



REPUBLIC OF MALAWI



LILONGWE WATER BOARD

Lilongwe Water and Sanitation Project

RESETTLEMENT ACTION PLAN REPORT

FOR

**UPGRADING, REHABILITATION AND OPERATION OF THE WATER
DISTRIBUTION NETWORKS IN THE CITY OF LILONGWE**

SEPTEMBER 2017

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ACRONYMS

ADL	Airport Development Limited
AIDS	Acquired Immune Deficiency Syndrome
RAP	Resettlement Action Plan
CBOs	Community Based Organizations
CDSS	Community Development Secondary School
CHAM	Christian Health Association of Malawi
CSR	Corporate Social Responsibility
CWG	Compensation Working Group
DC	District Commissioner
DEA	Director for Environmental Affairs
DEC	District Executive Committee
DFO	District Forestry Officer
EAD	Environmental Affairs Department
EDO	Environmental District Officer
EMA	Environment Management Act
ESAP	Environmental and Social Assessment Procedures
ESCOM	Electricity Supply Cooperation of Malawi
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FLWSP	First Lilongwe Water Supply Project
GRC	Gross Replacement Cost
HIV	Human Immunodeficiency Virus
ICU	Intensive Care Unit
IFC	International Finance Corporation
KCH	Kamuzu Central Hospital
LCC	Lilongwe City Council
LWB	Lilongwe Water Board
M	Meters
MAM	Minibus Association of Malawi
MK	Malawi Kwacha
Mm	Millimeters
MOTPI	Ministry of Transport and Public Infrastructure
MAIWD	Ministry of Agriculture Irrigation and Water Development
MSEs	Medium and Small Enterprises
MTL	Malawi Telecommunication Network
NAC	National AIDS Commission
NEAP	National Environmental Action Plan
NEP	National Environmental Policy
NGOs	Non-Governmental Organizations
NSO	National Statistical Office
Ops	World Bank's Operational Policies
OVI	Objectively verifiable Indicators
PAPs	Project Affected Persons
RFP	Resettlement Framework Policy
RWG	Resettlement Working Group

SADC	Southern Africa Development Corporation
SEP	Socio-economic profile
SLWSP	Second Lilongwe Water Supply Project
STIs	Sexually Transmitted Infections
TA	Traditional Authority
TB	Tuberculosis
THAs	Traditional Housing Areas
TLWSP	Third Lilongwe Water Supply Project
TNM	Telecoms Network Malawi Limited
TORs	Terms of Reference
USD	United States Dollar
UDHR	United Declaration of Human Rights
US	United States

EXECUTIVE SUMMARY

1.0 Introduction

Malawi Government through Lilongwe Water Board would like to upgrade, rehabilitate and operate existing water distribution networks in different parts of the City of Lilongwe to reduce water losses due to leakages and to improve quality of services to existing customers. These activities are part of the proposed Lilongwe Water and Sanitation Project which aims to increase access to improved water services and safely managed sanitation.

Infrastructure development of this nature brings along with it some environmental and social impacts on the people in the project area and beyond. Some of the social impacts include temporary physical relocation, loss of assets, loss of access to assets, loss of income sources, and loss of means of livelihood. To manage these impacts effectively, Lilongwe Water Board with financial assistance from the World Bank hired Environment and Natural Resources Management Consultants to conduct a Resettlement Action Plan study for the project.

The project will be implemented for a period of 2 years starting from September 2018 in all the three zones of Lilongwe Water Board distribution network in the city of Lilongwe, namely Southern, Central and Northern zones. Several activities will be carried out to implement the project and these will be grouped in four phases namely planning, construction, demobilization, and operation and maintenance phases.

In all, about 150 people, who will include supervisors, skilled and unskilled labours will be employed during the project construction phase. To implement this sub-project, Government will require about US\$35,000,000, which will be obtained from the World Bank as a loan consent of which has already been obtained.

2.0 Objectives of the Resettlement Action Plan

The objectives of the Resettlement Action Plan (RAP) are to:

- a) assess any adverse impacts of the proposed Project on the communities living near or on the proposed Project impact area;
- b) assess the severity of the impacts;
- c) provide resettlement cost;
- d) guide payment of compensation and resettlement activities to ensure that the affected persons are compensated fairly and have been resettled with ease and minimum disruption to their lives.

3.0 Methodology

The information used to prepare this RAP was collected using primary and secondary sources of information as follows:

- a) Literature review;
- b) Site visits;
- c) Public consultation;
- d) Socio economic survey;

- e) Inventory of PAPs and their assets; and
- f) Asset valuation.

4.0 Socio-economic situation of the people in the proposed project area

Considering that the activities for the proposed project will cover all the three zones of Lilongwe Water Board distribution network in the city of Lilongwe, namely Southern, Central and Northern zones, the socio-economic study for the project considered the population in all the three zones of Lilongwe Water Board distribution network. The study found that up to 24.6 percent of the City's population, which live in the project area is classified as ultra-poor. These are the people who earn less than MK10, 029.00 per year. The poor category comprising of those with annual earnings of less than MK16, 165.00 makes 8.8 percent of the total population. At the national level 22.4 percent and 52.4 percent are categorized as ultra-poor and poor respectively.

Per findings of Integrated Housing Survey of 2004-2005, the major source of income of the city population is salaries/wages and enterprises come a close second. The same survey indicated that close to 50 percent of the total income is used to purchase food stuff while 24.2 percent of the monthly income is used to cover housing, utilities and furnishings and 18.2 percent is for expenses related to transport, communication and recreation.

These findings have an implication on the issue of affordability to pay for the cost of piped water as most the city residents are low income earners and spend a large proportion of their earnings on food and housing.

Per the 2008 Census, the number of economically active persons was at 260,000. Out of these, 100,000 persons were working in the formal sector. The tertiary sector is the largest accounting for 78 percent of the jobs in the formal sector, primary sector accounts for 13 percent while the remaining 9 percent of the formal employment is in the secondary sector.

5.0 Public Consultation meetings

Several public consultation meetings were undertaken to ensure that all the information pertaining to the project and its likely impacts is disseminated to the PAPs. Focus was given to the issues related to temporary loss of business, loss of land and property; damage to road pavements; damage to concrete driveways; damage to different building structures; obstruction to passage on the roads; disruption of service utilities; and water resource depletion. In line with the above, the Consultants held several meetings in the different project areas along the routes of transverse for the proposed water distribution network. The meetings were well participated by different interested parties in the potentially affected project areas, paying special attention to PAPs.

The consultation process provided an opportunity for stakeholders, and particularly the affected households to express their views and opinions on the project and to raise issues of concern relating to the Project. Major issues discussed during consultations included:

- a) Different project activities and their impacts; and
- b) Expected benefits from the project.

6.0 Eligibility Criteria

The identification of persons eligible for compensation in the project area was based on the laws and policies of Malawi which consider all titled landowners, customary landowners, encroachers (who have settled before the cut-off date), persons affected by loss of access to sources of income and persons affected by loss of access to natural resources (water, wood, grazing areas etc.), as PAPs. Therefore, PAPs will be entitled to compensation based on the status of their occupation of the affected areas.

7.0 Resettlement and compensation

The proposed project will not cause any displacement and resettlement of the PAPs and their property. This is because the water distribution networks to be upgraded, rehabilitated, expanded and operated will be aligned along the road reserves except where the pipelines will cross the roads or pass through built up areas like market places and other residential areas, which will cause temporary disturbances especially during the construction phase. The disturbances will result into loss of land and property; damage to road pavements; damage to concrete driveways; damage to different building structures; obstruction to passage on the roads; disruption of service utilities; and temporary loss of business activities.

Stakeholders were informed that valuation approaches of all infrastructure will be by replacement cost. In all, money amounting to USD 415,184.76 will be used to pay for compensation. The Table below provides a summary of details of the items on which compensation will be paid.

Description of Disturbance	Frequency	Amount (Mk)	Amount (USD)
Concrete Driveway Cut	113	109,553,498.60	149,052.38
Tarmac Road Section Cut	41	159,600,000.00	217,142.86
Business Disturbed	150	26,631,500.00	36,233.33
Trees, Crops and Grass & Flower Lawn	11	2,499,000.00	3,400.00
Structures to be Demolished	2	6,722,800.00	9,146.67
Mtl Manholes	2	154,000.00	209.52
Total	363	305,160,798.60	415,184.76

8.0 Institutional and Organizational Framework

The Lilongwe District Council will have the overall responsibility of coordinating and monitoring implementation of the RAP and Government will finance implementation of the RAP. The Council shall make every effort to ensure that no land is acquired against the will of any person(s), exercising rights over their land. The Council, Lilongwe Water Board and the Ministry of Lands will be important institutions during implementation of the RAP.

9.0 Monitoring and Evaluation

Monitoring and Evaluation (M&E) will form an integral part of the project implementation, providing the necessary information about the resettlement aspects of the Project, measuring the extent to which the goals of the RAP will have been achieved and the effectiveness of mitigation measures put in place. Independent NGOs and the traditional leaders will be responsible for M & E.

10.0 Grievance Procedures

At the time that the individual compensation contracts will be signed, PAPs will be informed of the grievance procedure and the process for expressing dissatisfaction and to seek redress. Thus, a Grievances Committee will be formed comprising representatives of the PAPs, representatives from Lilongwe District Council and officials from Lilongwe Water Board. This RAP contains the principles for a three-tier grievance redress system and elaborates the grievance redress process.

11.0 Conclusion and Recommendations

The Project's major negative social impacts are temporary disturbance to business operations, loss of access to assets, loss of income sources, and loss of means of livelihood. The measures provided in this RAP will be implemented to mitigate against the envisaged impacts. The major action to be undertaken will be to:

- a) Put in place a committee comprising of institutions identified to implement this RAP as soon as the project is approved;
- b) Set up a grievance and complaints committee comprising of all stakeholders and the PAPs before the start of payouts; and
- c) Modify the RAP in line with situations experienced when the actual compensations begin.

CHAPTER 1 INTRODUCTION AND BACKGROUND TO THE PROJECT

1.1 Introduction

Malawi Government through Lilongwe Water Board intends to upgrade, rehabilitate and operate water distribution networks in different parts of the City of Lilongwe in order to reduce water losses due to leakages of old pipes and to quality of services to existing customers. To ensure that implementation of the project activities satisfies national and international policies, laws and regulations and to make sure that the project is environmentally and socially acceptable, Lilongwe Water Board hired Environment and Natural Resources Management Consultants to conduct a Resettlement Action Plan study for the project.

To implement the project, Government will require about US\$ 55,000,000.00, which will be obtained from the World Bank as a loan consent of which has already been obtained. The project will be implemented for a period of 2 years starting from September 2017. In all about 150 people, who will include supervisors, skilled and unskilled labourers will be employed during the project construction phase.

1.2 Objectives of the proposed project

The overall objective of the project is to reduce water losses and to improve water supply in the City of Lilongwe. The source of water for the project is Lilongwe River. Specifically, the project will:

- a) Rehabilitate and upgrading existing water supply networks to reduce water losses and to improve quality of services to existing customers in the City of Lilongwe;
- b) Restore operations of the distribution networks to acceptable quality standards; and
- c) Improve the efficiency and operational management of the networks while operating under stressed water supply conditions.

1.3 Objectives of the Resettlement Action Plan

The proposed project is expected to cause various impacts to both the biophysical and socio-economic environment of the project impact area. Some of the impacts will be positive while others will be negative. To identify the different impacts and to come up with appropriate measures to manage the impacts, Lilongwe Water Board engaged Environment and Natural Resources Management Consultants to undertake the Resettlement Action Plan (RAP) study for the project, which determined different types of impacts, which the project will cause and measures to manage the impacts.

The pipelines for the water distribution networks and the associated facilities will be constructed along the road reserves except in places where the pipelines will cross the road and in highly built up places like market places and in some residential areas. In such places, the project will cause temporary disturbances, which shall include damage to road pavements, concrete driveways, different building structures; obstruction to passage on the roads; disruption of public services; and temporary loss of business activities.

Basically, the RAP presents an inventory (register) of people likely to be affected by the project activities, a register of the assets that are likely to be affected by the project and the proposed compensation packages. Specifically, the RAP was prepared in order to:

- a) Raise awareness of the project and its consequences among the general public and particularly among those people who will be directly affected by the project activities;

- b) Set out strategies to mitigate against adverse effects suffered by the project affected people (PAP) including provision of channels and platforms for negotiations;
- c) Identify different categories of Project Affected Persons (PAPs) who will require some form of compensation;
- d) Quantify different categories of Project Affected Persons (PAPs) who will require some form of compensation;
- e) Provide guidelines to stakeholders participating in the mitigation of adverse social impacts of the project; and
- f) Estimate the costs necessary for compensation.

1.4 Institutional arrangements for the RAP implementation

Government being the primary proponent of the project will have the overall responsibility to coordinate implementation of the RAP through Lilongwe Water Board (Project Management).

The Board will set up a project management team and a team to monitor compensation process. The actual execution will be done through collaboration with Lilongwe District Council and all the relevant ministries and departments such as the Ministry of Lands, the Ministry of Finance and the Office of the President and Cabinet. The interactions among the relevant institutions for purposes of managing resettlement and compensation are depicted in Figure 1.1.

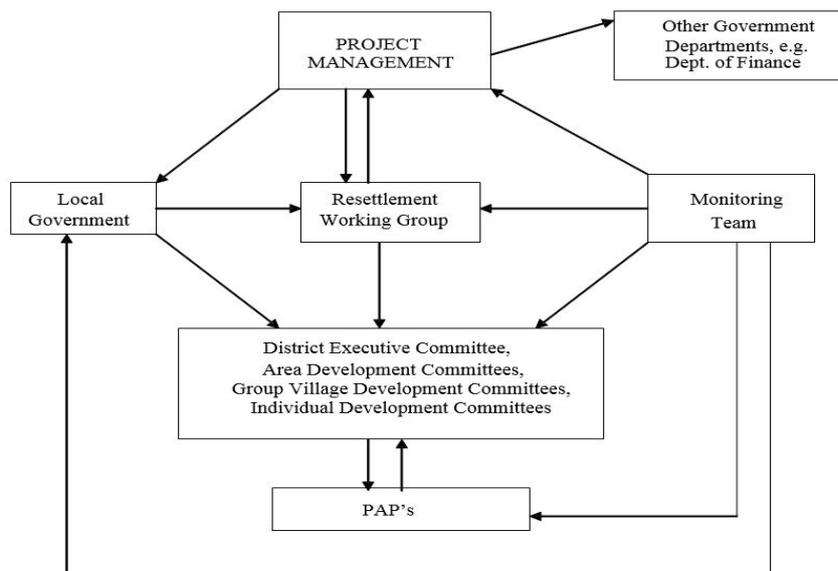


Figure 0.1 Interactions for implementation of the resettlement Action Plan

A Resettlement Working Group (RWG) will be formed which will have the following functions:

- a) Acting as the primary channel of communication between the various interest groups/organizations involved in the resettlement process. In particular, it will serve to facilitate communication between Lilongwe Water Board and the affected population;
- b) Solve amicably any problems relating to the resettlement process. If it is unable to resolve any such problems, it is to channel them through the appropriate grievance procedures; and

- c) Assume primary responsibility of assisting the Board in overseeing the resettlement processes in all its phases.

The RWG will be the primary representative voice of the affected persons and will be composed of:

- a) Representatives of the PAPs from each of the affected villages who will be elected by the PAPs themselves;
- b) Representatives of the Board; and
- c) One representative from the District Council who can be either the DC or his designated representative

1.5 Project background

Development of water facilities for Lilongwe Water Board started long before 1966. To meet the water demand for Lilongwe City and the surrounding areas, LWB has implemented several major projects in three phases. The first phase was the First Lilongwe Water Supply Project (FLWSP). This phase, which was completed in 1966, included construction of Kamuzu Dam I with raw water storage capacity of 4,500,000 m³.

The second phase was the Second Lilongwe Water Supply Project (SLWSP). This phase, which was completed in 1992, included construction of Kamuzu Dam II with raw water storage capacity of 9,200,000 m³.

The third phase was the Third Lilongwe Water Supply Project (TLWSP), which started in 1994 with the development of a Master Plan on water supply status for the Board and resulted in commencement of construction works in 1998. The major components of the project included raising Kamuzu Dam II by 5 m, which increased the raw water storage capacity from 9.2 to 19.8 million m³. The raising of height for Kamuzu Dam-II was considered as stage 1 of the TLWSP and was meant to meet the water demand up to year 2005. Details of the raw water reservoir (dams) are provided in Table 1.1.

Table 1.1: Details of Raw Water Reservoirs (Dams) for Lilongwe Water Board

Reservoir	Location	Year of construction	Maximum depth (m)	Volume at TWL (m ³)
Kamuzu Dam I	Malingunde	1966	20	4.5 x 10 ⁶
Kamuzu Dam II	Msinja/Masula	1992	28	9.2 x 10 ⁶
		1999	33	19.8 x 10 ⁶

1.5.1 Population and Water Demand Projection

Per the 2008 population census by the National Statistical Office (NSO), the City of Lilongwe had a total population of 669,021. The projected average population growth rate for the city up to 2015 was 5.49%. The high population growth rate is because of the increased influx of people from the rural areas, expansion of the city at its peripherals, high birth rate and reduced mortality due to improved health services (NSO, 2008). Table 1.2 provides details of the projected water demand for Lilongwe City up to 2025. The demand has been presented in three scenarios as high where population growth is estimated at 4%, medium

where population growth has been estimated at 3.5% and low where the population growth has been estimated at 3.0%.

Table 1.2 Projected water demand for Lilongwe City up to year 2025

Demand Scenarios per population growth	2000	2005	2010	2015	2020	2025
	m ³ /day					
High Demand (4.0%)	39,809	50,470	66,112	87,323	109,006	135,873
Medium Demand (3.5%)	39,809	49,832	62,869	74,435	87,786	103,101
Low Demand (3.0%)	39,809	51,584	58,815	66,564	75,353	85,326

Source: Water Resource Development Study Plan, 2000

More recent water demand assessments suggest that LWB needs to augment its production capacity in the medium to long term, even under the most conservative scenarios. Current peak water demand is estimated at 130,000 m³/day, and this is projected to increase to 170,000 m³/day by 2025 and 220,000 m³/day by 2035 (see Figure 1.2 below). At present, there are two existing water treatment works with a combined design production capacity of 125,000 m³/day. However, on average, the plants are operating at 70 percent capacity producing an average of about 90,000 m³/day – of which about 32,400 m³/day (36%) is unaccounted for. The low production efficiency is due to a combination of factors: low yields from the Kamuzu dam system during the dry season; poor raw water quality; inefficiencies in the existing treatment processes; and limitation in the hydraulic capacity of the distribution network.

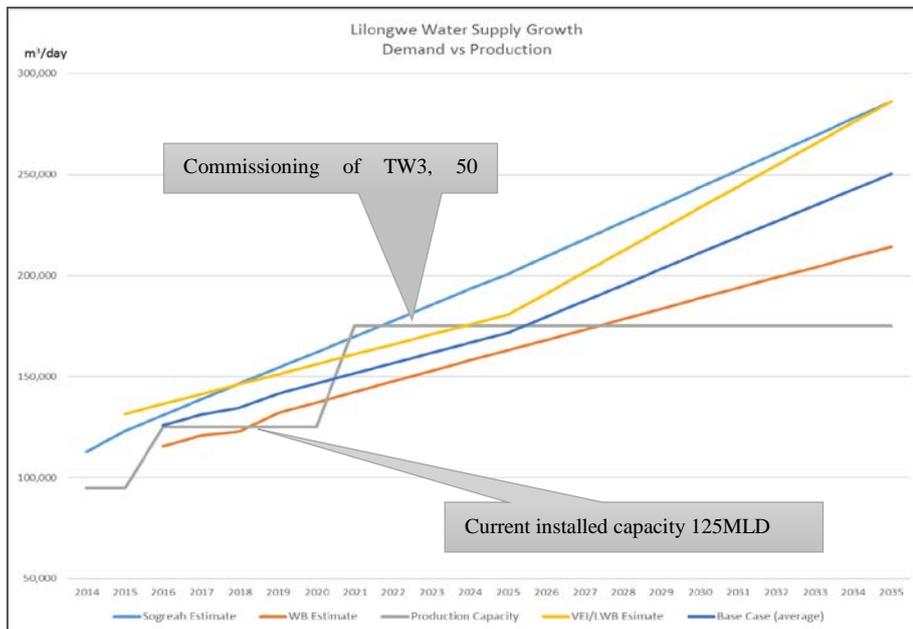


Figure 1.2: Recent Water Demand Projection Vs Production

LWB plans to raise the height of Kamuzu Dam 1 (KD1)¹ by 7m to increase abstraction capacity, which would enable full utilization of the installed production capacity and allow for an additional 50,000 m³/day expansion in water production capacity (TW3), reaching a total production capacity of 175,000 m³/day – enough to meet projected 2025 demand. Beyond 2025 however, the city will need a new water source.

To increase water supply to meet the growing demand for water in the city, LWB intends to establish new raw water sources at Diamphwe, Lake Malawi and underground water from Air Wing, which will result in increased water availability that Lilongwe Water Board will need to distribute to more consumers in the City and the surrounding areas, which will require water distribution system upgrading and construction of more storage reservoirs. The quality of groundwater in Malawi is highly dependent on aquifer lithology and is highly variable spatially. Table 1.3 provides details of borehole water quality for the Air Wing Lilongwe.

