mwenyekiti alisimama na kushukuru wajumbe na wataalamu hasa kutuletea fursa ndani ya kijiji na kufunga mkutano mnamo saa 9:10

Sahihi ya Mwenyekiti wa kijiji

ALFRED MALOGO

MWENYEKITI
WA KIJIJI CHA MATUMBULU
DODOMA (M)

Sahihi ya Mtendaji wa kijiji

STANLEY JOHN

Ndg. Rosina Bebwa alisisitiza wanachi wasiendeleze maeneo yao kwani hawatalipwa baada ya picha kupigwa Lakini Wanatuhusiwa Kulima. Mwezeshaji aliomba wananchi wasingoe alama zitakazowekwa na Masaryer au alama za maandishi zitakazochorwa. Alisisitiza kwamba barabara hiyo itapita nje ya makazi ya watu, itapita kwenye mashamba na maponi

Ndg. Albert Cheyo aliomba barabara ~~isogezwe~~ Isogezwe maeneo ya wananchi

4. KUAHIRISHA MKUTANO:

Mwenyekiti aliahirisha mkutano saa 13.28 mchana kwa ~~kuwaasb~~ kuwaasa wananchi kuboa ushirikiano na alinashukuru Wageni kwa maelezo mazuri waliyoyatoa kwa wananchi.

ARBOGAST S. MCHETE
M/KITI HALMASHAURI YA WILAYA DODOMA
S.L.P 1249
DODOMA
TAR 15-08-2017