Table 1.3 Borehole water quality test results from Air Wing

Parameter	Units	Results				WHO guideline values drinking water
		BH 1 (i)	BH 1 (ii)	BH 2	BH 3	
Bicarbonate (HCO ₃ ²⁻)	mg/l	219.5	241.5	258.5	148.8	-
Chloride (Cl ⁻)	mg/l	14.4	14.4	16.3	20.1	<600
Sulphate (SO ₄ ²⁻)	mg/l	95	100	210	235	<400
Nitrates (No ₃ ⁻)	mg/l	0.7	0.7	0.9	0.9	<45
Fluoride (F ⁻)	mg/l	0.02	0.04	0.12	0.14	<1.5
Sodium (Na ⁺)	mg/l	16.7	16.9	18.3	17.3	<200
Potassium (K ⁺)	mg/l	3.73	3.68	4.38	4.03	-
Calcium (Ca ⁺⁺)	mg/l	81.7	71.3	134.5	94.5	<200
Magnesium (Mg ⁺⁺)	mg/l	6.3	11.7	5.8	22.4	<150
Iron (Fe ⁺⁺)	mg/l	0.00	0.00	0.00	0.22	<1.0
Manganese (Mn ⁺⁺)	mg/l	ND	ND	ND	ND	<0.50
Conductivity	µs/m	549	542	778	712	-
Total Dissolve Solids (TD)	mg/l	384	379	545	498	<1000
Total Hardness	mg/l	230	226	370	328	<500
Alkalinity	mg/l	180	198	212	122	50 – 400
Phosphates	mg/l	1.36	1.56	1.27	1.65	-
pH	pH units	6.9	6.9	6.8	6.5	6.5 – 8.5
Turbidity	NTU	2.4	2.4	1.6	4.7	<5
Suspended Solids	mg/l	5.4	5.6	4.4	6.2	<25
Fecal coliforms	CFU/100ml	0	0	0	0	0

Note: ND = Not done due to technical issues

The results in Table 1.3 show that water from boreholes at the Air Wing in Lilongwe is fit for human consumption. If LWB is to supplement its water supply sources for domestic use, then the water must be drawn from the Air Wing.

Irrespective of where the water comes from, LWB will need to invest beforehand in the distribution network to improve its capacity to distribute additional water and to reduce water losses.

¹ KD1 raising is financed by EIB and it is at works procurement stage. ESIA and RAP were completed for the KD1 raising.

1.5.2 Lilongwe Water Supply and Coverage

Water supply coverage in Lilongwe is estimated at 70 percent of the population. Expansion of water supply network to different parts of the city is constrained partly by the availability of developed water sources and by the presence of old water distribution networks in the city, which is resulting in more water losses. The need to upgrade, rehabilitate and operate new water supply networks has become urgent and imminent now with the demand for water in many parts of the city and the surrounding areas growing annually. It is therefore important that the Board works on reducing water losses and improving quality of services to supply water to the existing customers.

CHAPTER 2 PROJECT DESCRIPTION

2.1 Description of main project activities

The proposed project is about upgrading, rehabilitation and operation of the proposed water distribution network in different residential as well as industrial areas in the city of Lilongwe covering all the 3 zones of Lilongwe Water Board Distribution Network in the city namely; Southern, Central and Northern zones.

Major activities of the project shall include site establishment; mobilization of workers; transportation of construction equipment; excavation of trenches in areas designated for water distribution networks; stockpiling of excavated materials; transportation of construction materials; construction of thrust blocks, anchor blocks and man holes for take-off points, air valves, scour valves and in line valves; laying down of new pipes; re-filling of trenches; and restoration of broken roads, concrete pavements, concrete pavements driveway and other structures for public utilities.

The trenches where the different pipes will be laid will be 0.5 m wide and 1.0 m deep. In all, pipes ranging from 50 – 800 mm will be installed and total distance to be covered by the new distribution network will be 55.35 km. Several manholes measuring on average 2 m x 1.5 m will be constructed in places where there will be intakes, air valves, scour valve and inline valves. Details of the manholes to be constructed are as follows:

Southern Zone: 34 Manholes;
Central Zone: 18 Manholes; and
Northern Zone: 15 Manholes

The activities that shall be carried out to upgrade, rehabilitate, expand and operate the water distribution networks in different residential and industrial areas of the City of Lilongwe shall be implemented in four phases namely planning and design, construction, demobilization, and operation and maintenance phases.

2.1.1 Planning and design phase

Activities under planning and design phase include surveying the sites for construction and operation of the proposed water distribution network; identification and enumeration of Project Affected Persons (PAPs) and their property; valuation of the PAPs property; preparation of designs documents for the project; conducting ESMP and RAP studies; preparation of the ESMP and RAP reports; preparation of detailed lay out plans; preparation of tender documents for the Contractors; obtaining approvals under the Town and Country Planning Act and the Bye-Laws and obtaining all the approvals necessary for the construction and operation of the proposed water distribution network. The planning phase commenced in April 2016 and will be concluded in August 2017.

2.1.2 Construction phase

The project will be implemented for 2 years and construction activities will start from September 2017 and will include site establishment; mobilization of workers; transportation of construction equipment; excavation of trenches in areas designated for water distribution networks; stockpiling of excavated materials; transportation of construction materials; construction of thrust blocks, anchor blocks and man holes for take-off points; laying down of new pipes; re-filling of trenches; and restoration of broken roads, paved driveways and concrete pavements and other structures for public utilities. In all, pipes ranging from 50 –

800 mm will be installed and the distribution network will cover 55.35 km. Details of the water distribution network to be constructed are provided in Table 2.1.

Table 2.1 Details of the proposed distribution network to be developed

Route	Route		Pipe Diameter (mm)	Distance (m)
SOUTHERN ZONE				
Route 1	From Tsabango low level tank to Kamuzu Barracks		500	2132
Route 1	From Tsabango low level tank to Kamuzu Barracks		300	1312
Route 1	From Tsabango low level tank to Kamuzu Barracks		200	91.46
Route 1	From Tsabango low level tank to Kamuzu Barracks		150	10.04
Route 2	From Kachere CCAP church through Majiga to CCDC and Matchansi		200	702.51
Route 2	From Kachere CCAP church through Majiga to CCDC and Matchansi		300	1914.68
Route 3	From Chidzanja Road through Kaliyeka to Midland (Area 23)		300	2270.9
Route 4	From Kum'bweza to Ngwenya		150	721.77
Route 4	From Kum'bweza to Ngwenya		300	690.81
Route 4	From Kum'bweza to Ngwenya		500	333.11
Route 5	From M1 to area 36		400	1177.13
Route 5	From M1 to area 36		500	42.94
Route 6	From Ajawa Lodge to Phwetekere Market		300	1195.36
Route 7	From Tsabango Tank through Namichimba Market		150	561.7
Route 7	From Tsabango Tank through Namichimba Market		300	967.29
Route 7	From Tsabango Tank through Namichimba Market		500	154.97
Route 8	From Chikungu to Katondo Market		300	2806.02
CENTRAL ZONE				
Route 1	Area 47		450	5910
Route 1	Area 47		450	2176.83
Route 2	Chinsapo via Chimphangu to Mchinji Road		450	8692.08
Route 2	Chinsapo via Chimphangu to Mchinji Road		300	422.78
Route 2	Chinsapo via Chimphangu to Mchinji Road		150	1539.89
Route 3	Area 9		450	5922.55
Route 3	Area 9		300	5.77
Route 3	Area 9		150	2.42
Route 4	Area 6 and 5		450	369.75
Route 4	Area 6 and 5		300	2886.90
Route 4	Area 6 and 5		150	545.46

Route 4	Area 6 and 5		50	10.437
Route 5	Connecting the Paul Kagame road's roundabout to Kamuzu central round about		300	764.49
Route 6	Area 40 to area 16 (Reserve bank road to Ministry of Lands, Housing and Urban Development)		400	1.236851
Route 6	Reserve Bank road		200	469.59
Route 6	Reserve Bank road		150	286.30
Route 7	From BICC to Area 6		450	3863.20
Route 7	From BICC to Area 6		300	160.98
Route 8	Area 10 to Area 43		800	119.03
From BICC to Area 6	Area 10 to Area 43		450	8.80
From BICC to Area 6	Area 10 to Area 43		300	2845.67
From BICC to Area 6	Area 10 to Area 43		150	1265.
NORTHERN ZONE				
Route 1	From Kanengo Tanks to Area 25 C via Area 25 A		600	6318.40
Route 1	From Kanengo Tanks to Area 25 C via Area 25 A		450	410.80
Route 1	From Kanengo Tanks to Area 25 C via Area 25 A		300	1715.50
Route 2	From Area 25A through Area 50 and 51 to Area 49		450	1234.72
Route 2	From Area 25A through Area 50 and 51 to Area 49		300	6932.80
Route 2	From Area 25A through Area 50 and 51 to Area 49		150	2522.70
Route 2	From Area 25A through Area 50 and 51 to Area 49		100	14.86
Route 3	Area 10 junction to Kauma		300	4946.055
Route 3	Area 10 junction to Kauma		150	1427.63
Route 3	Area 10 junction to Kauma		100	43.11
Route 4	Kanengo M1 to Area 30, Police		450	3817.16
Route 4	Kanengo M1 to Area 30, Police		300	967.6093
Route 4	Kanengo M1 to Area 30, Police		150	396.37

To implement the project, several requirements will need to be in place and these will include:

a) Construction workers

In all about 150 people will be directly employed. The people shall be employed in technical positions and as semi-skilled and unskilled labourers. For the semiskilled and unskilled workers, the Contractor will be encouraged to employ the people from the project as a way of making the project benefit the people.

b) Construction equipment and construction materials

Hoes, picks, wheelbarrows, an excavator, trencher or ditch witch for excavation will be used for the construction of the proposed project. Different raw materials will be required during construction phase. Materials such as soil, sand, gravel and quarry stone will be sourced from the surrounding communities. The contractor will obtain the necessary permits from different government regulatory authorities before extraction of the construction raw materials. The

use of stabilized soil blocks and or concrete blocks for construction of different structures will be more environmentally friendly than the use of burnt bricks, which contribute to deforestation. The project will also demonstrate to other contractors that stabilized soil blocks provide a practical alternative to burnt bricks though they are more expensive. This is because stabilized soil blocks and concrete blocks are stronger and long standing, do not lead to deforestation as burnt bricks do and that procurement of large quantities of cement for making the stabilized soil blocks and concrete blocks will contribute to increased growth of the local economy. Construction will be done by a private contractor and that Lilongwe Water Board will supervise the construction phase of the project to ensure that the contractor complies with the design standards.

2.1.3 Demobilization Phase

Decommissioning of the structures for the water distribution network is not expected to occur under the project, and potential future issues can be minimized by the avoidance of hazardous materials in the initial construction. The main activities to be undertaken during demobilization phase shall include laying off workforce employed during construction phase; demobilization of construction equipment; disposal of construction waste; and disposal of surplus excavated earth.

2.1.4 Operation and maintenance phase

Activities during operation and maintenance phase will include operation and maintenance of the water distribution network facilities.

2.2 Project Proponent

The ESMP has been prepared on behalf of the Lilongwe Water Board, who is the proponent of the project. The following are the details of the project proponent:

Proponent Name : Lilongwe Water Board
Postal Address : Lilongwe Water Board, Madzi House, Area 3, Off Likuni Road, Post Office Box 96, Lilongwe, Malawi

Contact Person : Chief Executive Officer

2.3 Consultation team

The study team comprised of the following professionals:

- a) A RAP Expert;
- b) A Sociologist;
- c) Land Surveyor; and
- d) Valuation expert.

2.4 Project Location

The project will be implemented in a number of residential as well as industrial areas in the City of Lilongwe covering all the three zones of Lilongwe Water Board distribution network, namely Southern, Central and Northern zones. Figure 2.1 provides details of the location of the water distribution networks. The distribution networks will be developed within the road reserves. This way, the project will minimize the extent of land take and disturbances that it may cause.

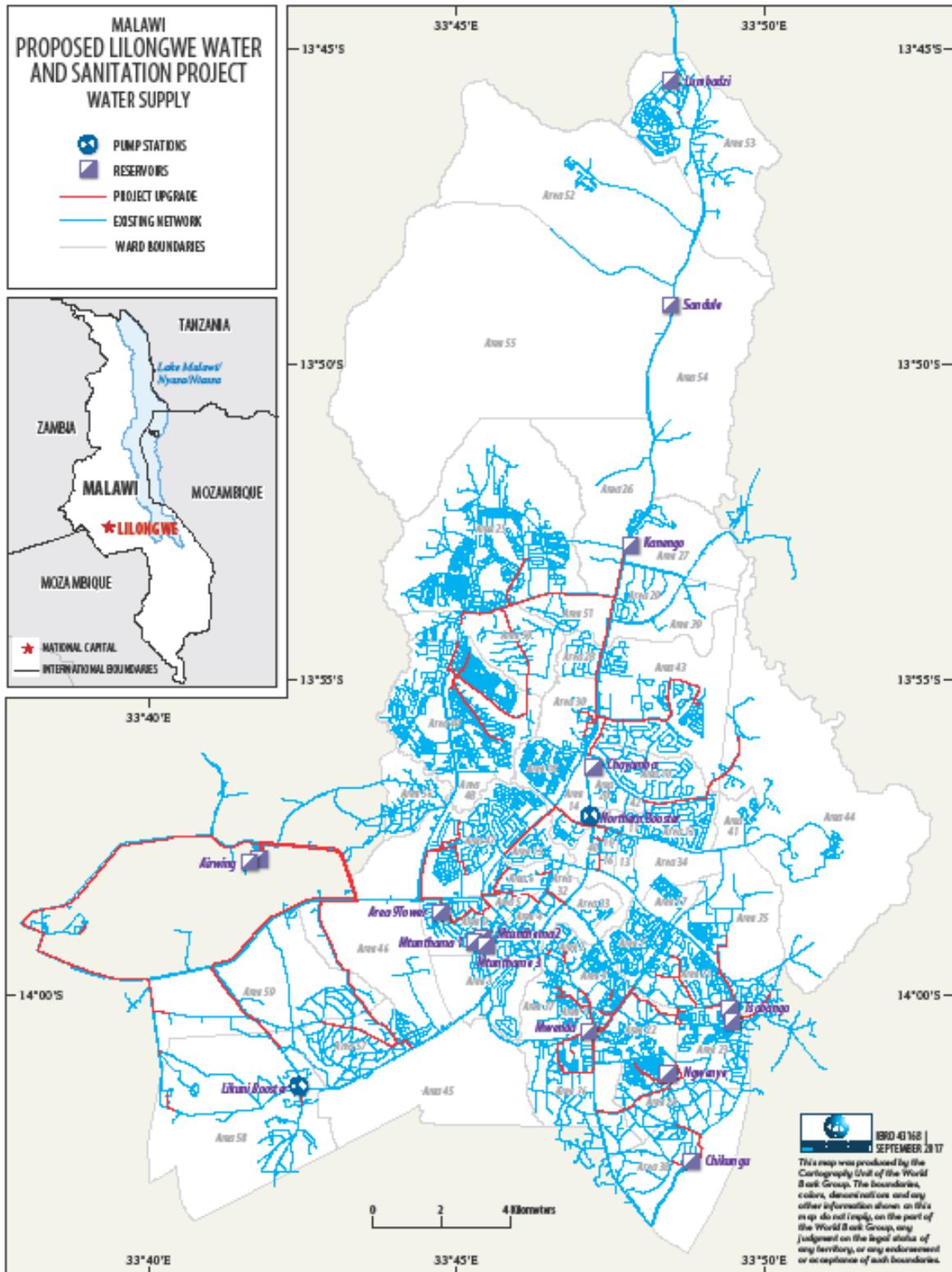


Figure 2.1 Location of the water distribution networks to be rehabilitated

CHAPTER 3 METHODOLOGY FOR THE RAP STUDY

The RAP study for the proposed project was carried out in accordance with the Terms of Reference that were provided by the Lilongwe Water Board (Annex 1). The study was undertaken in July 2017. The study methodology has been divided into three parts namely:

- a) Data Collection;
- b) Data Analysis; and
- c) Preparation of the RAP report.

Data required for the RAP study were collected through primary and secondary sources, which included:

- a) Literature review;
- b) Site visits;
- c) Public consultation;
- d) Socio economic survey;
- e) Inventory of PAPs and their assets; and
- f) Asset valuation.

Data already available by means of books, reports and unpublished documents and newspapers were used as secondary data sources in this study. Field surveys were mainly used to collect data of physical, biological and socio-economic environment along the proposed road project.

3.1 Literature Review

Literature review involved acquisition and review of documents, reports maps and drawings relevant to the project. Some of the documents reviewed included the Environment Management Act, Forestry Act, Water Resources Act, National Water Policy, National Environmental Policy, Malawi National Land Policy, Malawi Development and Growth Strategy, Occupational Safety, Health and Welfare Act, Mine Act and other relevant policies and pieces of legislation and Lilongwe District Socio Economic Profile. Examples of the information obtained from the different documents include project design, planned project activities and description, data on rainfall, flora and fauna, population statistics, socio-economic data, altitude and hydrology regimes of the area, rainfall figures and maps.

3.2 Site visits

Site visits to the project site were made, where the consultants conducted visual surveys along the route of transverse and informal interviews with the local people residing along in the project area. Some consultations were also made with the District Council officials for Lilongwe.

3.2.1 Field survey

Field surveys were conducted in July 2017 to the project-impact area and to appraise the Lilongwe District Council officials and the community members living in the project impact area of the coming of the project. Key staff for the project participated in the activity. The preliminary field survey also served as an opportunity for the consultants to familiarize themselves with the proposed project area. The survey focused on the existing physical environment (topography, soils, water resources, etc.), biological environment (flora and fauna), cultural and socio-economic environment (historical sites, human settlement patterns, land use, existing social services such as access roads, schools, health facilities, electricity, water supply, police services, existing communication networks, education facilities, etc.).

The preliminary field survey was followed by the different baseline studies whose summaries are outlined below:

3.2.2 Baseline Study

The baseline field surveys were conducted in July 2017. The study involved an assessment of the existing human population, settlement pattern, economic activities, cultural sites (grave yards) and land use patterns that might be affected by the implementation and operation of the project. Data generated through this baseline study was used in the description of existing socio-economic environment. Apart from the socio-economic environment, the socio-economic impact analysis was undertaken to identify positive and negative impacts that would likely be associated with the project.

3.3 Public consultation

Consultation with the Project Affected Persons (PAPs) formed an important feature of the ESMP study. The consultation meetings provided an opportunity for PAPs and other community members around the project areas to express their views on the proposed project activities as well as to raise any issues of concern relating to the project. The consultation meetings were conducted in built up places and market centres in the project area such as Katondo market in Area 38, Ngwenya Market in area 24, Zebra market in area 49, Kachere market (Chinsapo) in area 46 and at Senti market in area 50 whose summaries are provided in Table 3.1. Consultation meetings were held in such areas because implementation of project activities will have more temporary effects in these areas.

In these meetings, general information about the project was discussed and a number of issues were raised pertaining to how the project will affect the different community members. Question and answers were used to guide the discussions. The consultation meetings were conducted in order to:

- a) Inform them about the project;
- b) Provide an opportunity for them to discuss their opinions and concerns;
- c) Manage their expectations and misconceptions regarding the project;
- d) verify the significance of environmental, social and health impacts identified;
- e) get inputs on compensation issues;
- f) disseminate concepts of the proposed Project activities with a view to provoking Project interest amongst the communities; and
- g) promote sense of ownership for the Project; and informing the process of developing appropriate mitigation measures.

Table 3.1 Summary of the PAPs² consultation meetings

	Katondo in Area 38	Ngwenya Market in area 24	Zebra market in area 49	Kachere market (Chinsapo) in area 46	Senti market in area 50
Date and time the meetings took place	21/07/2017 09:00 hrs	21/07/2017 14:00 hrs	22/07/2017 09:00 hrs	22/07/2017 14:00 hrs	23/07/2017 09:00 hrs
Number of PAPs who					

² PAPs who attended these meeting included business owners, local/traditional leadership, religious leaders, members of CSOs/NGOs, residents (youth, elderly, and women), etc.

attended the meeting					
Issues discussed and details about how the project will address the issues	Issue raised during the plenary discussion	Response provided to PAPs during meetings			
1	PAPs were interested to know if the water would be for free or if people would pay for it	PAPs were informed that the water will be paid for and the project is just to upgrade the current water distribution network.			
2	PAPs wanted to know who will be compensated for loss of business in places where tenants would lose business and the building owners will have their structures temporarily closed	It was emphasized that if a structure will be affected, it will be the landlord who will be compensated and if the disturbance will cause temporary loss of business, the tenant will also be compensated.			
3	PAPs were keen to know when they should expect the project to start and its period	PAPs were informed that the project is expected to start in 2017 and will run for 2 years but it will be done in phases. Necessary communication will be made before the actual date of commencement to all PAPs. Nevertheless, compensation will be paid before any project activity starts.			
4	PAPs were interested to know how the upgrading of the water distribution network will improve the current problem of water scarcity in the city considering that Lilongwe is already experiencing water shortages even with limited connections	The PAPs were informed that the upgrading will improve current water problems being experienced in Lilongwe as the project will reduce water losses and improve quality of service of water supply to the consumers			
5	PAPs were interested to know the size of the pipeline trench to be excavated	PAPs were informed that the trenches will be 0.5 m wide and 1.0 m deep			
6	PAPs were also interested to know when the compensation will be paid to PAPs	PAPs were informed that the exact time was not known but will be soon before any project activity commences. Meaning no project activity shall be done before PAPs receive their compensations			
7	PAPs were so keen to how long it will take to backfill the trenches relating to other areas like <i>Gaga</i> where similar exercise took about 3 months before the trenches were backfilled	The PAPs were informed that the trenches will be filled immediately after laying down the pipes			
8	PAPs also wanted to know who would pay for the cost of new connections after disconnection due to the project activity	PAPs were informed that LWB shall meet all costs and will make sure that the reconnections are made as soon as the pipes are laid and the trenches are backfilled. This is to prevent additional disturbance of water unavailability			

		to surrounding households and locations.
9	On Valuation approaches, PAPs were informed that valuation approach for all infrastructure will be by replacement cost	PAPs were in agreement with this method.
10	PAPs wanted to find out if the owners of the shops to be affected could be hired to excavate the trenches for the pipelines going through their shops and be paid for the services rendered to avoid hiring other people to excavate trenches through their shops who may end up stealing from them.	Participants at the meeting were informed that the point was valid, however the contractor will be in a better position to know how best to deal with that.
11	PAPs were also interested to know how details of the potential PAPs will be verified to avoid paying compensation to wrong people	Participants to the meeting were informed that the details of the PAPs will be verified during verification exercise.
12	PAPs wanted to know whether they would receive the compensation in a form of cash or cheque	It was highlighted that the task shall be handled by the office of the DC for Lilongwe who shall decide the mode of payment regarding the fact some compensation might not really need a cheque. Nevertheless, prior communicated shall be made
13	PAPs wanted to know what will happen to business people who do not have structures but have some permanent places where they carry out their businesses	Participants were informed that such business people usually carry around their businesses with them to sell at places which are seen to be convenient. Such businesses will not be considered for compensation as they can always move to convenient places where their businesses will not be disturbed.
	PAPs were interested to know the average compensation per PAP	PAPs were informed that compensation will depend on the temporary losses the different PAPs will suffer. The preliminary valuation that was already conducted would form basis for compensation.
	PAPs also wanted to know if pipelines will follow existing pipelines	PAPs were informed that not in all cases. The proposed routes were opted in terms of the side of the road which will cause less or no damage and disturbance.
	PAPs were interested to know the type of equipment to be used during excavation of trenches considering that the place is a market	PAPs were informed that in confined areas like markets and highly built up residential areas labourers instead of machines shall be used to excavate trenches so as to minimize disturbance. This shall also provide employment opportunity to the youth from surrounding areas.
	PAPs wanted to know what LWB will do if the number of days for disturbance will not be	The PAPs were informed that the project proponent will direct the contractor on how long the actual project activity should take so

	equivalent to the compensation given since compensation will come before any project activity commences	that the compensation is equivalent to the disturbance period.
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Figure 3.1 presents pictures of different public consultation meetings and minutes of the meetings and people present at the meetings are presented in Annex 2. Annex 3 presents a list of people consulted and issues raised during the meetings while Annex 4 presents details of the Experts who conducted the study.



Consultation meeting at Katondo



Consultation meeting at Kachele (Chinsapo)



Consultation meeting at Area 50 (Senti)



Consultation meeting at Zebra area 49

Figure 3.1 Pictures of different community consultation meetings

3.3.3 Areas discussed during the public meetings

Areas discussed during the meetings included the following:

- a) Nature of the project;
- b) project impact areas;
- c) activities of the project;
- d) environmental and social impacts of the different project activities;
- e) measures to manage the different impacts;
- f) most important features in the project impact area;
- g) sensitive areas (protected areas, graveyards, historical sites, etc.) in the project impact area;
- h) socio-economic and environmental issues to arise from implementation of the proposed Project activities;
- i) gender and HIV issues;
- j) economic activities of the area;
- k) livelihood programs in the area;
- l) land tenure and land use;

- m) employment opportunities;
- n) occupational health and safety;
- o) benefits (increased trade, employment, social amenities and transport); and
- p) positive or negative experiences with other projects of similar nature.

3.3.4 Advantages of the project

On the advantages of the project, the consultants discussed with the stakeholders and the community members that the proposed project will assist to:

- a) Improved access to portable water by Lilongwe City residents and surrounding areas;
- b) Creation of employment;
- c) Increase in government revenue through taxes;
- d) Reduced incidences of water borne (e.g. cholera and diarrhea) and water washed diseases (e.g. skin infection) due to improved availability of water;
- e) Reduction in water losses as more people will be legally connected;
- f) Increased economic activities within the project impact area; and
- g) Contribution to increased opportunities for foreign investments

3.4 Socio-economic survey

Considering that the activities for the proposed project will cover all the three zones of Lilongwe Water Board distribution network in the city of Lilongwe, namely Southern, Central and Northern zones, the socio-economic study for the project considered the population in all the three zones of Lilongwe Water Board distribution network. A socio-economic survey was conducted in the project impact area in July 2017. Socio-economic data were collected using:

- a) a structured Questionnaire;
- b) Interviews/ Case Studies; and
- c) Observation

A structured questionnaire (Annex 5) was administered to a sample of individual households in the project impact area. Both open and closed ended questions were included in the questionnaire. The questionnaire was pre-tested in the project impact area to ensure clarity of questions thus to improve its quality, efficiency, accuracy and reliability. The consultants with the assistance of enumerators and some project staff also conducted household interviews to solicit baseline data of the people in project impact area. Enumerators moved from one household to another throughout the whole project impact area. Data that was collected through the questionnaire covered the following areas:

- a) The demographic characteristics of the people in the project impact area which included: the total number of the household, sex, language, marital status, ethnic and religion composition, educational status, employment and occupation, and number of household members who are involved in economic activities. Number of social institutions, small and medium enterprises in the area which are benefiting the people;
- b) Major economic activities of household, sources of income of the household, total income and expenditure of the household, household expenditure by type; and
- c) Major health problems of the household, health education status (water, sanitation and hygiene), incidence of water borne diseases, type of latrine and other sanitation facilities in use; etc

3.5 Inventory of PAPs and their assets

Inventory of PAPs and their property was undertaken along the route of traverse in along the proposed route of transverse for the water distribution networks. The survey of affected assets and survey of PAPs came up with preliminary details listed below:

- a) Exact temporary land requirements;
- b) Number and types of structures to be affected;
- c) Number and types of trees to be affected;
- d) Amount and types of crops to be affected;
- e) Number and types of affected households / businesses;
- f) Livelihood impacts;
- g) Income sources of affected households / businesses;

3.6 Asset valuation and computation of compensation packages

Asset valuation and computation of compensation packages was conducted in July 2016. Table 3.1 provides a summary of valuation methodology.

Table 3.1 Summary of Valuation Methodology

Asset	Process
Temporary and permanent loss of land	<ol style="list-style-type: none"> a) A detailed inventory of all persons and their land holdings; b) Valuation of land on market basis; c) Determination of costs to the land including disturbance allowance; and d) Determination of compensation package according to valuation and costs.
Structures	<ol style="list-style-type: none"> a) A detailed inventory of persons affected and their buildings and ancillary structures; b) Valuation of buildings based on comparable/investment/cost/profits approach; c) Determination of disturbance allowance; and d) Determination of compensation package without depreciating the value of the structures.
Temporary loss of business profits	<ol style="list-style-type: none"> a) A detailed inventory of persons and their businesses; b) Establishing business profits for the past 5 years using their accounts details. Where not possible, application of the rate provided in RPF (2010); c) Determination of disturbance allowance; and d) Determination of the compensation package.
Crops	Potential annual yield of the crop multiplied by highest market price per kg multiplied by land size.
Trees	No. of trees multiplied by market prices or as per Forestry Gazette prices.
Fruit trees	Value was based on yield per year per hectare, productive lifespan, market price/kg. Establishment will be added.

Construction and operation of the proposed project will involve temporary disturbance of people and their businesses and loss of property such as trees. Compensation whether in a form of money, replacement of structures will arise from:

- a) Temporary land requirements for the project;
- b) Structures falling within the proposed route for the water distribution network; and
- c) Trees and crops falling under the proposed route for the water distribution network.

3.6.1 Valuation methodology

Valuation of assets was guided by the provisions of statutes, laws and policies of Government of Malawi and as provided by the IFC, World Bank for the reasons which include:

a) Market values of land and properties

The World Bank's Operational Policy 4.12 requires that compensation be done at full replacement cost. Full replacement cost has been defined as including market value. Assessment of market values world over involves the use of Comparable Sales and Capitalization/ Income or Investment approaches.

b) Comparable Sales Approach

In this approach, sales of similar, vacant parcels of land or property are analyzed, compared, and adjusted to provide a value indication for the land or property being appraised. It basically relies on market information which must be sought. In the case of land, comparable sales or offers made in the vicinity will be sought, analyzed, adjusted to arrive at the market value.

c) Investment Approach

This approach is most applicable to agricultural land and investment properties lost. The income approach is based on the principle that the value of an investment property reflects the quality and quantity of the income it is expected to generate over the life of the property at issue. In other words, the value of the land derived from this approach is the estimated present value of future benefits, including streams of incomes during the lifetime of the property and proceeds from the sale of the property. The income approach assumes that the owner or potential owner intends to generate income from the land. This valuation approach derives land or property value by annual net income from the land/property divided by an estimated capitalization rate.

To arrive at a full replacement cost of land the value of labour invested in preparing agricultural land will be compensated for using wage for the same period. The labour cost will be calculated on what it would cost a farmer to create a replacement land. This value will be determined by adding together the costs of clearing, ploughing, sowing, weeding twice and harvesting the crop plus registration and taxes (as the case may be) to achieve a full replacement cost

d) Cost Approach/Contingent valuation

The cost approach is based on the supposition that no one would pay more for an existing property than the amount it would cost to buy an equivalent site in terms of size and location plus the cost of constructing an equivalent building. To that cost land value is added.

The gross replacement cost (GRC) of the buildings is calculated using current cost figures to which is added the related costs such as site works, architect's fees, building permit costs, and finance interest charges on bank borrowing to cover the costs as the case may be. Costs of materials (both local and manufactured), labour and transport of such materials were obtained from shops and contractors in the area under consideration.

This method was used for structures/buildings and other support facilities in rural areas where market of such properties is scarce. As required by the RPF (2010), cost of access to water supply was considered including sanitary facilities regardless of whether the house had such or not. Incomplete or partly falling dwelling houses were also valued based on the

replacement costs only. Partly, this method was intertwined with contingent valuation. Contingent valuation involves directly asking people, in a survey, how much they would be willing to pay for specific service or how much they will be willing to accept for loss of an existing service. This can work well for the cost of loss of access to water supply and other related services. The method is called ‘contingent’ valuation because people are asked to state their willingness to pay for obtaining or losing, contingent on a specific hypothetical scenario. As required under IFC, the gross replacement cost will not be depreciated.

3.6.2 Assessment for business loss

The project will cause some temporary business loss for a certain period of time especially during construction phase. Business loss was assessed through Profits Valuation method. The method was applicable on categories of property that were normally bought and sold on the basis of their trading potential. The essential characteristics of these properties is that they are designed, or adapted, for a specific use and that ownership of the property normally passes with the sale of the business as an operational entity.

3.6.3 Assessment of Shops

For shops, such as those found in trading centres, the same investment method as described above was employed. However, for total extinguishment of business Profits method was used.

3.6.4 Assessment of fruit trees and perennial crops

The valuation of perennial crops and fruit trees was based on the product of their average yield (kg/tree/year), highest market price/kg and expected life span plus establishment cost. This has been the practice at district and national level. It is also applicable under the World Bank practice.

3.6.5 Assessment of values for trees

Assessment of values for trees has in the past been based on the provision of the Forestry Gazette (2010). Regard was given on the current market prices of trees locally in the absence of better prices. Regard was given on the size of trees being lost. Big trees attracted high rates.

3.6.6 Assessment of annual crop values destroyed

Where crops will be damaged, assessment of values for annual crops for land in the road reserve were based on the highest market unit price of the crop over the period of three years multiplied by the yield /kg and multiplied again by the land size. The yield was the highest yield of that particular crop as determined by Ministry of Agriculture.

3.7 Working out the disturbance allowance for the PAPs

The local laws provide that disturbance allowance be paid to those affected in the involuntary displacements. Therefore, a percentage of a total value for compensation was decided and applied accordingly.

3.8 Preparation of the RAP report

The step focused on compiling the baseline and socio-economic survey data into the RAP report for submission to the client based on the steps above.

CHAPTER 4 POLICY AND LEGAL FRAMEWORK

4.1 NATIONAL LEGISLATION AND PRACTICE

Malawi has a policy and legal framework on resettlement. The basis of legislation on resettlement is the Constitution. However, there is also legislation which deals specifically with land. Between 2016 and 2017 Malawi passed several Bills which either repealed legislation on land issues or amended it. Key Government policies and legislation relevant to issues of resettlement in Malawi include; the National Land Policy of 2002, Land Act No.16 of 2016, the Customary Lands Act No.19 of 2016, the Lands Acquisition Act and the Lands Acquisition (Amendment) Act No. 9 of 2017, the Physical Planning Act No.17 of 2016 and the Public Roads Act and the Public Roads (Amendment) Act No of 2016.

4.1.1 The Constitution of the Republic of Malawi

The Constitution is the basis for legislation on expropriation and compensation. Section 207 of the Constitution vests all land and territories in Malawi in the Republic. The word 'Republic' means the people and territory of Malawi; and therefore, this section vests land ownership in the people of Malawi. Specific legislation providing for issues pertaining to title, claim or specific responsibility over land is outlined below.

Section 28 of the Constitution provides that every person shall be able to acquire property alone or in association with others and that no person shall be arbitrarily deprived of property.

In Malawi, an individual cannot be deprived of property without compensation. Section 44 of the Constitution provides that expropriation of property shall be permissible only when done for public utility and only when there has been adequate notification and appropriate compensation, provided that there shall always be a right to appeal to a court of law.

4.1.2 National Policies and Acts

4.1.2.1 National Land Policy 2002

The goal of the National Land Policy in Malawi is to ensure tenure security and equitable access to land in accordance with section 28 of the Constitution and to facilitate the attainment of social harmony and broad based social and economic development through optimum and ecologically balanced use of land and land based resources.

The Policy identifies the Ministry of Lands as the principal authority responsible for land matters. The Policy also provides clear definitions and categories of land tenure and outlines proposals to reform the land tenure system.

Section 4.11 of the land policy ensures that security of land tenure can be guaranteed on an equitable basis to all citizens in accordance with the statement that "Any citizen or group of citizens of Malawi can have access to land in any part of Malawi provided that:"

- a) Land is available where it is being sought;
- b) The person agrees with the land owner and the laws governing disposal of land; and
- c) The proposed land use is compatible with land use plans, environmental regulations and community land management duties and obligations.

Section 5.0 specifically provides for land administration and resettlement. The definition of 'land administration' in the Policy is broad and includes the delivery of land rights, the

planning of land uses, demarcation and survey of land parcels and the registration and maintenance of land information. It also includes conveyance, policies to facilitate decisions on mortgages and investment, development management, property valuation for assessment purposes and monitoring the environmental impact of all land based activities.

Section 5.19 to 5.22 of the Policy deal with Land Redistribution and Resettlements. This part focuses on the acquisition of land for redistribution to the landless and also for promoting a strategy to encourage the resettlement of landless and land-short households in carefully selected areas throughout the country in order to relieve land pressure and poverty in some of the most congested agricultural districts in the nation. The Policy further provides notes that relocation and resettlement would have to take into consideration the following factors:

- a) the principles of fairness, equity and human rights;
- b) the fact that people cannot be forced to relocate to any location without their consent and that individuals and household's readiness to resettle in a different traditional area, district or region is a matter of personal choice;
- c) the fact that the potential disruption of social, cultural and economic existence may be traumatic enough to make the prospect of relocation untenable to some, and the prospect of leaving valuable immovable property is always a cause for resisting relocation; and
- d) how much will respondents demand to be successfully resettled.

In spite of the fact the provisions of the Policy focus on re-distribution of land to the landless and land poor, the principles and factors are applicable to issues of relocation and land settlement in general. The National Land Policy provides a basis for the review and amendment of land legislation to ensure conformity with the goals and strategies of the Policy.

4.1.2.2. The Land Act No.16 of 2016

The Land Act No. 16 of 2016 is the principal legislation dealing with land tenure and land use. It repealed the Land Act of 1965. Sections 6 and 8 of the Land Act reiterate the Constitutional provisions that all land is vested in perpetuity in the Republic. The Act provides that all land is administered by the Commissioner of Lands on behalf of the Republic and the Minister responsible for lands may delegate any of the powers and duties conferred on him to the Commissioner.

Section 7 of the Act recognizes two categories of land namely; public land and private land.

Public Land

The Act defines public land as held in trust for the people of Malawi and managed by Government, a local government authority and a Traditional Authority. Public land includes;

- a) Any land held by Government or a local government authority consequent upon a reversion thereof to the Government or local government authority, as the case may be, on the termination, surrender or falling in of any freehold or leasehold estate therein pursuant to any covenant or by operation of law;
- b) Land acquired and privately owned by Government or a local government authority used for dedicated purposes such as Government buildings, schools, hospitals and public infrastructure;
- c) Land gazetted for national parks, recreation areas, forest reserves, conservation areas, historic and cultural sites;

- d) Land vested in Government as a result of uncertain ownership, abandonment or land that cannot be used for any purposes; and
- e) Unallocated and communal land within the boundaries of a Traditional Land Management Area.

Private Land

Private land is defined as all land which is owned, held or occupied under a freehold title, leasehold title or as a customary estate or which is registered as private land under the Registered Land Act. Customary estate means any customary land which is owned, held or occupied as private land within a traditional land management area and which is registered as private land under the Registered Land Act. Customary land means all land used for the benefit of the community and includes unallocated customary land within the boundaries of a traditional land management area. Freehold is defined as an estate which is held in perpetuity and a lease includes an agreement for lease.

Relevant Provisions

Section 12 of the Act empowers the Minister responsible for lands to make and execute grants, leases or other dispositions of public land classified as Government land for any such estates, interests or terms and for such purposes and on such terms as and conditions as he may think fit.

Section 21 of the Act enables the Minister, upon application by any person in a prescribed manner, to grant or allocate leasehold or customary estate on terms and conditions as he may determine, however according to section 22 he cannot grant freehold title.

Section 36 places restrictions on a person to sell or otherwise to convey, lease, transfer or assign any private land without prior written consent of the Minister or local government authority to sell, convey, lease, transfer or assign the land. The granting or refusal of consent must be communicated to the person who intends to sell within 30 days of receipt of the written notice. The provisions of this section do not apply to sale, conveyance, lease, transfer or assignment by or direct to the Government, any agreement to lease for a non-renewable term of not more than 3 years, a sale pursuant to an order of court by any officer in the public service acting in his official capacity and pursuant to any written law and any mortgage or other hypothecation for repayment of money lent in good faith.

Section 39 provides that where a holder of private land under freehold title has not developed the land and not shown his intention to develop or dispose of it within 2 years from the date of registration the Minister may in writing demand voluntary surrender of that land to the Government and if there is no voluntary surrender the Minister may acquire the land under the Lands Acquisition Act and its 2016 Amendment or exercise powers under section 64 of the Physical Planning Act 2016.

Part VII deals with trespass or encroachment upon, or unlawful occupation of, land. Section 45 enables a magistrate with relevant jurisdiction, upon complaint by a person claiming to have lawful title to the land, to issue summons against an alleged trespasser, encroacher, or unlawful user or occupier (defendant) requiring him to attend court. If the magistrate is satisfied the defendant has trespassed, encroached or unlawfully occupied the magistrate may make an order requiring the defendant to vacate land within 7 days or longer. The number of days to vacate land depends on a on several factors including; how long it would take the defendant to take down or remove structures, buildings, fences or improvements of any kind

erected on the land; how long it will take the defendant to harvest, collect, take in or remove crops, plants, trees and shrubs and to how long it will take the defendant to remove any chattels belonging to him. Failure to comply with the Court order could lead to forced removal from the land by an authorized officer, police officer or officer of the court. The Land Act emphasizes the fact that procedures under Part VII must be in accordance with the Courts Act.

Section 17 enables the Minister to acquire unallocated customary land for public utility purposes. The section provides that where it appears to the Minister that unallocated customary land is needed for public utility, the Minister shall serve notice upon the Traditional Authority within whose traditional land management area the customary land is situated. Section 18 provides that any person who suffers disturbance of, or loss or damage to any interest which he may have or may have had in such land because of the land being acquired for public utility purposes, under section 17, should be paid such compensation for such disturbance, loss or damage as is reasonable.

4.1.2.3 The Lands Acquisition Act No. 21 of 1979 and the Lands Acquisition (Amendment) Act No. 9 of 2017

The Lands Acquisition Act No. 21 of 1979 was enacted to provide for the acquisition of land. The Lands Acquisition (Amendment) Act No. 9 of 2017 has amended some provisions of the Lands Acquisition Act, the main one being that the Amendment Act now provides for the acquisition and compensation of land in the citation.

Section 3 of the Act read with the Amendment Act empowers the Minister responsible for lands whenever he is of the opinion that it is desirable or expedient in the interests of Malawi, to acquire land for public utility, either compulsorily or by agreement, and pay compensation as may be agreed or determined under the Act.

Sections 5-7 of the Act provide for the issuing of notices upon the persons who are possessed of an interest in the land. According to section 12 of the Amended Act when a notice to acquire land has been issued and published, the land shall revert to the Government as public land within 2 months of the publication of the notice.

Section 9 as amended provides for the payment of compensation. It provides that where any land is acquired by the Minister under this Act the Minister shall pay in respect thereof appropriate compensation agreed or determined in accordance with the provisions of this Act. The Amendment Act further provides that compensation shall be paid in one lump sum; therefore, the assumption is that compensation shall only be monetary.

Amended provisions relating to assessment of appropriate compensation provide that an assessment is to be done by an independent valuer appointed by the Minister, unless the parties agree otherwise. The Amendment to the Act also provides information on the grounds on which compensation can be calculated which include; loss of occupational rights, loss of land, costs of professional advice and disturbances which are a natural and reasonable consequence of the disposition of land. The Amendment has inserted substantive provisions on matters to be taken into consideration in assessing compensation for alienated land under section 10A.

Section 11 of the Act deals with the effect of payment of the compensation and states that a person who has been paid compensation for land cannot make further claims in respect of the

land. However, this does not prevent any subsequent proceedings against the person to whom the same was awarded by any person claiming to have a better right to the compensation or the right to a share thereof.

4.1.2.4 The Registered Land Act No.6 of 1967 and the Registered Land (Amendment) Act No.7 of 2017

The Act makes provision for the registration of title to land, and for dealings in land so registered. The Act has been amended several times since 1967 with the most current amendments being passed in 2017. The Amendment Act amends some provisions in the Registered Land Act including new definitions of customary estate and land to ensure conformity with the Land Act, 2016.

4.1.2.5 Land Survey Act No.18 of 2016

The Land Survey Act provides for land surveys, the establishment of the Land Surveyors Registration Board, the licensing and control of land surveys, survey marks and boundaries and the establishment of the Malawi Geographic Information Council.

4.1.2.6 The Local Government Act, 1998 and the Local Government (Amendment) Act No. 10 of 2017

The Local Government Act, 1998 consolidates the law relating to local government. Section 34 of the 1998 Act provides for the acquisition of land by Agreement. It states that that for the purpose of (a) any of its functions under this Act or any other written law; or (b) the benefit, improvement or development of its area, the Assembly may acquire whether by way of purchase, lease, exchange or gift, any land, whether situated inside or outside its area. Subsection 2 of section 34 of the 1998 Act has been deleted and substituted with a new subsection 2 that provides that subject to the provisions of the Land Acquisition Act, the Council may acquire land to be used for any of the Council's functions.

The Amendment Act also amends the principal act by providing that the Council may dispose of land held by it in accordance with the Land Act 2016 and the Registered Land Act.

4.1.2.7 The Public Roads Act No.11 of 1962 as amended and the Public Roads Amendment Act No.8 of 2017

The Public Roads Act of 1962 as amended was enacted to consolidate and amend the law relating to Public Roads. In this Act the highway authority is assigned responsibilities for the construction, care and maintenance of any road or class of road in accordance with the Act.

The Public Roads Act provides for various instances when compensation may or may not be paid. Sections 44-50 of the Act provide for issues relating to compensation including assessment of compensation generally and for surface rights, compensation for land which becomes public land, matters to be taken into consideration in assessing compensation for alienated land and claims for compensation. The part also provides for procedures to be followed before a Land Tribunal and the right to apply to the High Court for judicial review if the claimant of highway authority is unhappy with a decision of the Land Tribunal.

4.1.2.18 Environment Management Act No.23 of 1996

The Environment Management Act No.23 of 1996 (EMA) was enacted to make provision for the protection and management of the environment and the conservation and sustainable utilization of natural resources. The Act provides for Environmental Impact Assessment to be done in certain circumstances.

Malawi has developed Guidelines for Environmental Impact Assessment (EIA) in Malawi. The purpose of the Guidelines is to facilitate compliance with Malawi's EIA requirements by Government, project developers, donors and the general public. The guidelines help to integrate environmental concerns in national development and will be applicable to all types of projects, in the public and private sectors, for which EIA studies may be or are required.

4.1.2.9 Summary of Key legislation on Resettlement

Table 4.1 provides details of key legislation on Resettlement.

Table 4.1 Details of key legislation on Resettlement

LEGISLATION	FUNCTIONAL RELATIONSHIP TO RESETTLEMENT
The Constitution of the Republic of Malawi	Basis for legislation on property, land, expropriation and compensation.
The Malawi National Land Policy, 2002	Provides policy objectives on land administration and resettlement.
The Land Act No.16 of 2016	Principal legislation dealing with land tenure and land use
The Customary Land Act No.19 of 2016	Provides for the management and administration of traditional land
The Lands Acquisition Act No. 21 of 1979 and the Lands Acquisition (Amendment) Act No. 9 of 2017	Provides for the acquisition of land for the public benefit. Empowers Government to acquire land for public utility if it is desirable or expedient in the interests of Malawi and sets out procedures for compensation.
The Registered Land Act No.6 of 1967 and the Registered Land (Amendment) Act No.7 of 2017	Provides for registration of title to land.
The Physical Planning Act No 17 of 2016	Provides that a person shall not commence the development land unless he first obtains planning and development permission
The Land Survey Act No.18 of 2016	Provides for land surveys
The Public Roads Act No.11 of 1962 as amended and the Public Roads Amendment Act No.8 of 2017	Provides for construction, care and maintenance of any road or class of road and payment of compensation where this has an impact generally and on surface rights
The Local Government Act, 1998 and the Local Government (Amendment) Act No. 10 of 2017;	Provides for the acquisition of land by the Council for any of the Council's functions and for the making of By-Laws by the Council
Environment Management Act No.23 of 1996 and Environmental Impact Assessment Guidelines	Provides for Environmental Impact Assessment and public consultation.

4.2 INTERNATIONAL STANDARDS

The international legal and policy framework within which projects operate, and implementation procedures and guidelines, have developed substantially since adoption of the Universal Declaration of Human Rights (UDHR) in 1948. Instruments supported by member states include those developed by the United Nations (UN) and the European Union/Commission. Others have been developed by particular agencies, such as the World Bank Group.

4.2.1 International Agreements and Conventions

Malawi Government is a party to several international conventions, treaties and other agreements in the ambit of environment. Of particular importance to social issues that relate to aspects of involuntary resettlement are the following:

4.2.2 International Guidelines and Procedures

In addition to the different national policies and legislation which have been examined when preparing this RAP, provisions of other international policies and laws have also been examined and these include the World Bank Policy on involuntary resettlement.

4.2.3 World Bank

The operations of the World Bank are guided by a comprehensive set of policies and procedures, dealing with the Bank's development objectives and goals, the instruments for pursuing them, and specific requirements for Bank financed operations. The core of this guidance lies in the Bank's Operational Policies (OPs), which are critical to ensuring that potentially adverse environmental/ social consequences are identified, minimized and mitigated so as to prevent "undue harm to people and their environment in the development process".

World Bank Policy on resettlement is outlined in Operational Policy (OP 4.12), and the overall objective of this safeguard is to avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs. Further the policy encourages community participation in planning and implementing resettlement. More specifically, where resettlement is unavoidable, the policy stipulates criteria for eligibility to compensation, resettlement assistance and rehabilitation assistance measures to displaced persons. In addition, the World Bank policy on resettlement stipulate those displaced persons who encroach on the project area after the cut-off date shall not be entitled to compensation, or any resettlement assistance or any other form of rehabilitation assistance.

4.3 GAP ANALYSIS BETWEEN NATIONAL LAW AND THE WORLD BANK POLICY ON RESETTLEMENT

The World Bank Policy on resettlement as outlined in Operational Policy (OP 4.12) and the laws of Malawi have several common aspects in management of resettlement. The policy and the national laws; require compensation for expropriation of land, emphasize the need for meaningful consultation with persons and communities affected by the project and recommend fair (or reasonable) and adequate compensation to PAPs. However, there some gaps which exists between the World Bank policy and the laws of Malawi. Some selected examples are as follows:

- a) Under World Bank Policy displaced persons are classified into the three groups mentioned in section 3.3 (a, b and c). Land owners under Group a and b, are among the PAPs who are entitled to full, fair and prompt compensation as well as other relocation assistance. With respect to those in Group c, where displaced persons have no recognizable legal rights they are to be provided with resettlement assistance in lieu of compensation for the land they occupy, as well as other assistance. Under Malawian legislation, Group (a) and (b) are entitled to compensation. However, those under (c) are not entitled to compensation but they can be given compensation for the investment they made on the land.

- b) On aspects on compensation on land, the laws of Malawi consider the different intrinsic values associated with various classes of land (customary land, leasehold land, freehold land, public land). In such cases, rates for compensation on land vary from one site to another and from one class of land tenure to the other. The World Bank OP4.12 also distinguishes whether it is land with formal legal rights/customary rights, land without recognizable legal right or claim (such as squatters and encroachers), or leased land. The compensation for each type is different accordingly.
- c) In cases of compensation of loss of land by project affected people, the World Bank policy prefers land for land compensation. In Malawi, an option of land for land compensation is normally preferred in customary land transaction while the option of land for money compensation is the preferred options in urban areas.
- d) The World Bank policies clearly stipulates resettlement as an upfront project – in that all issues of land acquisition and relocation of PAPs must be done prior to commencement of the project site on the acquired site. Malawian laws do not clearly spell out this approach and in practice; resettlement is treated as a separate exercise outside project planning and implementation.
- e) The World Bank policy clearly recommends adequate resettlement assistance and rehabilitation assistance to relocated people as a way of restoring and enhancing socio – economic living standards. This is supposed to be undertaken within the first years of relocation on the new sites. Malawian legislation does not clearly define the extent of resettlement assistance to relocated people. Much of available support is normally left in hands of District Commissioner and local chiefs within the district and area of relocation of the project affected people.
- f) The World Bank Policy advocates identification of persons who will be affected by the project to determine who will be eligible for assistance and requires meaningful consultations with affected persons and communities, local authorities, and, as appropriate, nongovernmental organizations. Malawian legislation and Guidelines also require sufficient public consultation to determine potential impacts of the project and to ensure the public can participate in decision making.

Other gaps between the two approaches are in the following areas:

- a) Extent of entitlement: World Bank OP/BP 4.12 includes affected parties with non-formal property rights, while this does not apply in all instances in Malawi.
- b) Timing of payments: World Bank OP/BP 4.12 requires payment before loss of assets, while the Malawi legislation does not have this requirement.
- c) Relocation and resettlement: World Bank OP/BP 4.12 requires additional assistance with resettlement (such as establishment of new sites) while this is not provided in Malawi’s laws.
- d) Livelihood restoration: The World Bank OP/BP 4.12 requires that livelihoods are improved or at least restored, while the Malawi’s laws contains no requirements for livelihood restoration.

- e) Grievance mechanisms: World Bank OP/BP 4.12 requires that a grievance mechanism is established as early as possible in the project development phase, while the Malawian legislation provides for dispute resolution mechanisms in the form of land tribunals and the court system requires.

Table 4.3 summarizes selected differences between the laws of Malawi and OP4.12 and does not provide comprehensive comparison with the laws of Malawi.

Table 4.2 A summary of some selected differences between the World Bank Policy on Resettlement (OP 4.12) and Laws of Malawi

Project affected person	Provisions from relevant laws of Government of Malawi		World Bank Provision on the aspects	Appropriate measures for addressing the gaps.
	Name of Legislation	Provision within piece of legislation in Malawi		
Land Owner/Occupier	Public Roads Act (chapter 69:02) and Public Roads (Amendment Act) No.8 of 2017	<ul style="list-style-type: none"> • The Act and its amendment stipulate payment of compensation based on loss or damage suffered by the claimant arising from the damage to or destruction of his interest in the surface rights on such land • This damage or loss includes; the damage sustained because of the severance of such land from his other land or other injurious matter affecting his other movable or immovable property and if the claimant is compelled to change his residence or place of business, the reasonable expenses incidental to such change 	<ul style="list-style-type: none"> • The policy stipulates that land owners are entitled to compensation of land, compensation of building on replacement costs, expenses on labour • The policy stipulates that land owners are entitled to compensation for crops 	<ul style="list-style-type: none"> • Compensation of land for land to project affected persons. • Compensations on crops and trees on real replacement values.
Land Owner/Occupier	Public Roads Act (chapter 69:02) and Public Roads (Amendment Act) No.8 of 2017	<ul style="list-style-type: none"> • The Act and its Amendment stipulate that for customary estate, land owners are entitled to reasonable compensation in respect of disturbance • This compensation shall be assessed using open market value based on the loss suffered by the claimant arising from damage to or destruction of his interest in the land, and the surface rights on such land may include compensation for other disturbance- -where he has to move his residence or place of business -where alternative land cannot be made available to him and the land 	<ul style="list-style-type: none"> • The policy stipulates that the recommended option is compensation of land for loss land. Other losses to be compensated at replacement costs. • The policy stipulates that temporary structures or buildings are entitled for compensation for loss of assets other than land or cash compensation at full replacement costs including 	<ul style="list-style-type: none"> • Compensation of land for land to project affected persons will be the first priority. • Compensation of money for land to project affected persons in cases of lack of alternative suitable land. • Compensation of all structures at full replacement costs and labour costs prior to displacement • Compensations on crops and trees on market values. • Resettlement assistance to project affected persons.

Project affected person	Provisions from relevant laws of Government of Malawi		World Bank Provision on the aspects	Appropriate measures for addressing the gaps.
	Name of Legislation	Provision within piece of legislation in Malawi		
		<p>remaining to him for any purpose is not an economic unit</p> <p>-where alternative land is made available to him, and where in making the alternative land equally as fit for use as the land which he has been deprived of, is likely to involve a loss in terms of money, materials or work.</p>	labour and relocation expenses prior to displacement	
Land Owner/Occupier	Lands Acquisition Act 21 of 1970 and the Lands Acquisition (Amendment) Act No. 9 of 2017	<ul style="list-style-type: none"> • The Act and its amendment stipulate that compensation will be based on an assessment done by an independent valuer appointed by the Minister. • The Act and its amendment stipulate that compensation is given when land is acquired. 	<ul style="list-style-type: none"> • The policy stipulates that owners of buildings built illegally are entitled to compensation for loss of assets other than land at full replacement costs including labour costs prior to displacement. 	<ul style="list-style-type: none"> • Compensation of all structures at full replacement costs prior to displacement
Land Owner/Occupier	Lands Acquisition Act 21 of 1970 and the Lands Acquisition (Amendment) Act No. 9 of 2017	<ul style="list-style-type: none"> • The law stipulates that reasonable compensation should be given for loss of land by affected persons • The Act and its amendment stipulate that in assessing compensation the following matters should be taken into consideration; <ul style="list-style-type: none"> -the market value of the land, or interest therein of the claimant at the valuation date -the damage, if any, sustained by the person interested, at the valuation date, because of the severance from his land as a result of it being acquired 	<ul style="list-style-type: none"> • The policy stipulates that owners of buildings built illegally are entitled to compensation for loss of assets other than land at full replacement costs including labour costs prior to displacement. 	<ul style="list-style-type: none"> • Compensation of structures at full replacement costs and labour costs prior to displacement

Project affected person	Provisions from relevant laws of Government of Malawi		World Bank Provision on the aspects	Appropriate measures for addressing the gaps.
	Name of Legislation	Provision within piece of legislation in Malawi		
		<p>-if the claimant is compelled to change his residence or place of business, reasonable expenses incidental to such change</p> <p>-any increase in the value of the land or other benefit likely to accrue at the valuation date from the proposed development of the person interested</p> <p>-the relief obtained by the claimant because of the taking of land against the necessity of carrying out any order or direction against the land made under any law relating to the use and protection of land when the work required by the order or direction has not been commenced or completed at the valuation date</p>		
Land Owner/ Owner	Land Act No.16 of 2017	<ul style="list-style-type: none"> The Act states that any person who suffers disturbance of, or loss or damage to any interest which he may have or may have had in unallocated customary land because of the land being acquired for public utility purposes should be paid reasonable compensation for such disturbance, loss or damage 	<ul style="list-style-type: none"> The policy stipulates that land owners are entitled to compensation of land, compensation of building on replacement costs, expenses on labour The policy stipulates that land owners are entitled to compensation for crops 	<ul style="list-style-type: none"> Compensation of land for land to project affected persons. Compensations on crops and trees on real replacement values.
Encroachers	Land Act No.16 of 2017	<ul style="list-style-type: none"> The Act states that a court order can be issued against alleged trespassers, encroachers, or unlawful users or occupiers to vacate land 	<ul style="list-style-type: none"> The policy stipulates that persons are entitled to compensation regardless of the 	<ul style="list-style-type: none"> Compensation of all structures at full replacement costs prior to displacement Compensations on crops and trees on real

Project affected person	Provisions from relevant laws of Government of Malawi		World Bank Provision on the aspects	Appropriate measures for addressing the gaps.
	Name of Legislation	Provision within piece of legislation in Malawi		
		<p>within 7 days or longer. The number of days to vacate land depends on a on several factors including; how long it would take the defendant to take down or remove structures, buildings, fences or improvements of any kind erected on the land; how long it will take the defendant to harvest, collect, take in or remove crops, plants, trees and shrubs and to how long it will take the defendant to remove any chattels belonging to him. Failure to comply with the Court order could lead to forced removal from the land by an authorized officer, police officer or officer of the court.</p> <ul style="list-style-type: none"> • The Act states that any person who uses or occupies any public land without title commits an offence • The Act is silent on compensation for alleged trespassers, encroachers, or unlawful users or occupiers 	<p>legal status of their structures or occupation of the land</p> <ul style="list-style-type: none"> • The policy stipulates that owners of buildings built illegally are entitled to compensation for loss of assets other than land at full replacement costs including labour costs prior to displacement • The policy stipulates that owners of buildings built illegally are entitled to compensation for loss of assets other than land at full replacement costs including labour costs prior to displacement. 	<p>replacement values.</p> <ul style="list-style-type: none"> • Compensation on labour costs based on real replacement values.
Land Owner/Owner	Customary Land Act No.19 of 2016	<ul style="list-style-type: none"> • The Act states that customary land shall be transferred subject to payment of appropriate compensation assessed by a registered valuer and agreed upon by the land committee and the Commissioner or between a person or representative of group of persons under a customary estate or those with a derivative right to use the land and the Commissioner 	<ul style="list-style-type: none"> • The policy favours land for land compensation in cases of loss of land by project affected persons. • The policy stipulates that owners of buildings built illegally are entitled to compensation for loss of assets 	<ul style="list-style-type: none"> • Compensation of land for land to project affected persons. • Compensation of structures at full replacement costs prior to displacement

Project affected person	Provisions from relevant laws of Government of Malawi		World Bank Provision on the aspects	Appropriate measures for addressing the gaps.
	Name of Legislation	Provision within piece of legislation in Malawi		
		<ul style="list-style-type: none"> The Act favours land for land compensation. It provides that if Government or reserved land is to be exchanged with the customary land which is the subject of the transfer, Government will identify an alternative piece of land to be transferred to the Traditional Land Management Area or the affected persons 	other than land at full replacement costs including labour costs prior to displacement.	
PAPs	Environment Management Act No.23 of 1996 and the Environmental Impact Assessment Guidelines	<ul style="list-style-type: none"> The Act and the Guidelines require a social-economic and environmental assessment to be conducted on the impacts of the proposed project. This can include determination of eligibility for compensation. The EIA Guidelines also provide for meaningful consultations to be conducted. 	<ul style="list-style-type: none"> The Policy advocates identification of persons who will be affected by the project to determine who will be eligible for assistance and to discourage inflow of people who will be ineligible The Policy also requires meaningful consultations with affected persons and communities, local authorities, and, as appropriate, nongovernmental organizations (NGOs) 	<ul style="list-style-type: none"> Identification of person who will be affected by the project Consultations to be conducted with affected persons and communities

4.4. ADDRESSING POLICY GAPS IN IMPLEMENTATION

The approach in addressing the discrepancies between policies of the two institutions is to focus on implementation of policy aspects, which positively favour the PAPs, and leave out those that negatively impact on the PAPs. This recommendation is based on the observation of that the common position between the World Bank Policy on Resettlement and the Constitution of Republic of Malawi on resettlement is the guarantee of fair and

adequate compensation and adequate resettlement assistance for the PAPs. In this regard, suitable options to be adopted are as follows:

- a) Compensation in the form of land for land lost to acquisition from those who have been displaced must be made as a top priority. The option could be more cost effective as the land acquisition process (which involves the PAPs) may be much cheaper compared to acquisition of the same land by the government.
- b) Compensation related to customary land acquisition should be made on real replacement values as opposed to previous practice of considering customary land as a free commodity. Whenever there is a conflict between the World Bank Policy and laws of Malawi on land tenure; that of the World Bank will prevail.
- c) Compensation should be paid to categories of PAPs so long they are covered within the cut-off date. Some special PAPs to be included are the squatters, pirates, vendors' stalls/hawkers.
- d) Compensation should be paid in relation to labour and other inputs into gardens and maintenance of trees and crops.
- e) Provisions of basic and social services (such as potable water, graded access roads, sanitation facilities, fertilizer, income generating activities) to PAPs within the new area of relocations. Such support would enhance the restoration of standards of living of the PAPs.

CHAPTER 5 DESCRIPTION OF EXISTING SOCIO-ECONOMIC ENVIRONMENT

Considering that the activities for the proposed project will cover all the three zones of Lilongwe Water Board distribution network in the city of Lilongwe, namely Southern, Central and Northern zones, the socio-economic study for the project considered the population in all the three zones of Lilongwe Water Board distribution network. A study of the existing socio-economic environment was carried out in the project area. Some of the areas studied included Population and settlement; Age structure; Land ownership and administration; Land tenure; Land use; Poverty rate, Household income and expenditure; Employment; Gender analysis and mainstreaming; Education and Literacy; Health and Sanitation (including HIV and AIDS Prevalence Rate); Socio-economic Activities; Water Supply; Wastewater Management; Waste Management and Sanitation; Transport and Communication; Cultural, Ancestral framework and Local customs and traditions; Monuments and buildings; Religion and sacred sites; Local Settlements; Resettlement and compensation. The study has provided a measure of the existing state of the socio-economic environment against which future changes imposed by the project activities will be measured and monitored.

5.1 POPULATION AND SETTLEMENT

Lilongwe is the fastest growing urban area in the country. It has an area of approximately 728,000 Ha. According to the UN-Habitat Lilongwe Urban Profile 2015, Lilongwe has a population of 1,077,116. The City had a population of only 19,425 in 1966 which means that it has grown over 55 times in the last 50 years. The population growth has had a corresponding increase in the population density, from 43 persons per square kilometre in 1966 to 1,479 persons per square kilometre in 2015, which has exerted so much pressure on the requirements for water distribution network to service the residents in the city and surrounding areas. Table 5.1 gives details of the Lilongwe City Population, Growth Rate and Density (1966-2015).

Table 5.1 Population and density figures for Lilongwe, 1966 – 2015

Year	Population	Growth Rate (%)	Density	Area sq. km
1966	19,425		49	
1977	98,251	15.9	251	390
1987	223,318	8.5	568	390
1998	440,471	6.4	1,121	390
2008	674,448	4.3	1,702	396
2015	1,077,116	8.5	1,479	728

Source: Draft Lilongwe Urban Structure Plan, 2010 and UN-Habitat Lilongwe Urban Profile

Malawi's population was estimated at 13.1 million in 2008 with population prospects of 14.9 million in 2010. As of 1 January 2016, the population of Malawi was estimated to be 17 473 734 people. This is an increase of 3.06 % (518 491 people) compared to

population of 16 955 243 the year before. The major source of demographic data in the project impact area was obtained from Lilongwe central, north and southern zones.

Table 5.2 shows that among the urban zones, Alimaunde (Areas 52 and 55) has the lowest density of only 2.4 persons per hectare, while Ngwenya Zone (Areas 22, 23, 24, 36 & 38) has the highest density of 50.8 persons per hectare. The immediate catchment area of the study area (Nyama Zone), is low density in character with only 4.4 persons per hectare.

Table 5.2 Lilongwe City Population and Density by Urban Zone

Urban Zone	Areas	Total Population	Total Land Area (ha)	Density
Alimaunde	52&55	18,876	7,919	2.4
Lumbadzi	53&54	23,942	3,265	7.3
Mvunguti	25,26&27	71,698	4,121	17.4
Kanengo	28,29,39,50&51	45,957		
Maliya	49&56	62,187	1,693	36.7
Chimutu	3,6,9,18,47,15&48	30,801	2,665	11.6
Nyama	10, 12, 30&43	10,175	2,326	4.4
Tsabango	35,41&44	33,729	4,324	7.8
City Centre	11,13,14,16,17, 19,20,31,32,33,34, 40 &42	5,109	1,612	3.2
Old Town	1,2,3,4,5,7,8,21&37	124,431	1,644	75.7
Chinsapo	45,46,57&58	88,453	5,055	17.5
Ngwenya	22,23,24,36&38	154,971	3,051	50.8

Source: Draft Lilongwe Urban Structure Plan, 2010

5.2 AGE STRUCTURE

The population of the City is mostly comprised of the youth with 48 % under the age of 18. The country as a whole has a young population with (<25 years) accounting for 65 % of the population and older persons (65 years +) accounting for only 4 percent of the population. The age structures for Lilongwe city are 0-14 years: 46.9% (male 4,056,810/female 4,100,841), 15-24 years: 20.2% (male 1,748,919/female 1,765,212), 25-54 years: 27.1% (male 2,329,952/female 2,371,274), 55-64 years: 3.1% (male 256,034/female 280,997) and 65 years and over: 2.7% (male 206,923/female 260,506) (2014 est).

5.3 LAND OWNERSHIP AND ADMINISTRATION

Land in the city is managed by five major landlords, namely: The Minister responsible for Lands, Malawi Housing Corporation, Lilongwe City Council, Airport Development Limited (ADL), Press Properties, and private individuals and companies.

The Minister responsible for Lands is responsible for public land which has been subdivided and offered for development under leasehold titles that are usually for 99

years or shorter terms. The Malawi Housing Corporation owns public freehold land for purpose of subdivisions in residential and commercial development in the city. The Lilongwe City Council is responsible for the administration of Traditional Housing Areas (THAs) in the City. Airport Development Limited is a statutory corporation responsible for airport development activities and land administration particularly in Areas 53, 54 and 55. Press Properties have been responsible for demarcation, servicing and allocation of plots in Area 9 (part), such plots are sold out to prospective developers.

5.4 LAND USE

The land use structure of Lilongwe City is contained in the Lilongwe Outline Zoning Scheme of 1986 and includes housing, commercial, industry, institutional, agriculture/forestry, open space, state house, government offices airport and undetermined. However, this scheme has not been implemented fully as planned due to the fact that:

- a) The plan has time consuming planning application process;
- b) Inadequate implementation capability of the Lilongwe City Council; and
- c) LCC's insufficient capability to control development.

Table 5.3 is a summary of the land use structure of the Lilongwe City as contained in the Lilongwe Outline Zoning Scheme of 1986.

Table 5.3 Land Allocation - Outline Zoning Scheme in 1986

Land Use			Area (ha)	Percent
Housing	Permanent	Low Density	2,005	5.9
		Medium Density	1,855	5.5
		High Density	1,135	
	Traditional	High Density	6,740,	
Total			11,735	
Commercial			295	0.9
Industry			2,050	6.0
Institutional			2,300	6.8
Agriculture/ Forestry			7,990	23.5
Open Space			1,060	3.1
State House			560	1.6
Government Offices			155	0.5
Airport			1,340	3.9
Undetermined			6,545	19.2
Total			34,030	100

Source: Lilongwe Outline Zoning Scheme (OPC, 1986)

This scheme has not been implemented as envisaged by the Lilongwe Outline Zoning Scheme. Reasons cited for the failure include: time consuming planning application

process, inadequate implementation capability of the Lilongwe City Council and LCC's insufficient capability to control development.

5.5 POVERTY RATE, HOUSEHOLD INCOME AND EXPENDITURE

The population of Lilongwe has grown as villagers, including young orphaned children, from the surrounding rural areas have relocated to the capital in search of jobs and the unattainable quality of life enjoyed by government officials, NGO and other international workers, and expatriates. Despite the highly visible class differences, most of the city's residents go about their lives in relative harmony.

Up to 24.6 percent of the City's population is classified as ultra-poor, living on less than a dollar per day. The ultra-poor cannot even afford potable water of their own connection as they cannot have excess income to pay for water bills. Expansion of the water distribution networks will assist the ultra-poor to access potable water through water kiosks, as they can afford at least to pay for a bucket or two of water per day. The poor category comprising of those with annual earnings of less than MK16, 165.00 makes 8.8 percent of the total population. At the national level 22.4 percent and 52.4 percent are categorized as ultra-poor and poor respectively.

According to findings of Integrated Housing Survey of 2004-2005, the major source of income of the city population is salaries/wages and enterprises come a close second. The same survey indicated that close to 50 percent of the total income is used to purchase food stuff while 24.2 percent of the monthly income is used to cover housing, utilities and furnishings and 18.2 percent is for expenses related to transport, communication and recreation.

These findings have an implication on the issue of affordability as the majority of the city residents are low income earners and spend a large proportion of their earnings on food and housing. Hence

5.6 EMPLOYMENT

Per 2008 Census, the number of economically active persons was at 260,000. Out of these, 100,000 persons were working in the formal sector. The tertiary sector is the largest accounting for 78 percent of the jobs in the formal sector, primary sector accounts for 13 percent while the remaining 9 percent of the formal employment is in the secondary sector.

5.7 GENDER ANALYSIS AND MAINSTREAMING

Sections 20 and 41 of the Constitution of Malawi uphold the principle of equal rights for men and women and prohibit any discrimination based on gender or marital status. The Republic of Malawi ratified the Convention on the Elimination of All Forms of Discrimination against Women in 1987. Malawi signed the Optional Protocol in 2000, but has yet to proceed with ratification. It ratified the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa in 2005. Malawi has achieved gender parity with respect to primary school enrolments, which indicates an improvement in attitudes towards girls' education.

The city treats gender and HIV/AIDS as crosscutting issues in all programmes being implemented with the Department of Health taking the lead in the implementation of Gender and HIV/AIDS initiatives. HIV/AIDS rates stood at about 15 percent in 2007 down from about 25 percent in 1996. Other institutions that have contributed to efforts to tackle HIV/AIDS include the National AIDS Commission (NAC) and local development and humanitarian organizations.

The 2010 sex distribution of the district population reveals that there are more males than females in the project area that are likely to be affected. This is attributed to the nature of works involved in the area such as welding, tyre fitting, garage services, chicken business, butchering services, farm procedure and shops.

Nationally, women constitute 51.4 % of the labour force. However, they tend to participate in a limited range of income-earning activities, predominantly agriculture. In recent years there been an increase in the number of women involved in agriculture. Women employment includes work in homes (daily chores), on family farms/gardens and doing small businesses.

5.8 EDUCATION AND LITERACY

Literacy is defined as the ability to read and write. Specifically this analysis classifies all those who can read and write in Chichewa or English or any other language as being literate. Among males, almost 76 percent is literate while half of females are literate.

Education services are provided by the government. By the year 2020, Lilongwe Urban Education district will provide quality and relevant education to its learners to enable them acquire relevant knowledge, skills, expertise and competencies to perform effectively as citizens of Malawi.

Lilongwe City has 55 full public government primary schools, 48 registered private primary schools and 51 unregistered private primary schools. There are a total of 1,100 classrooms in the 55 public schools. The district has a total of 2,144 teachers of which 1,920 are female and 224 are male and there are 70, 999 boys and 75,214 girls making an enrolment of 146, 213 which translate into pupil: teacher ratio of 68:1.

There are 29 public secondary schools. Out of these, 24 are Community Day Secondary Schools (CDSSs). Out of the five conventional secondary schools, one is a girls' national boarding secondary school, three are double shift day secondary schools and the remaining is a day secondary school. There are 10 registered and more non-registered private secondary schools.

5.9 HEALTH AND SANITATION (INCLUDING HIV AND AIDS PREVALENCE RATE)

Some of the major hospitals operating in Lilongwe are Kamuzu Central (area 33), bwaila/bottom (area 1), likuni Mission (area 57), and Daye Yong hospital (area 27).

There are 33 public and private health centres and clinics run by the government, Lilongwe City Council, the private sector, and churches.

Health Services in the city are provided at three levels: primary, secondary and tertiary. At primary level, services are delivered through health centres, health posts and outreach clinics. The Likuni Mission Hospital and the African Bible College Hospital (in Area 47, Sector 1) offer secondary level health care services to back up the activities of the primary level facilities.

Kamuzu Central Hospital (KCH) is the largest health facility in the city and offers tertiary level health care services. Other major hospitals include Bwaila, Likuni Mission and Luke Dayeng. While in theory, the KCH is supposed to be the main referral hospital, offering specialized clinical services, in reality the hospital functions as an urban health centre serving the surrounding areas. The hospital has over 500 beds, ICU large casualty Department and specialists in areas of obstetrics and gynecology, surgery, medicine pediatrics. Details of primary level health facilities in the City are shown in Table 5.4.

Table 5.4 Health Facilities and Catchment Population

Name of Facility	Estimated Catchment Population
Area 18	119,054
Lilongwe (Bottom)	115,453
Area 25	64,408
Kawale	174,291
Lumbadzi	54,921
Kang'oma/Tsabango	13,934

Source: Lilongwe District Socio-Economic Profile

The main challenges facing the health sector include high cases of malaria, high HIV/AIDS prevalence rates, high shortage of equipment and health facilities, shortage of qualified medical staff in the hospitals and clinics, limited capacity, and poor sanitation and hygiene.

Lilongwe has the full range of diseases including cholera, typhoid, tuberculosis (TB), measles, infectious hepatitis, malaria, and HIV/AIDS. Malaria is the leading cause of morbidity and mortality in the City, especially among children under five years old. Malaria accounts for 40 percent of all outpatient visits to health facilities. Pneumonia and diarrhea are the other leading causes of death in children under five years old. Despite the continuing presence of these diseases, on the whole, Malawi's health conditions appear to be improving. The impact areas are mainly affected by malaria, pneumonia, diarrhoea, common injuries, chicken pox outbreaks and HIV/AIDS. Malaria is still the biggest health challenge with over 206,830 cases reported in the city. Most of the malaria cases were reported in the low-income areas and the informal settlements.

Lilongwe has a lot of people from different areas with different interests, most of these people come to the city with different types of diseases, others are referred from

Lilongwe rural health centres to Lilongwe urban main hospitals such as Kamuzu Central Hospital and Bwaila clinic. The majority of people are not satisfied with the quality of healthcare. They indicated there are problems with medical supplies (inconsistent supplies, drugs are not). The ratio of doctor to patient is also big, for example, Area 18 health centre sees more than 100 people a day and yet the health facility only has 2 medical officers. Another issue raised was the long queuing times at health facilities due to the large volume of patients per facility.

5.10 SOCIO-ECONOMIC ACTIVITIES

While the nation of Malawi is primarily a rural culture with most of the population living in rural areas, recent famines and high levels of unemployment have created higher levels of migration to the cities. According to 2008 Census, the number of economically active persons was at 260,000. Out of these, 100,000 persons were working in the formal sector. The tertiary sector is the largest accounting for 78 percent of the jobs in the formal sector, primary sector accounts for 13 percent while the remaining 9 percent of the formal employment is in the secondary sector. 76 percent of Lilongwe's population live in informal settlements while poverty stands at 25 percent and unemployment is at 16 percent. The civil service employs about 27 percent of all formal workers while 40 percent work in the private sector and 2 percent are self-employed. Those that are working earn little money and are usually below the poverty line.

5.11 WATER SUPPLY

Lilongwe Water Board supplies water in the city from Lilongwe river. Water supply is upon application and one's financial ability to afford the cost of water supply. Lilongwe Water Board has the capacity to supply 95,000m³ of water per day but only supplies 69,000–78,000m³ of water per day, with the daily demand estimated at 73,250m³ of water.

The project's main components consist of improving network management which will lead to extending water-treatment works and reducing leakages. During implementation of the project, the contractors will source their own water for construction. The sources would range from nearby rivers to boreholes.

Lilongwe Water Supply Project aims to extend and improve the water supply system of Lilongwe, Malawi's capital city, to strengthen Lilongwe Water Board's (LWB) management and operational efficiency, and to study future options for Lilongwe's water disposal and sanitation systems. Demand for water supply in Lilongwe is increasing with the growing population, especially after 2005 when government ministries and organizations started moving their head offices to the capital city. Lilongwe City Council estimates that about 75 percent of the population was served by the Lilongwe water board in the 2012 up from 50 percent in 2013. About 91 percent of the population was able to access piped water within a 30 minute walking distance in 2012.

Lilongwe Water Board in May started rationing distribution of water to its customers following current water problems affecting several parts of Lilongwe as a goal to ensure that they save lives of people through provision of potable water all the time for all

people. The water problem is because of less of rainfall in the last three years, which forces them to start using the reservoirs earlier. The main coping methods include the use of water that people store in buckets, water purchased from privately owned borehole at a nearby primary school and water purchased from neighboring locations throughout the rationing period. In most unplanned areas water is mainly provided through communal pipes or kiosks which are run by the communities or individuals as can be seen in figure 5.1.



Figure 5.1 One of the water kiosk in the city of Lilongwe

5.12 WASTEWATER MANAGEMENT

The Lilongwe City Council (LCC) is responsible for providing sewerage and sanitation services in the City. The City derives its authority to do so from the Public Health Act (34:01) of 1996.

Houses in the traditional housing areas largely depend on pit latrines for disposal of human waste. In those houses, household wastewater is discharged untreated and seeps underground. Human waste also seeps underground from pit latrines affecting the quality of underground water.

In Lilongwe, 19.8% use septic tanks. When full, septic tanks are emptied and the contents transported to disposal ponds. The ordinary or conventional dug-out pit latrine, with or without a superstructure of either logs or a concrete slab over the pit, is the dominant faecal-disposal measure. A standard pit latrine may be 3m deep and is designed to last up to 10 years. 71% of the city's population uses pit latrines. There are some VIP (ventilated improved pit) latrines, which have a concrete slab, permanent superstructure and a pipe to remove odor and keep out flies and only 9% of Lilongwe's population is served by a sewerage system.

For permanent residential units, septic tanks are required and designs need to be approved by the planning authority. There is no regulation on septic tank de-sludging and people remove sewage at their own convenience.

The Draft Lilongwe Urban Structure Plan estimated that the total sewerage generation is around 5,280 cubic metres per day which is less than the current treatment plant capacity. There are seven treatment plants in the City namely: Kauma 1 and 2, Kanengo North pond, Kanengo South pond, KIA pond, Chipasula Secondary School, Kamuzu Barracks. Only 9% of the city is attached to the sewage system.

5.13 WASTE MANAGEMENT AND SANITATION

Lilongwe City Council (LCC) is in charge of waste management in the city. The Cleansing Services within the LCC is responsible for waste collection and disposal. Waste management is largely focused towards planned areas. The informal urban areas, which include over 60 percent of the urban population, have little access to waste management services provided by the LCC, mostly serving the markets.

A survey done by the University of Malawi indicated that generation varies between 3.3 and 3.7 kg per household in high density areas, 5.2 and 6.8 kg per household in medium density areas and between 6.7 and 14.2 kg per household in low density areas. It is estimated that the city generates about 335 tons of solid waste per day. According to the annual report of reporting services (2007-08), annual collection is 31,431.78 tons translating to an average daily collection of 86 tons per day. Thus, the current collection is less than 30 percent of daily generation. Collection from medium and high income areas is regular, while in low income areas households dispose the waste either in waste pits within their plot or in skips located in the neighborhoods. In low and medium density residential areas, garbage is collected once a week and for high density residential areas, waste skips are placed in strategic locations. Waste is collected by skip carriers once a week. There is limited waste collection from informal areas due to problems of accessibility resulting into garbage being dumped everywhere as shown in Figure 5.2.



Figure 5.2 Waste Disposal in Lilongwe City

The proposed project is located within a high-income area that is served by the City Assembly. However, due to distance from the development to the dumpsite it is recommended that waste requiring removal is minimized by activities within the site, e.g. composting of organic material and recycling of combustible material. There is need for appropriate on-site garbage storage facilities.

At household level, most families, because of lack of knowledge on the use waste as manure or on separation as noted above, have the option either to bury filled pits and dig a new one (31%), or burn the waste (6.2%) when pits are full. Very few (4.1 %) would use the waste as manure on their gardens. A block leader in Mgoni, to emphasize the shortage of land in his area, told enumerators that he had asked his neighbours to dispose of all their solid wastes at his premises to bury a large drain so that his land increases in size. Those surveyed who did not respond to this question (25.4%) may include those disposing of waste on road- or river-sides, open areas and skip sites

The construction site wastes and building materials must be properly managed and disposed of to reduce the risk of pollution in elements such as soil, ground water and air.

5.14 TRANSPORT AND COMMUNICATION

Minibuses are the most common means of public transport in Lilongwe as shown in Figure 5.3. An average of about 40 percent of the population rely on minibuses to transport them from one location to another. Taxi services are available but they are too expensive for the poor majority. Bicycle taxis are also increasing in popularity in the peri-urban and low-income areas. However, the current roads infrastructure is inadequate to support the growing number of vehicles leading to increased traffic congestion and a lot of time wasted in traffic jams. The city has one international airport and railway station. Many people however still walk to their various places of work resulting in a high number of pedestrians. However, the absence of footpaths creates conflict between motorists and pedestrians and has resulted in a high increase in road accidents. The local authorities need to provide adequate transport infrastructure such as footpaths, bicycle paths, safe pedestrian crossings and flyovers, and well-protected bus lay-bys.

The Road Traffic Directorate in the Ministry of Transport and Public Infrastructure provides the legal framework for the transport industry. It administers regulatory provisions governing motor vehicle administration, driver licensing, operator authorization, permit control and other related traffic management controls.

The road network in the City comprises main, secondary and minor roads. M1 forms the north-south trunk axis. Secondary and (minor) urban roads extend from M1 to main urban development areas and settlements, especially in the southern part of the city. The total road length is approximately 585 km. Overall, the main and secondary roads are well developed in terms of pavement condition.

The traffic survey carried by the JICA Team indicates that traffic volumes in the city vary between 1,200 and 27,000 cars per day. The most serious bottleneck point is between the Lilongwe Town Hall roundabout and the Old Town in Area 1 where the daily traffic

volume is 27,000 cars per day. The traffic volumes of other sections are within the road capacities.

The area is within the coverage of Access, Airtel, MTL and TNM networks hence people are able to make and receive calls and send and receive messages from friends and relatives using cell phones and land lines and there are a number of service providers of internet including Skyband, Malawi Net, Globe Internet, and Broadband Digital Solutions.



Figure 5.3 Some Modes of Transport in Lilongwe

5.16 ENERGY AND ELECTRICITY

The Electricity Supply Commission of Malawi (ESCOM) is the sole provider of electricity in Malawi. Currently its installed capacity is 302MW (95% hydro; 5% diesel) whilst available capacity is only 265MW against an estimated demand of 295MW. Planned investment in Kapichira-II hydropower plant and the interconnection of Malawi's electricity grid with Mozambique in 2011 should help reduce capacity shortages and load shedding and improve supply reliability. However, demand is growing fast and is projected to reach 325 MW, 478 MW and 757 MW for years 2010, 2015 and 2020 respectively. Given the expected load growth, the planned investment will not be sufficient to meet the projected demand. As such this would lead to more load shedding, discouragement of business investment, and would undermine economic development and efforts to reduce poverty. It would also damage attempts to widen access to electricity among Malawi's population.

Energy sources in Lilongwe include electricity, fuel wood and paraffin. The Electricity Supply Commission of Malawi supplies electricity in most parts of the city. In Lilongwe, only 26 percent of residents are connected to electricity. The electricity supply infrastructure is old and worn out resulting in frequent power outages and high maintenance costs. Further, the cost of electricity supply is high and inaccessible to the

poor. The high reliance on charcoal and firewood for cooking and lighting, mainly by the urban poor, is the major cause of deforestation. The Electricity Supply Commission of Malawi needs to research on new alternatives to improve energy supply, such as solar power. The majority of the population cannot access electricity, hence they use fuel wood for heating and cooking; there is also a high demand for firewood for brick curing. Almost 74% of the population in the city use fuel wood in form of charcoal and firewood.

5.16 CULTURAL, ANCESTRAL FRAMEWORK AND LOCAL CUSTOMS AND TRADITIONS

Records have it that there is mixing of cultures in Lilongwe city, as a result of co-existence of the major tribes Mang'anja, Chewa, Ngoni, Senga, Tumbuka, Yao and foreigners. Almost all the areas in the study area are ethnically mixed, reflecting a regional trend with significant numbers of settlers from other parts of Malawi. Chichewa is the most common language that is used; other languages spoken are mang'anja, yao and tumbuka. All the tribes have beliefs such as witchcraft and evil spirits/ supernatural gods. All people in the area have different beliefs according to their customs and norms.

5.17 MONUMENTS AND BUILDINGS

In terms of specific places of cultural and historical interest, Lilongwe has a few, including original mission stations and centers of excellence for handicrafts however, the project will not interfere with any monuments or buildings.

5.18 RELIGION AND SACRED SITES

Most religions have a Christian base, with only 14 % following animism and Gule wamkulu, and 1% being Muslim in Lilongwe city. There are a variety of churches; however, the main church following was with the Church of Central African Presbyterian (CCAP), the African Abraham Church, and Catholicism.

There are a number of sacred sites in the city which include grave yards but none of the grave yards will be affected by the project.

5.19 LOCAL SETTLEMENTS

Lilongwe City Council is responsible for urban planning and development functions in the city under the Town and Country Planning act of 1988 and the local Government act of 1998. The major land owners in Lilongwe include the Ministry of lands, Housing and urban Development, Lilongwe City Council and Lilongwe District Council. Chiefs claim ownership to land and undertake customary land administration as de facto landlords and managers of public land. The total area of the city is 456 km², 60 percent being public land, 30 percent being private land and 10 percent being customary land¹. within residential areas, informal settlements occupy 54 percent of land, Traditional Housing areas occupy 19 percent, high density housing areas occupy 4 percent, medium density occupy 9 percent and low density occupy 14 percent². The multiplicity of land owners has created urban land management challenges

A number of factors were considered when selecting the proposed project site. The networks will follow the already established water way for Lilongwe Water Board which

are usually in road reserves. However, there might be a few diversions due to other reasons. Land Use and Settlement & Practices in the Proposed Project Area will be used.

The most common challenges faced by residents in the settlements surveyed have been grouped into six categories, as outlined in Figure 5.4.

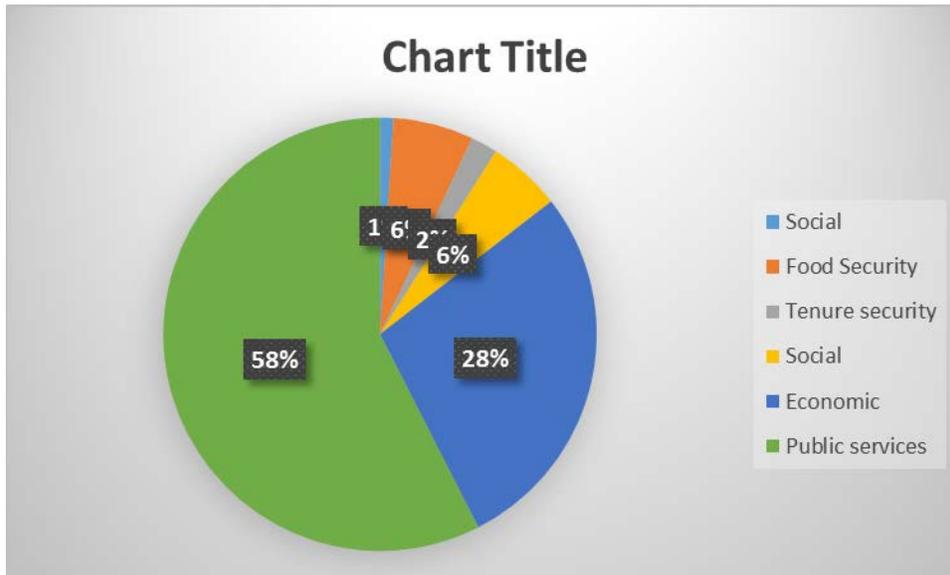


Figure 5.4 Most common types of challenges faced in the settlements surveyed

Accessing public services is the most prevalent (57.5%) challenge, while economic challenges such as accessing finance are second most common. Some of the positive socio-economic impacts that the study identified included:

- Increased water production and hence reduced water shortage;
- Increased employment opportunities for the local people;
- Creation of market for goods and services due to availability of running water;
- Increased economic activities within the project area;
- Increased economic development in the country;
- Increased tax revenues for the Government through payment of water; and
- Improved living and welfare standards of people of Lilongwe

The main negative impacts of the proposed project include the following:

- Risk of Increased incidences of Sexually Transmitted Infections (STIs) and HIV/AIDS during program implementation;
- business disturbances during the implementation of the project;
- Population influx after the project due to proper; and
- Loss of livelihood resulting in increase in social ills.

5.20 RESETTLEMENT AND COMPENSATION

The proposed project will not cause any permanent displacement of people, institutions and their property hence issues of resettlement will not arise. The pipelines for the water distribution networks and the associated facilities will be constructed along the road

reserves except in places where the pipeline will cross the road and in highly built up places like market places and in some residential areas. In such places, the project will cause temporary disturbances, which shall include damage to road pavements, concrete driveway, different building structures; obstruction to passage on the roads; disruption of public services; and temporary loss of business activities. The developer will compensate all the project affected persons for the different losses arising from such disturbances.

Consultation with stakeholders showed that there will be three types of compensations to the PAPs, which shall include:

- a) Monetary compensation to the PAPs who will experience temporary disturbance/loss of business for the whole period that they will lose business;
- b) Monetary compensations to the PAPs who will experience permanent loss of property such as trees and structures belonging to different PAPs that shall be destroyed as a whole or experience partial damage; and
- c) “In-kind” compensation through a Contractor, the Developer will replace damaged infrastructures such as damaged road pavements; damaged concrete driveway; damaged different building structures; and disruption of public service.

In all, money amounting to MK 305,160,798.60 will be used to pay for compensation. Details of the compensation schedule are provided in Annex 6 while Table 5.5 provides a summary of details of the items on which compensation will be paid.

Table 5.5 Summary of the compensation details

Description of Disturbance	Frequency	Amount (Mk)
Concrete Driveway Cut	113	109,553,498.60
Tarmac Road Section Cut	41	159,600,000.00
Business Disturbed	150	26,631,500.00
Trees, Crops and Grass & Flower Lawn	11	2,499,000.00
Structures to be Demolished	2	6,722,800.00
Mtl Manholes	2	154,000.00
Total	363	305,160,798.60

CHAPTER 6: ELIGIBILITY FOR COMPENSATION AND PROCEDURES FOR LAND ACQUISITION

6.1 DETERMINING CRITERIA

The proposed project will affect the PAPs in various ways. All the PAPs who will be affected by the activities of the project in one way or the other will be eligible for compensation and other assistance. The RAP study showed that the types of losses that the PAPs will suffer from will include loss of land and property; damage to road pavements; damage to concrete driveway; damage to different building structures; obstruction to passage on the roads; disruption of public service utilities; and temporary loss of business opportunities.

The World Bank Policy on resettlement, Operational Policy (OP 4.12) considers all titled landowners, customary landowners, encroachers (who have settled before the cut-off date), persons affected by loss of access to sources of income and persons affected by loss of access to natural resources (water, wood, grazing areas etc.), as PAPs and are entitled to compensation. The entitlement matrix prepared for the Project is given in Table 6.1.

Table 6.1 Entitlement matrix

Types of loss/impacts	Definition of Entitlement	Definition of entitled person/unit ³	Application guidelines
Loss of land	Replacement value in cash or in-kind; provision of cash compensation as per the replacement value	A person with an original Certificate of Title, or customary right on that land	Owners losing less than 20% of their total holdings will be compensated in cash. PAPs to be exempt from capital gains tax against this payment. Owners losing more than 20% land will be provided in kind compensation (Land for Land) or replacement value in cash.
Loss of structure	Replacement value of the lost structure	A person with an original Certificate of Title, or customary right on that land or who has been residing / doing business before the cut-off date	Owners or occupier of the property should receive the full value if the structure becomes unusable.
Temporary loss of business	Cash compensation	PAP running a business on property to be acquired	Cash compensation equal to loss in income for the period of disruption
Temporary loss of dimba land	Cash compensation.	Cultivator	One time cash compensation for the loss of crops

³ PAPs from Vulnerable Groups (Elderly, chronically ill, orphans, disabled, etc.) will be provided additional support during RAP administrative processes and payment by the Implementing Agency. This assistance is generally provided on a case by case basis and includes measures such special/additional assistance from the PIU throughout the compensation process to ensure that (i) individuals such as elderly/widows who are identified as rightful PAPs receive their full compensation, (ii) they are continuously informed about the compensation process, (iii) they receive assistance in opening Bank accounts and managing their compensation monies when necessary, (iv) and etc.

6.2 IDENTIFYING THE ELIGIBLE

The land laws consider all titled landowners, customary landowners, encroachers, persons affected by loss of access to sources of income and persons affected by loss of access to natural resources (water, wood, grazing areas etc.), as PAPs. Therefore, PAPs will be entitled to compensation based on the status of their occupation of the affected areas. The survey identified PAPs as being land owners, tenants, squatters and shop owners.

6.3 CUT-OFF DATE TO ENTITLEMENTS

A cut of date for which this RAP is effective was 31 July 2017. All affected persons were informed of this date. This therefore means that any new structure coming to the Project affected area after this date will not be considered for compensation.

6.4 VALIDATION OF AFFECTED ASSETS

Validation of the affected properties will be conducted based on the provisions in the Malawian legislation for consistence and accountability. The properties to be verified shall include:

- a) Physical assets;
- b) Crops and fruit trees; and
- a) Houses;
- b) Land; and
- c) Business.

6.5 PROCEDURES FOR LAND ACQUISITION AND NOTIFICATION

The acquisition of land for the project will be guided by the Constitutional provisions and other relevant legislation. For a household, the affected individual is the owner of the land on which the household is built whilst for business the owner of the business or business premises will be recorded. The record will have the following: -

- a) The land to be acquired;
- b) Names of owners or occupiers of the land, as far as they can be ascertained; and
- c) The estimated magnitude of impacts relative to the need for compensation and valuation of assets for the compensation.

Each person receiving compensation will have a dossier containing:

- a) The person's detailed identification information, including name, date and place of birth, next of kin, marital status ;
- b) Number of persons she or he claims as household or homestead dependants;
- c) The amount of land available to the person or household when the dossier is opened;
- d) Assets - including structures, resources, crops; and
- e) Means of livelihood.

The dossiers will provide the foundation for monitoring and evaluation, as well as

documentation of compensation agreed to, received and signed for. Additional information will be required for individual's eligibility for resettlement or compensation. This information will include:

- a) Level of income and of production;
- b) Inventory of material assets and any improvements made on the land; and
- c) Debts;

The authority responsible for acquiring land shall also make the following available to all key stakeholders in the land acquisition process:

- a) Proposed compensation offers and draft agreements to be signed by the affected persons and the developer; and
- b) Mechanisms for monitoring and evaluation.

The land acquisition and compensation procedures shall ensure that persons affected either physically or economically by the Project maintain or improve their livelihood.

CHAPTER 7 PROCEDURES FOR RAP IMPLEMENTATION

7.1 INSTITUTIONAL ARRANGEMENTS FOR RAP IMPLEMENTATION

Lilongwe District Council will have the overall responsibility to coordinate implementation of the RAP. Lilongwe Water Board will set up a project management team and a team to monitor compensation process. The indicators to be monitored are provided in Chapter 10 of this RAP Report. The actual execution will be done through collaboration with Lilongwe District Council and all the relevant ministries and departments such as the Ministry of Lands and Urban Development, the Ministry of Finance and the Office of the President and Cabinet.

A Compensation Committee (CC) will be formed which will have the following functions:

- a) Acting as the primary channel of communication between the various interest groups/organizations involved in the compensation process. In particular, it will serve to facilitate communication between Lilongwe Water Board and the community members;
- b) Solve amicably any problems relating to compensation process. If it is unable to resolve any such problems, it is to channel them through the appropriate grievance procedures; and
- c) Assume primary responsibility of assisting Lilongwe Water Board in overseeing the compensation processes in all its phases.

The CC will be the primary representative voice of the affected persons and will be composed of:

- a) Representatives of the PAPs from each of the affected Lilongwe Water Board Water Distribution Zone who will be elected by the PAPs themselves⁴;
- b) Representative of traditional authorities or a community leader in the affected area;
- c) Representatives of Lilongwe Water Board; and
- d) One representative from the District Council who can be either the DC or his designated representative.

7.2 NEGOTIATIONS AND RESOLUTION OF CONFLICTS

The negotiations between Government and the affected persons shall be done in the spirit of finding amicable solutions with full respect of all the parties concerned. The negotiations will be guided by the following:

- a) **Procedure** – The procedures to be followed in raising grievances will be discussed and agreed between the Lilongwe Water Board and the affected persons. All the institutions involved will provide their contact details to the people;

⁴ At least one of the two members will be a woman

- b) **Full Disclosure-** Full disclosure of the implications and provisions of the compensation for temporary disturbances will be made to the affected people;
- c) **Willingness** – All parties will enter into the agreements willingly without any force from anyone and if no agreement is made further deliberations should be made;
- d) **Back and Forth Discussions-** Adequate time shall be given to the affected communities to discuss the matter amongst themselves and they should be allowed to do so for as long as they feel necessarily without necessarily causing unwarranted delays in project implementation;
- e) **Recording for Proceedings-** All proceedings from negotiations meetings shall be filed and be open to all for reference purposes. The local language shall be used in recording so that the local people can understand the minutes; and
- f) **Court of Law-** The court of law will be a last resort for all parties as the spirit will be to have some kind of consensus among the negotiating teams.

7.3 PROCEDURES FOR COMPENSATION

Payment of compensation will be made at the Lilongwe DC's office, attended by the Project-Affected Persons, Project officers, the District Commissioner, and Civil Society Organizations such as LandNet. The officials and the neutral supervisors will verify that the amount to be paid is the amount agreed to by the PAP in negotiation with the Project Management Team. The responsible Government officer will then deliver the payment to the PAP, who will sign a receipt acknowledging payment in full as agreed upon during negotiations. The Lilongwe Water Board will monitor the delivery of such funds in order to ensure that all amounts reach all the PAPs.

7.4 RAP IMPLEMENTATION SCHEDULE

Implementation schedule for the RAP is provided in Table 7.1. In order to facilitate the compensation payment process given the proposed construction timing, the following key activities will be initiated immediately upon commencement of the Project:

- a) Finalizing the detailed configurations of the various project components so that land requirements and recording exercises can be undertaken;
- b) Appointing staff from Lilongwe Water Board and Lilongwe District Council to commence with preparatory activities, including ongoing consultation with affected communities;
- c) Updating the socio-economic baseline, including completing socio-economic questionnaires for all affected households not surveyed during the preparation of the RAP;
- d) Engaged a professional valuer to finalize compensation principles, norms and rates; and

- e) Contracting suitable NGOs to assist with the preparation of the social environment, including preparation of capacity building and skills enhancement programs.

Table 7.1 Implementation schedule for the RAP													
	Task Name	Timeline (Weeks)											
		1	2	3	4	5	6	7	8	9	10	11	12
8.1	Appointment of staff from Lilongwe Water Board and Lilongwe District Council to commence with preparatory activities												
8.2	Contracting Civil Society Organizations such as LandNet to assist with the capacity building and skills enhancement programs.												
8.3	Conducting sensitization meetings with PAPs on compensation arrangements												
8.4	Updating the socio-economic baseline												
8.5	Asset valuation and validation												
8.6	Disclosure of compensation values to PAPs and Signing compensation agreements with PAPs												
8.7	Payment of compensation												
8.8	Update database												

CHAPTER 8 Grievance Redress Procedures

Grievance and complaints about construction, expropriation, construction activities, social issues and any other subjects related to the project from the start of project till the end of the monitoring will be redressed for effective project implementation. In this respect, all grievances and complaints will be recorded and processed at all stages of the project implementation.

8.1 The Aim of the Grievance Redress Procedure

The aim of Grievance Redress Procedure is to settle or redress any individual grievance or complaint of PAPs promptly, fairly and as much as possible in a manner that is acceptable to all parties. The general approach will be to seek a solution to the problem in the earliest stage of the project and avoid taking complaints to courts for redress. The following will be considered when applying this approach:

- a) Provide straightforward and accessible ways to PAPs for making complaints or resolving any disputes that may arise due to the project activities;
- b) Identify and implement appropriate and mutually acceptable actions to address complaints;
- c) Ensure that complainants are satisfied with outcomes of the corrective actions; and
- d) Avoid the tendency to resort to judicial proceedings.

Grievances are useful indicators of a project performance. A high number of grievances may point out a need to adjust work practices or procedures in order to mitigate adverse impacts or conflicts with the PAPs. In this respect, the effectiveness of the related procedures will be evaluated at all stages of implementation.

8.2 Establishment of the Grievance Redress Committee

The project will establish a Grievance Redress Committee (GRC) for the purpose of handling grievances related to environmental and social concerns. The committee will be established as soon as the project is approved. The GRC will be ad hoc institutions established primarily for the sub project investment and will have no legal mandate and will follow the Grievance Redress Process provided in Table 8.1. The GRC will be established under the guidance of the District Commissioner of Lilongwe and will be composed of the following:

- a) Project Affected Communities or Individuals representation;
- b) Lilongwe Water Board;
- c) District Environmental Officer;
- d) Representatives from Ministry of Labour;
- e) Contractor/Engineers;
- f) Women and Youth Representatives; and
- g) Representation of active NGOs or CBOs in project area.

Table 8.1 Grievance Redress Process

Process	Description	Time Frame	Other information
Identification of grievance	Face to face; phone; letter, e-mail; recorded during public/community interaction; others	1 Day	Email address; hotline number
Grievance assessed and logged	Significance assessed and grievance recorded or logged (i.e. in a log book)	4-7 Days	Significance criteria: Level 1 –one off event; Level 2 – complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or this ESMP provisions
Grievance is acknowledged	Acknowledgement of grievance through appropriate medium	7-14 Days	
Development of response	Grievance assigned to appropriate party for resolution Response development with input from management/ relevant stakeholders	4-7 Days 7-14 Days	
Response signed off	Redress action approved at appropriate levels	4-7 Days	Project staff to sign off
Implementation and communication of response	Redress action implemented and update of progress on resolution communicated to complainant	10-14 Days	
Complaints Response	Redress action recorded in grievance log book Confirm with complainant that grievance can be closed or determine what follow up is necessary	4-7 Days	
Close grievance	Record final sign off of grievance If grievance cannot be closed, return to step 2 or refer to sector minister or recommend third-party arbitration or resort to court of law.	4-7 Days	Final sign off on by LWB Project Management Unit Manager in liaison with Lilongwe City Council

8.3 Duties and Responsibilities

The grievance redress mechanism will be managed by LWB. The Board will put in place a grievance redress committee, which will be comprised of the representatives of District Commissioner of Lilongwe District, The Chief Executive Officer of Lilongwe Water Board, Commissioner for Lands, Traditional leaders in the project areas, PAPs representative, Representative of Civil Society in the project area, Politicians and Councilors in the project affected area.

The purpose of including these institutions and associations into the grievance redress committee is to ensure the participation of local authorities and associations into the problem-solving processes. Thus, these institutions and associations, functioning as a balancing body between the PAPs and the project, will contribute to the fairness and transparency of the grievance redress mechanism. The decisions of the Committee will be binding for all the local implementing agencies.

The committee will meet twice a month to propose corrective/precautionary actions. If required, the committee may also invite the applicants, relevant governmental authorities and/or third parties to these meetings. The committee will also monitor the grievance mechanism via the reports prepared by the resettlement action plan committee and propose improvement when necessary.

8.4 Types of Grievances

All types of grievances related to the project will be received at the project implementation unit at Lilongwe Water Board Madzi House. In addition, grievances can be received through the project-dedicated phone line, which will be active throughout the project. By this phone line, PAPs who cannot come to the project office or are away from the affected areas, can express their concerns and grievances regarding the project. The phone number shall be widely advertised in all affected settlements through the community information meetings. In addition, each site will have grievance boxes where affected PAPs can deposit grievances. These are likely to include:

- a) Damages to buildings and assets;
- b) Disruption or damages to local roads;
- c) Closure of passageways;
- d) Damages to lands outside the project demarcated working area;
- e) Reinstatement of immovable assets after temporary use (establishment of easement rights, rental or temporary occupation);
- f) Nuisance from dust, noise and vibration;
- g) Disruption or damages to water sources and infrastructures;
- h) Destruction of wells that are water sources for the local communities;
- i) Increase in the traffic load;
- j) Health problems, injuries and accidents;
- k) Misconduct of project personnel/workers; and
- l) Unfair selection practice of employees for project-related jobs.

The grievances that are probable to occur may be related to:

- a) Disputed compensation valuation and compensation amount (land, crop and immovable assets);
- b) Disputed valuation survey (measurement);
- c) Identification of property owners (including the determination of addresses of the property owners living outside the project area);
- d) Unregistered land users;
- e) Determination of compensations (crops, agricultural products, land use type);
- f) Misconduct of project personnel/workers; and

- g) Income loss of tradesmen due to the loss of their commercial facilities or decrease in the number of customers.

8.5 Procedure for Receiving and Responding to Complaints, Grievances, Appeal and Claiming Process

All types of complaints, appeals and claims related to the project will be received by the Grievance Committee located at the project office at Lilongwe Water Board. Complaints can be lodged through the toll-free phone line (8000500) and complaint boxes to be located on project sites.

At the beginning of the project, the grievance mechanism will be disclosed to all stakeholders through meetings with the Project Affected Persons. All types of grievances will be received by the Social Specialist (or other designated project official in person or via project dedicated phone/site boxes) at the project office, which will operate throughout the project cycle. These grievances will be recorded in Grievance Forms, which contain the details regarding the grievance as well as the name and address of the applicant, application date, type of application and the name of the person receiving the grievance. For proper functioning of this procedure, all grievances will be recorded by the PIU Social Specialist located at Lilongwe Water Board.

When receiving the grievances of the vulnerable PAPs such as elderly, disabled and illiterate people, the PIU will pay special attention and help them to receive their grievances properly. The grievances depending on the gravity of the matter will be solved via the Grievance Committee and in consultation with the contractor if it occurs during the implementation period of the project. When required, site investigations will be undertaken involving technical staff from relevant organizations such as the Developer, Ministry of Lands, District Council officials, MPs and Councilors. Technical reports to serve as a basis for the discussions will be prepared and tabled before the Grievance Redress Committee. During this site observation, the complainant or his/her representative shall also be present.

The committee will inform the complainant about the status of their grievances within 10 working days after receiving the complaint and carrying out the investigations. In case the applicant is not satisfied with the result, the Social Specialist will forward the case to the Grievance Redress Committee and notify the applicant. In addition, in case the applicant cannot receive a respond within the designated time frame, s/he can apply directly to the Grievance Redress Committee.

CHAPTER 9 COSTS AND BUDGETS

Rehabilitation and upgrading of the water distribution networks will follow the existing network, which are along the road reserves except in places where the pipeline will cross the road and in highly built up places like market places and in some residential areas. In such places, the project will cause temporary disturbances, which shall include damage to road pavements, concrete driveway, different building structures; obstruction to passage on the roads; disruption of public services; and temporary loss of business activities. The developer will compensate all the project affected persons for the different losses arising from such disturbances.

Consultation with stakeholders showed that there will be three types of compensations to the PAPs, which shall include:

- a) Monetary compensation to the PAPs who will experience temporary disturbance/loss of business for the whole period that they will lose business;
- b) Monetary compensations to the PAPs who will experience permanent loss of property such as trees and structures belonging to different PAPs that shall be destroyed as a whole or experience partial damage; and
- c) “In-kind” compensation through a Contractor, the Developer will replace damaged infrastructures such as damaged road pavements; damaged concrete driveway; damaged different building structures; and disruption of public service.

The costs and budget being presented in this Chapter are with respect to compensation schedule verification by the Ministry of Lands and Urban Development and RAP implementation. From the valuation of the PAPs assets, it was concluded that money amounting to USD 649,723.07 will be used to pay for compensation, implement the RAP and monitor RAP implementation. Table 9.1 provides details the costs which will be required to implement the RAP, which will be provided by Government.

Table 9.1 Summary of Costs and budgets for RAP implementation

Description of Costs	Amount (Mk)	Amount (USD)
Total compensation for the PAPs	305,160,798.60	415,184.76
Verification of the PAPs assets and their costs by Ministry of Lands and Urban Development	25,000,000.00	34,674.00
Compensation process (RAP Implementation)	68,000,000.00	94,313.40
Monitoring and evaluation of compensation process	15,000,000.00	20,804.43
Sub total	413,160,798.6	564,976.59
15% Contingency	61,974,119.78	84,746.48
Grand Total	475,134,918.39	649,723.07

CHAPTER 10 MONITORING AND EVALUATION

Monitoring and evaluation will form an integral part of project implementation, providing the necessary information about the involuntary resettlement aspects of the project, measuring the extent to which the goals of the resettlement plan have been achieved and the effectiveness of mitigation measures. Problems and successes will be identified as early as possible so that timely adjustment of implementation arrangements will be made. The process needs to be undertaken for a reasonable period after all resettlement and related development activities have been completed.

The RAP specifies the methods to be employed, frequency of measurement, reporting procedures, and the organizational arrangements to be made to undertake the activities including the involvement of those affected in the process.

10.1 Indicators

Indicators and targets will be established for the project as a whole, in consultation with representatives of the affected communities and other key stakeholders. Indicators will be grouped into the following categories:

- a) **Input indicators** – will measure the resources (financial, physical and human) allocated for the attainment of the resettlement objectives, such as livelihood restoration goals.
- b) **Output indicators** – will measure the services/goods and activities produced by the inputs. Examples will include compensation disbursements for acquired assets.
- c) **Outcome indicators** – will measure the extent to which the outputs will be accessible and used, as well as how they will be used. They will also measure levels of satisfaction with services and activities produced by the inputs. Examples will include the ways in which recipients used compensation. Although they are not measures of livelihood restoration in themselves, they will be key determinants of well-being.
- d) **Impact indicators** – will measure the key dimensions of impacts to establish whether the goals of the Compensation Plan will be achieved. Examples will include restoration and diversification of income levels and the sustainability of income-generating activities, as dimensions of livelihood restoration and well-being.
- e) **Process indicators** – will measure and assess implementation processes. Examples will be the functioning of liaison/participation structures, the levels of representation of different social categories/interest groups, and the processes by which conflicts and disputes are resolved.

Indicators will also be disaggregated to ensure that social variables are properly accounted for. Table 10.1 provides details of different indicators and variables to be monitored.

Table 10.1 Indicators and Variables to be monitored

Aspect	Indicator	Variable
Land	Affected land	<ul style="list-style-type: none"> • Area of cultivable land acquired for road developments • Area of communal land acquired for road developments • Area of private land acquired • Area of Government land acquired
Buildings/Structures	Affected Buildings	<ul style="list-style-type: none"> • Number, type and size of private buildings affected • Number, type and size of community buildings affected • Number, type and size of government buildings affected
	Other Structures affected	<ul style="list-style-type: none"> • Number, type and size of other private structures affected • Number, type and size of other community structures affected
Trees	Affected trees	<ul style="list-style-type: none"> • Number and type of trees affected
Compensation, Re-establishment and Rehabilitation	Compensation and re-establishment of affected owners/individuals	<ul style="list-style-type: none"> • Number of homesteads affected (buildings, land, trees, crops) • Number of owners compensated by type of loss • Amount compensated by type and owner • Number of replacement houses constructed • Size, construction, durability and environmental suitability of replacement houses • Possession of latrines • Water supply access • Number of replacement businesses constructed
	Re-establishment owned resources	<ul style="list-style-type: none"> • Number of community buildings replaced • Number, type of plants lost • Number of seedlings supplied by type • Number of trees planted
Hazards and Disturbances	Introduction of nuisance factors	<ul style="list-style-type: none"> • Number of homesteads affected by hazards and disturbances from construction (noise levels, blasting, increased traffic levels)
Social/Demographic	Changes to homestead Structure	<ul style="list-style-type: none"> • Homestead size • Gender distribution • Marital status • Relationship to homestead head • Status of “vulnerable” homesteads
	Population migration	<ul style="list-style-type: none"> • Residential status of homestead members • Movement in and out of the homestead (place and residence of homestead members)
	Changes to access	<ul style="list-style-type: none"> • Distance/travel time to nearest water source, communication facility, school, energy source, church, shop, village

Aspect	Indicator	Variable
	Changes to health Status	<ul style="list-style-type: none"> • Number of people with disease, by type (STDs, diarrhoea, malaria, ARI, • Immunizable disease) • Mortality rates • Access to health care services (distance to nearest facility, cost of services, quality of services) • Utilization of health care services • Disease prevention strategies • Extent of educational programs • Latrine provision at schools (school child population per VIP on site)
	Changes to educational status	<ul style="list-style-type: none"> • Literacy and educational attainment of homestead members • School attendance rates (age, gender) • Number, type of educational establishments
	Changes to status of Women	<ul style="list-style-type: none"> • Participation in training programs • Use of credit facilities • Landholding status • Participation in jobs and other activities resulting from the project
	Homestead earning Capacity	<ul style="list-style-type: none"> • Ownership of capital assets • Landholding size, area cultivated and production volume/value, by crop • Landholding status (tenure)• • Employment status of economically active members • Earnings/income by source, separating compensation payments • Changes to income-earning activities (agriculture) – pre- and post-disturbance• • Access to income-generating natural resource base (wood, grass, sand, stones)
	Changes in social Organization	<ul style="list-style-type: none"> • Organizational membership of homestead members • Leadership positions held by homestead members
	Population influx	<ul style="list-style-type: none"> • Growth in number and size of settlements, formal and informal • Growth in market areas
Consultation	Consultation program operation	<ul style="list-style-type: none"> • Number of local committees established • Number and dates of local committee meetings • Type of issues raised at local committees' meetings • Involvement of local committees in RA development planning • Number of participating NGOs
	Information Dissemination	<ul style="list-style-type: none"> • Number, position, staffing of Information Centres • Staffing, equipment, documentation of Information Centres • Activities of Information Centres • Number of people accessing Information Centres • Information requests, issues raised at Information Centres

Aspect	Indicator	Variable
	Grievances resolved	<ul style="list-style-type: none"> • Number of grievances registered, by type • Number of grievances resolved • Number of cases referred to court
Training	Operation of training Program	<ul style="list-style-type: none"> • Number of local committee members trained • Number of affected population trained in Project-related training courses
Management	Staffing	<ul style="list-style-type: none"> • Number of implementing agencies by function • Number of GOM ministry officials available by function • Number of office and field equipment, by type
	Procedures in Operation	<ul style="list-style-type: none"> • Census and asset verification/quantification procedures in place • Effectiveness of compensation delivery system • Number of land transfers effected

At the end of the compensation period the RAP shall be evaluated on its performance. The evaluation will assess the number of people who were to be resettled, issued to be addressed versus what will have been achieved in the agreed period. The evaluation will be done by an independent NGO which will be decided and will determine modifications to be done on future similar projects in the District.

10.2 Monitoring

The monitoring program will involve the following:

- a) Establishment of required institutional structures;
- b) Operation of compensation, grievance and other necessary procedures;
- c) Disbursement of compensation payments;
- d) Development of livelihood restoration programs; and
- e) Preparation and submission of monitoring and evaluation report.

10.3 Reporting

Reporting on the activities around compensation forms an integral part of monitoring and evaluation, to:

- a) Ensure early detection of conditions that necessitate particular mitigation measures, and
- b) Provide information on the progress and results of mitigation. Reporting methods of any resettlement activities on the project to date seem to have been limited to reports from consultants working on different aspects of the project. It is recommended that in the future all consultation and disclosure activities be reported in detail, internally and externally.

CHAPTER 11 CONCLUSION AND RECOMMENDATIONS

The Project's major disadvantage is that it will cause temporary disturbances especially during the construction phase, which will result into loss of land and property; damage to road pavements; damage to concrete driveway; damage to different building structures; obstruction to passage on the roads; disruption of public service utilities; and temporary loss of business activities.. However if this compensation plan is followed then the PAPs will suffer minimum inconvenience. It is therefore recommended that the following should be done:

- a) The institutions recommended for negotiations and RAP implementation i.e. CWG, and DC Team should be set up as soon as approval of the project is given; and
- b) The RAP be modified in line with situations experienced when the actual compensation begins.

With all procedures for compensation implemented, it is recommended that the project should be undertaken. The composition of the CWG will be as follows:

- a) Representatives of the affected communities. At least one of the two members will be a woman. The PAP will elect these members;
- b) Representative of Traditional Authorities or a community leader in the affected area
- c) Representatives of Lilongwe Water Board; and
- d) One representative from Lilongwe District Council.

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25. **National Statistical Office, 2008**. Population and Household Survey.

ANNEX 1: MINUTES OF STAKEHOLDER CONSULTATION MEETINGS IN THE PROJECT AREAS

ANNEX 1.1 MINUTES OF THE STAKEHOLDERS' CONSULTATION MEETING WITH POTENTIAL PROJECT AFFECTED PERSONS (PAPS) HELD AT AREA 38-KATONDO ON 21 JULY, 2017 FOR LILONGWE WATER BOARD DISTRIBUTION NETWORK PROJECT

NO.	MINUTES
1.0	<p>Opening Remarks</p> <p>1.1. Mr. J. Matumba the market Vice Chairperson opened the meeting with a word of prayer and welcomed the consultation team and potential PAPS to the meeting;</p> <p>1.2. He requested the consulting team to introduce itself and to brief the gathering why they had requested for the meeting.</p>
2.0	<p>Objectives of the meeting</p> <p>2.1 Mr. L. Kampira of Environment and Natural Resources Management Consultants on behalf of the Consulting team informed the people gathered at the meeting that the meeting was organized in order to:</p> <ul style="list-style-type: none"> a) Inform them about the project; b) Provide an opportunity for them to discuss their opinions and concerns; c) Manage their expectations and misconceptions regarding the project; d) verify the significance of environmental, social and health impacts identified; e) get inputs on compensation issues; f) disseminate concepts of the proposed Project activities with a view to provoking Project interest amongst the communities; and g) promote sense of ownership for the Project; and informing the process of developing appropriate mitigation measures. <p>2.2 During the meeting, general information about the project was discussed and a number of issues were raised pertaining to how the project will affect the PAPS. Question and answers were used to guide the discussions.</p>
3.0	<p>Briefing on the project</p> <p>3.1 Mr. Kampira briefed the PAPS that LWB intends to upgrade, rehabilitate and expand its pipeline distribution network so as to improve access to portable water in the city.</p> <p>He informed the gathering that the pipes will be laid along the roads in the road reserves. He also advised the gathering that according to the laws of Malawi, people are not allowed to build either houses or shops in the road reserve, though that's not the case in most areas. He highlighted that during the project implementation some people and business premises shall be temporarily disturbed especially those residing or conducting business along the proposed route for the pipelines. He emphasized that the pipelines will pass through a route with minimal disturbance and along the road reserve. However, he informed them that in built up places like markets and other residential areas labourers instead of machines shall be used to excavate trenches so as to minimize disturbance.</p> <p>The PAPS were further informed that where disturbance will be unavoidable, LWB shall compensate the affected persons for temporary loss of business or structures. He further clarified that compensation will only be paid where construction activities will disturb business and where a</p>

NO.	MINUTES	
	structure will be destroyed. He informed the PAPs that a preliminary valuation was already conducted and that would form a basis for compensation. Thereafter, the floor was opened for the potential PAPs to comment or seek clarifications relating to the briefing or the project in general.	
4.0	ISSUE RAISED DURING THE PLENARY DISCUSSION	RESPONSE
A	PAPs were interested to know if the water would be for free or if people would pay for it	The system is for water that will be paid for and is just to upgrade the current system. Following the project however, some kiosks will be constructed for communal consumption, where individuals will buy water for their home use.
B	PAPs wanted to know who will be compensated for loss of business in places where tenants would lose business, will the landlords equally be compensated	It depends on who owns what. It was emphasized that if a structure will be affected, it will be the landlord who will be compensated. But if the disturbance will only be temporary loss of business, it will be the tenant who will be compensated. If the disturbance will affect both temporary loss of business and the structure, then both the landlord and the tenant will be compensated.
C	PAPs were also keen to know when they should expect the project to start and its period	The project is expected to start in September, 2017 and will run for five years but it will be done in phases. Necessary communication will be made before the actual date of commencement to all PAPs. Nevertheless, compensation will be paid before any project activity starts.
D	PAPs were also interested to know how this pipeline upgrading might improve the current problem of water scarcity in the city considering that Lilongwe is already experiencing water shortages even with limited connections	It was indicated that Diamphwe multipurpose dam is underway which is bigger than Kamuzu Dams 1 and 2. Another additional option is that of abstracting water from Lake Malawi. Both these new water sources will have large volume of water which Lilongwe Water Board will need to distribute to consumers. Hence important that the boards starts expanding its distribution network.
E	On Compensation, three ways of compensating the PAPs were discussed: a) Monetary compensation to the PAPs who will experience temporary disturbance/loss of business for the whole period that they will lose business; b) Monetary compensations to the PAPs who will experience permanent	PAPs preferred cash compensation as opposed to in kind compensation

NO.	MINUTES
	<p>loss of property such as trees that shall be destroyed as a whole or experience partial damage; and</p> <p>c) "In-kind" compensation where Lilongwe Water Board through a Contractor, will replace damaged infrastructures such as damaged road pavements; damaged concrete driveway; damaged building structures; and disruption of public service</p>
5.0	<p>Closing Remarks</p> <p>The Chairperson asked the PAPs to make sure that they all participate in the verification exercise which will take place soon during the implementation of the RAP and attend the subsequent meetings on the same.</p> <p>Mr. S. Phiri of Environment and Natural Resources Management Consultants thanked all PAPs for their availability, attention and interaction, saying it was very necessary for them to get to understand how the project will be implemented and how it will affect them. He also emphasized on the point that all PAPs shall be verified and compensated accordingly before the actual project activity commences. He also requested them to help with the signing of the minutes once they are developed particularly the leaders, a copy of which will be left with them for future use and another copy will be submitted to LWB for official use. He lastly urged them to keep attending the subsequent meetings on the project in order to ensure smooth implementation of the project.</p> <p>The meeting was closed with a word of prayer.</p>

ATTENDANCE			
NAME	POSITION	ORGANISATION	CONTACT
Mr. L. Kampira	Team Leader	Environment and Natural Resources Management Consultants	0999 916 036/ 0888 771 836
Mr. S. Phiri	Water Resources Expert	Environment and Natural Resources Management Consultants	0999 808 612
Ms. A. Kaudzu	Assistant Project Coordinator	Environment and Natural Resources Management Consultants	0884 062 701
Mr. I. Mwale	Assistant Surveyor	Lilongwe Water Board	0991 433 250
Josiah Matumba	Vice Chairperson	Area 38-Katondo Market	0993 951 602
Major Yusuf	Chairperson	Area 38-Katondo Market	0993 496 701
Mphatso Mpaya	Project Affected Person	Area 38-Katondo Market	
Catherine Magombo	Project Affected Person	Area 38-Katondo Market	
Enita Pitala	Project Affected Person	Area 38-Katondo Market	
Felista Mkoka	Project Affected Person	Area 38-Katondo Market	
Alfred Champepa	Project Affected Person	Area 38-Katondo Market	
Edesi Lemani	Project Affected Person	Area 38-Katondo Market	
Matthews Innocent	Project Affected Person	Area 38-Katondo Market	
Rashid Kwinje	Project Affected Person	Area 38-Katondo Market	
Hassan James	Project Affected Person	Area 38-Katondo Market	
I.S. Khombe	Project Affected Person	Area 38-Katondo Market	
Prosper Banda	Project Affected Person	Area 38-Katondo Market	
Imedi Milli	Project Affected Person	Area 38-Katondo Market	
H. Makiyi	Project Affected Person	Area 38-Katondo Market	
Ishmaela M'bwana	Project Affected Person	Area 38-Katondo Market	
Catherine Paulo	Project Affected Person	Area 38-Katondo Market	
Beatrice Andrea	Project Affected Person	Area 38-Katondo Market	
Grace Molande	Project Affected Person	Area 38-Katondo Market	

ANNEX 1.2 MINUTES OF THE STAKEHOLDERS’ CONSULTATION MEETING WITH POTENTIAL PROJECT AFFECTED PERSONS (PAPS) HELD AT NGWENYA MARKET ON 21 JULY 2017 FOR LILONGWE WATER BOARD DISTRIBUTION NETWORK PROJECT

NO.	MINUTES
1.0	<p>Opening Remarks</p> <p>1.1 Mr. Mtunda the market chairperson opened the meeting with a word of prayer and welcomed the consultation team and potential PAPS to the meeting;</p> <p>1.2 He requested the consulting team to introduce itself and to brief the gathering why they had requested for the meeting.</p>
2.0	<p>Objectives of the meeting</p> <p>2.1 Mr. L. Kampira of Environment and Natural Resources Management Consultants on behalf of the Consulting team informed the people gathered at the meeting that the meeting was organized in order to:</p> <ul style="list-style-type: none"> a) Inform them about the project; b) Provide an opportunity for them to discuss their opinions and concerns; c) Manage their expectations and misconceptions regarding the project; d) verify the significance of environmental, social and health impacts identified; e) get inputs on compensation issues; f) disseminate concepts of the proposed Project activities with a view to provoking Project interest amongst the communities; g) promote sense of ownership for the Project; and informing the process of developing appropriate mitigation measures. <p>2.2 During the meeting, general information about the project was discussed and a number of issues were raised pertaining to how the project will affect the PAPS. Question and answers were used to guide the discussions.</p>
3.0	<p>Briefing on the project</p> <p>3.1 Mr. L. Kampira briefed the PAPS that Lilongwe Water Board (LWB) intends to upgrade, rehabilitate and expand its pipeline distribution network so as to improve access to portable water in the city.</p> <p>He informed the gathering that the pipes will be laid along the roads in the road reserves. He also advised the gathering that according to the laws of Malawi, people are not allowed to build either houses or shops in the road reserve, though that’s not the case in most areas. He highlighted that during the project implementation some people and business premises shall be temporarily disturbed especially those residing or conducting business along the proposed route for the pipelines. He emphasized that the pipelines will pass through a route with minimal disturbance and along the road reserve. However, he informed them that in built up places like markets and other residential areas labourers instead of machines shall be used to excavate trenches so as to minimize disturbance.</p> <p>The PAPS were further informed that where disturbance will be unavoidable, LWB shall compensate the affected persons for temporary loss of business or structures. He further clarified that compensation will only be paid where construction activities will disturb business and where a structure will be destroyed. He informed the PAPS that a preliminary valuation was already conducted and that would form a basis for</p>

NO.	MINUTES	
	compensation. Thereafter, the floor was opened for the potential PAPs to comment or seek clarifications relating to the briefing or the project in general.	
4.0	ISSUE RAISED DURING THE PLENARY DISCUSSION	RESPONSE
A	PAPs were interested to know the size of the pipeline trench to be excavated	The trenches will be 0.5 m wide and 1.0 m deep
B	PAPs were also interested to know when the compensation will be paid to PAPs	Exact time not known but will be soon before any project activity commences. Meaning no project activity shall be done before PAPs receive their compensations
C	PAPs were so keen to how long it will take to backfill the trenches relating to other areas like <i>Gaga</i> where similar exercise took about 3 months before the trenches were backfilled	The PAPs were informed that the trenches will be filled immediately after laying the pipes
D	PAPs also wanted to know landlords will be helped in cases where loss of business to tenants means loss of business to landlords,	That would be possible but it depends on the duration of the project. However, this project shall only cause temporal disturbance (1-4 days) with compensation attached to it as such we do not expect any tenant to vacate the premise unless for other reasons.
E	PAPs also wanted to know who would pay for the cost of new connections after disconnection due to the project activity	It was highlighted that LWB shall meet all costs and will make sure that the reconnections are made as soon as the pipes are laid and the trenches are backfilled. This is to prevent additional disturbance of water unavailability to surrounding households and locations.
F	PAPs were also keen to know how some people of the opposite side of the road who will also be affected with dust for instance, would be considered	To prevent dust emission, the areas to be excavated will be sprinkled with water first
G	On Valuation approaches, PAPs were informed that valuation approach for all infrastructure will be by replacement cost	PAPs were in agreement with this method.
5.0	Closing Remarks Chairperson asked the PAPs to make sure they all attend the proceeding meetings. Mr. S. Phiri thanked all PAPs for their availability, attention and interaction, saying it was very useful. Then he requested them to help with the signing of the minutes once they are developed particularly the leaders, a copy of which will be left with tem for future use and another copy will be submitted to LWB for official use.	

NO.	MINUTES
	The meeting was closed with a word of prayer.

ATTENDANCE			
NAME	POSITION	ORGANISATION	CONTACT
Mr. L. Kampira	Team Leader	Environment and Natural Resources Management Consultants	0999 916 036/ 0888 771 836
Mr. S. Phiri	Water Resources Expert	Environment and Natural Resources Management Consultants	0999 808 612
Ms. A. Kaudzu	Assistant Project Coordinator	Environment and Natural Resources Management Consultants	0884 062 701
Mr. I. Mwale	Assistant Surveyor	Lilongwe Water Board	0991 433 250
Mr. Mtunda	Chairperson	Ngwenya market	
Chisomo Ganizani	Project Affected Person	Ngwenya market	
Alinafe Kamunda	Project Affected Person	Ngwenya market	
Dr Wademba	Project Affected Person	Ngwenya market	
Phillip Namangale	Project Affected Person	Ngwenya market	
Haswell Mtongola	Project Affected Person	Ngwenya market	
Alinet Kamudya	Project Affected Person	Ngwenya market	
Chrissy Bulawayo	Project Affected Person	Ngwenya market	
Mr Jekapu	Project Affected Person	Ngwenya market	
Yosofi Visatsi	Project Affected Person	Ngwenya market	
Cecilia Petulo	Project Affected Person	Ngwenya market	
Clement Saulosi	Project Affected Person	Ngwenya	
Moses Chiponda	Project Affected Person	Ngwenya	
Akuzike Ganizani	Project Affected Person	Ngwenya	
Victor Katalama	Project Affected Person	Ngwenya	
Kelvin Million	Project Affected Person	Ngwenya	
Weluzani Benisoni	Project Affected Person	Ngwenya	
Adam Kananji	Project Affected Person	Ngwenya	

ANNEX 1.3 MINUTES OF THE STAKEHOLDERS’ CONSULTATION MEETING WITH POTENTIAL PROJECT AFFECTED PERSONS (PAPS) HELD AT AREA 49-ZEBRA MARKET ON 22 JULY 2017 FOR LILONGWE WATER BOARD DISTRIBUTION NETWORK PROJECT

NO.	MINUTES
1.0	<p>Opening Remarks</p> <p>1.1 Mr. D. Mwale the market chairperson opened the meeting with a word of prayer and welcomed the consultation team and potential PAPS to the meeting;</p> <p>1.2 He requested the consulting team to introduce itself and to brief the gathering why they had requested for the meeting.</p>
2.0	<p>Objectives of the meeting</p> <p>2.1 Mr. S. Phiri of Environment and Natural Resources Management Consultants on behalf of the Consulting team informed the people gathered at the meeting that the meeting was organized in order to:</p> <ul style="list-style-type: none"> a) Inform them about the project; b) Provide an opportunity for them to discuss their opinions and concerns; c) Manage their expectations and misconceptions regarding the project; d) verify the significance of environmental, social and health impacts identified; e) get inputs on compensation issues; f) disseminate concepts of the proposed Project activities with a view to provoking Project interest amongst the communities; g) promote sense of ownership for the Project; and informing the process of developing appropriate mitigation measures. <p>2.2 During the meeting, general information about the project was discussed and a number of issues were raised pertaining to how the project will affect the PAPS. Question and answers were used to guide the discussions.</p>
3.0	<p>Briefing on the project</p> <p>3.1 Mr. S. Phiri of Environment and Natural Resources Consultants briefed the PAPS that Lilongwe Water Board (LWB) intends to upgrade, rehabilitate and expand its pipeline distribution network so as to improve access to portable water in the city.</p> <p>He informed the gathering that the pipes will be laid along the roads in the road reserves. He also advised the gathering that according to the laws of Malawi, people are not allowed to build either houses or shops in the road reserve, though that’s not the case in most areas. He highlighted that during the project implementation some people and business premises shall be temporarily disturbed especially those residing or conducting business along the proposed route for the pipelines. He emphasized that the pipelines will pass through a route with minimal disturbance and along the road reserve. However, he informed them that in built up</p>

NO.	MINUTES	
	<p>places like markets and other residential areas labourers instead of machines shall be used to excavate trenches so as to minimize disturbance.</p> <p>The PAPs were further informed that where disturbance will be unavoidable, LWB shall compensate the affected persons for temporary loss of business or structures. He further clarified that compensation will only be paid where construction activities will disturb business and where a structure will be destroyed. He informed the PAPs that a preliminary valuation was already conducted and that would form a basis for compensation. Thereafter, the floor was opened for the potential PAPs to comment or seek clarifications relating to the briefing or the project in general.</p>	
4.0	ISSUE RAISED DURING THE PLENARY DISCUSSION	RESPONSE
A	<p>PAPs were interested to know the type of equipment to be used during excavation of trenches considering that the place is a market</p>	<p>It was indicated that in confined areas like markets and highly built up residential areas labourers instead of machines shall be used to excavate trenches so as to minimize disturbance.</p> <p>This shall also provide employment opportunity to the youth from surrounding areas.</p>
B	<p>PAPs were also interested to know why is it that they are being considered for compensation when most of them are illegally operating their businesses within the road reserves</p>	<p>This is so because according to policies of World Bank who are also funding the project; every affected person as long as that person will be disturbed on their legal or illegal resident or business place needs to be compensated as any disturbance will affect their livelihood.</p>
C	<p>PAPs were also keen to know what LWB will do if the number of days for disturbance will not be equivalent to the compensation given since compensation will come before any project activity commences</p>	<p>The full project team is also composed of designers who will be able to direct the contractor on how long the actual project activity should take so that the compensation is equivalent to the disturbance period.</p>
D	<p>PAPs were also keen to know when they should expect the project to start and its period</p>	<p>They were informed that project is expected to start in September, 2017 and will run for five years but it will be done in phases. Necessary communication will be made before the actual date of commencement to all PAPs. Nevertheless, compensation would be granted before any project activity starts.</p>
e	<p>On Compensation, three ways of compensating the PAPs were discussed: a) Monetary compensation to the PAPs who will experience</p>	<p>PAPs preferred cash compensation as opposed to in kind compensation</p>

NO.	MINUTES
	<p>temporary disturbance/loss of business for the whole period that they will lose business;</p> <p>b) Monetary compensations to the PAPs who will experience permanent loss of property such as trees that shall be destroyed as a whole or experience partial damage; and</p> <p>c) “In-kind” compensation where Lilongwe Water Board through a Contractor, will replace damaged infrastructures such as damaged road pavements; damaged concrete driveway; damaged building structures; and disruption of public service</p>
5.0	<p>Closing Remarks</p> <p>Mr. S. Phiri appreciated the PAPs for the collaborative and interactive meeting held. He also encouraged them to keep attending similar expected future meetings so that they are all updated about any development regarding the project.</p> <p>The meeting ended with a word of prayer.</p>

ATTENDANCE			
NAME	POSITION	ORGANISATION	CONTACT
Mr. L. Kampira	Team Leader	Environment and Natural Resources Management Consultants	0999 916 036/ 0888 771 836
Mr. S. Phiri	Water Resources Expert	Environment and Natural Resources Management Consultants	0999 808 612
Ms. A. Kaudzu	Assistant Project Coordinator	Environment and Natural Resources Management Consultants	0884 062 701
Mr. A. Chapalika	Assistant Surveyor	Lilongwe Water Board	0999 426 244
Dziyanjanani Mwale	Chairperson	Area 49-Zebra market	0995 530 780
Mr. Major Fanuel	Project Affected Person	Area 49-Zebra market	
Vincent Banda	Project Affected Person	Area 49-Zebra market	
Elizabeth Guba	Project Affected Person	Area 49-Zebra market	
Jummah Yassin	Project Affected Person	Area 49-Zebra market	
Esther Mwiwa	Project Affected Person	Area 49-Zebra	
Queen Soko	Project Affected Person	Area 49-Zebra	
Limbani White	Project Affected Person	Area 49-Zebra	
Osman Maluwa	Project Affected Person	Area 49-Zebra	
Kumbukani Phiri	Project Affected Person	Area 49-Zebra	
Livinity Moyo	Project Affected Person	Area 49-Zebra	
Ezekiel Sandramu	Project Affected Person	Area 49-Zebra	
Hardwell Chigoneka	Project Affected Person	Area 49-Zebra market	
Frank Alli	Project Affected Person	Area 49-Zebra market	
Maxwell Kadammanja	Project Affected Person	Area 49-Zebra market	
Isaac Banda	Project Affected Person	Area 49-Zebra market	
Abdul Kosmas	Project Affected Person	Area 49-Zebra market	
Mike Banda	Project Affected Person	Area 49-Zebra market	

ANNEX 1.4 MINUTES OF THE STAKEHOLDERS’ CONSULTATION MEETING WITH POTENTIAL PROJECT AFFECTED PERSONS (PAPS) HELD AT AREA 46-CHINSAPO KACHERE MARKET ON 22 JULY 2017 FOR LILONGWE WATER BOARD DISTRIBUTION NETWORK PROJECT

NO.	MINUTES
1.0	<p>Opening Remarks</p> <p>1.1 Mr. J. Matumba the market Vice Chairperson opened the meeting with a word of prayer and welcomed the consultation team and potential PAPS to the meeting;</p> <p>1.2 He requested the consulting team to introduce itself and to brief the gathering why they had requested for the meeting.</p>
2.0	<p>Objectives of the meeting</p> <p>2.1 Mr. Phiri of Environment and Natural Resources Management Consultants on behalf of the Consulting team informed the people gathered at the meeting that the meeting was organized in order to:</p> <ul style="list-style-type: none"> a) Inform them about the project; b) Provide an opportunity for them to discuss their opinions and concerns; c) Manage their expectations and misconceptions regarding the project; d) verify the significance of environmental, social and health impacts identified; e) get inputs on compensation issues; f) disseminate concepts of the proposed Project activities with a view to provoking Project interest amongst the communities; g) promote sense of ownership for the Project; and informing the process of developing appropriate mitigation measures. <p>2.2 During the meeting, general information about the project was discussed and a number of issues were raised pertaining to how the project will affect the PAPS. Question and answers were used to guide the discussions.</p>
3.0	<p>Briefing on the project</p> <p>3.1 Mr. Phiri briefed the PAPS that Lilongwe Water Board (LWB) intends to upgrade, rehabilitate and expand its pipeline distribution network so as to improve access to portable water in the city.</p> <p>He informed the gathering that the pipes will be laid along the roads in the road reserves. He also advised the gathering that according to the laws of Malawi, people are not allowed to build either houses or shops in the road reserve, though that’s not the case in most areas. He highlighted that during the project implementation some people and business premises shall be temporarily disturbed especially those residing or conducting business along the proposed route for the pipelines. He emphasized that the pipelines will pass through a route with minimal disturbance and along the road reserve. However, he informed them that in built up places like markets and other residential areas labourers instead of machines shall be used to excavate trenches so as to minimize disturbance.</p> <p>The PAPS were further informed that where disturbance will be unavoidable, LWB shall compensate the affected persons for temporary loss of business or structures. He further clarified that compensation will only be paid where construction activities will disturb business and where a structure will be destroyed. He informed the PAPS that a preliminary valuation was already conducted and that would form a basis for compensation. Thereafter, the floor was opened for the potential PAPS to comment or seek clarifications relating to the briefing or the project in</p>

NO.	MINUTES	
	general.	
4.0	ISSUE RAISED DURING THE PLENARY DISCUSSION	RESPONSE
A	PAPs wanted to find out if the owners of the shops to be affected could be hired to excavate the trenches for the pipelines going through their shops and be paid for the services rendered to avoid hiring other people to excavate trenches through their shops who may end up stealing from them.	Participants at the meeting were informed that the point was valid, however the contractor will be in a better position to know how best to deal with that.
B	PAPs were also interested to know how details of the potential PAPs will be verified to avoid paying compensation to wrong people	Participants to the meeting were informed that the details of the PAPs will be verified during verification exercise.
C	PAPs wanted to know whether they would receive the compensation in cash or cheque	It was highlighted that the task shall be handled by an administrator who shall decide the mode of payment regarding the fact some compensation might not really need a cheque. Nevertheless, prior communicated shall be made
D	PAPs wanted to know what will happen to business people who do not have structures but have some permanent places where they carry out their businesses	Participants were informed that such business people usually carry around their businesses with them to sell at places which are seen to be convenient. Such businesses will not be considered for compensation as they can always move to convenient places where their businesses will not be disturbed.
E	On Compensation, three ways of compensating the PAPs were discussed: a) Monetary compensation to the PAPs who will experience temporary disturbance/loss of business for the whole period that they will lose business; b) Monetary compensations to the PAPs who will experience permanent loss of property such as trees that shall be destroyed as a whole or experience partial damage; and c) “In-kind” compensation where Lilongwe Water Board through a Contractor, will replace damaged infrastructures such as damaged	PAPs preferred cash compensation as opposed to in kind compensation

NO.	MINUTES
	road pavements; damaged concrete driveway; damaged building structures; and disruption of public service
5.0	<p data-bbox="266 296 488 328">Closing Remarks</p> <p data-bbox="266 328 1375 360">Chairperson asked the PAPs to make sure they all attend the future expected similar Meetings.</p> <p data-bbox="266 392 1962 496">Mr. S. Phiri thanked all PAPs for their availability and contributions. He also requested them to help with the signing of the minutes once they are developed particularly the leaders, a copy will be left with tem for future use and another copy will be submitted to LWB for official use. He lastly urged them to keep attending the proceeding meetings on the project matter in order not to ensure smooth implementation of the project.</p> <p data-bbox="266 528 819 560">The meeting was closed with a word of prayer.</p>

ATTENDANCE			
NAME	POSITION	ORGANISATION	CONTACT
Mr. L. Kampira	Team Leader	Environment and Natural Resources Management Consultants	0999 916 036/ 0888 771 836
Mr. S. Phiri	Water Resources Expert	Environment and Natural Resources Management Consultants	0999 808 612
Ms. A. Kaudzu	Assistant Project Coordinator	Environment and Natural Resources Management Consultants	0884 062 701
Mr. I. Mwale	Assistant Surveyor	Lilongwe Water Board	0991 433 250
Lucy Mbizi	Chairperson	Area 46-Chinsapo	0991 928 555
Dimon Masiku	Area 38-Katondo Market	Area 46-Chinsapo	
Willy Kapala	Project Affected Person	Area 46-Chinsapo	
Rabson Kalilangwa	Project Affected Person	Area 46-Chinsapo	
Alick Kaunde	Project Affected Person	Area 46-Chinsapo	
Gift Kapalepale	Project Affected Person	Area 46-Chinsapo	
John Sitolo	Project Affected Person	Area 46-Chinsapo	
Mrs. Ngwena	Project Affected Person	Area 46-Chinsapo	
Mr. Govati	Project Affected Person	Area 46-Chinsapo	
Andrew Braim	Project Affected Person	Area 46-Chinsapo	
Mr. Kondwani	Project Affected Person	Area 46-Chinsapo	
Elizabeth Kajawa	Project Affected Person	Area 46-Chinsapo	
Mary Skinala	Project Affected Person	Area 46-Chinsapo	
Mr. Salanje	Project Affected Person	Area 46-Chinsapo	
Leniya Kachepa	Project Affected Person	Area 46-Chinsapo	
Mr. Mbenjere	Project Affected Person	Area 46-Chinsapo	
Mr. Bandawe	Project Affected Person	Area 46-Chinsapo	
Mrs. Kenya	Project Affected Person	Area 46-Chinsapo	
Precious Fodayitoni	Project Affected Person	Area 46-Chinsapo	
Joseph Nyozeke	Project Affected Person	Area 46-Chinsapo	
Mr. Bonomali	Project Affected Person	Area 46-Chinsapo	
Mrs. Mazira	Project Affected Person	Area 46-Chinsapo	
Mrs. Masiye	Project Affected Person	Area 46-Chinsapo	
Mr. Osman	Project Affected Person	Area 46-Chinsapo	
Flora Mkumbira	Project Affected Person	Area 46-Chinsapo	
Idah Magaloni	Project Affected Person	Area 46-Chinsapo	
Getrude Namgumuli	Project Affected Person	Area 46-Chinsapo	

ATTENDANCE			
NAME	POSITION	ORGANISATION	CONTACT
Shikujuwa Ganizani	Project Affected Person	Area 46-Chinsapo	
Christina Limitedi	Project Affected Person	Area 46-Chinsapo	
Brenda Mawira	Project Affected Person	Area 46-Chinsapo	
Ethel Banda	Project Affected Person	Area 46-Chinsapo	
Mary Kandammanja	Project Affected Person	Area 46-Chinsapo	
Martha Mwase	Project Affected Person	Area 46-Chinsapo	
Stovas J. Palapandu	Project Affected Person	Area 46-Chinsapo	
Lucy Mbizi (Chairperson)	Project Affected Person	Area 46-Chinsapo	
Hannah Kachipande	Project Affected Person	Area 46-Chinsapo	
Styvelia Mpuwa	Project Affected Person	Area 46-Chinsapo	
Edina Mkukula	Project Affected Person	Area 46-Chinsapo	
Estelle Mhango	Project Affected Person	Area 46-Chinsapo	
Patricia Palapandu	Project Affected Person	Area 46-Chinsapo	
Esther Chibuli	Project Affected Person	Area 46-Chinsapo	
Rose Kathumba	Project Affected Person	Area 46-Chinsapo	
Safiyatu Milinda	Project Affected Person	Area 46-Chinsapo	
Mercy Mpate	Project Affected Person	Area 46-Chinsapo	
Virginia Kavekanji	Project Affected Person	Area 46-Chinsapo	
Margret Banda	Project Affected Person	Area 46-Chinsapo	
Jessie Gwetse	Project Affected Person	Area 46-Chinsapo	
Charity Mazengela	Project Affected Person	Area 46-Chinsapo	
Farress Lusiyano	Project Affected Person	Area 46-Chinsapo	
Juliana Namkuza	Project Affected Person	Area 46-Chinsapo	
Lufina Tembo	Project Affected Person	Area 46-Chinsapo	
Monica Kanyenga	Project Affected Person	Area 46-Chinsapo	
Janet Saimoni	Project Affected Person	Area 46-Chinsapo	
Beatrice Mwenyemasi	Project Affected Person	Area 46-Chinsapo	
Joyce Solomoni	Project Affected Person	Area 46-Chinsapo	

ANNEX 1.5 MINUTES OF THE STAKEHOLDERS’ CONSULTATION MEETING WITH POTENTIAL PROJECT AFFECTED PERSONS (PAPS) HELD AT AREA 50 MARKET ON 23 JULY 2017, 2016 FOR LILONGWE WATER BOARD DISTRIBUTION NETWORK PROJECT

NO.	MINUTES
1.0	<p>Opening Remarks</p> <p>1.1 Village Head Nyemba opened the meeting with a word of prayer and welcomed the consultation team and potential PAPS to the meeting;</p> <p>1.2 He requested the consulting team to introduce itself and to brief the gathering why they had requested for the meeting.</p>
2.0	<p>Objectives of the meeting</p> <p>2.1 Mr. Phiri of Environment and Natural Resources Management Consultants on behalf of the Consulting team informed the people gathered at the meeting that the meeting was organized in order to:</p> <ul style="list-style-type: none"> a) inform them about the project; b) provide an opportunity for them to discuss their opinions and concerns; c) manage their expectations and misconceptions regarding the project; d) verify the significance of environmental, social and health impacts identified; e) get inputs on compensation issues; f) disseminate concepts of the proposed project activities with a view to provoking project interest amongst the communities; g) promote sense of ownership for the project; and informing the process of developing appropriate mitigation measures. <p>2.2 During the meeting, general information about the project was discussed and a number of issues were raised pertaining to how the project will affect the PAPS. Question and answers were used to guide the discussions</p>
3.0	<p>Briefing on the project</p> <p>3.1 Mr. S. Phiri briefed the PAPS that Lilongwe Water Board (LWB) intends to upgrade, rehabilitate and expand its pipeline distribution network so as to improve access to portable water in the city.</p> <p>He informed the gathering that the pipes will be laid along the roads in the road reserves. He also advised the gathering that according to the laws of Malawi, people are not allowed to build either houses or shops in the road reserve, though that’s not the case in most areas. He highlighted that during the project implementation some people and business premises shall be temporarily disturbed especially those residing or conducting business along the proposed route for the pipelines. He emphasized that the pipelines will pass through a route with minimal disturbance and along the road reserve. However, he informed them that in built up places like markets and other residential areas labourers instead of machines shall be used to excavate trenches so as to minimize disturbance.</p> <p>The PAPS were further informed that where disturbance will be unavoidable, LWB shall compensate the affected persons for temporary loss of business or structures. He further clarified that compensation will only be paid where construction activities will disturb business and where a structure will be destroyed. He informed the PAPS that a preliminary valuation was already conducted and that would form a basis for compensation. Thereafter, the floor was opened for the potential PAPS to comment or seek clarifications relating to the briefing or the project in general.</p>

NO.	MINUTES	
4.0	ISSUE RAISED DURING THE PLENARY DISCUSSION	RESPONSE
a	PAPs were interested to know the average compensation per PAP	It was clarified that compensation will depend on the loss the different PAPs will suffer. The preliminary valuation that was already conducted would form basis for compensation.
b	PAPs were also interested to know how long it will take for the destroyed structures to be brought back to shape	<p>The following options were suggested:</p> <p>Option 1: If the PAP opts for cash compensation. This will give the PAP the liberty to start reconstruction soon after the project is completed on his or her affected structure. The amount of compensation shall be based on the preliminary valuation already conducted. In case where one mismanages their cash compensation, LWB will not be liable for reconstruction or any further compensation other than valuated.</p> <p>Option 2: If the PAP opts for a hired contractor to do the reconstruction which might take relatively longer period because the contractor will need to wait for the whole activity in that area to be completed. The PAPs would have to be compensated for the whole period that their structures are damaged by the project activities and are not in use.</p>
c	PAPs also wanted to know if pipelines will follow existing pipelines	Not in all cases. The proposed routes were opted in terms of the side of the road which will cause less or no damage and disturbance.
d	PAPs were keen to appreciate where LWB intends to abstract the water understanding that we do not have enough water in Kamuzu dams 1 and 2	It was highlighted that LWB is planning to source water from Diamphwe multipurpose dam as well as Lake Malawi. As such, this project is to get prepared before abstraction from the two sources becomes a reality.
e	PAPs were also keen to know when they should expect the project to start	The project is expected to start in September, 2017 and will run for five years but it will be done in phases. Necessary communication will be made before the actual date of commencement to all PAPs. Nevertheless, compensation would be granted before any project activity starts.
f	<p>On Compensation, three ways of compensating the PAPs were discussed:</p> <p>a) Monetary compensation to the PAPs who will experience temporary disturbance/loss of business for the whole period that they will lose business;</p> <p>b) Monetary compensations to the PAPs who will experience permanent loss of property such as trees that shall be destroyed as a whole or experience partial damage; and</p> <p>c) “In-kind” compensation where Lilongwe Water Board through a</p>	PAPs preferred cash compensation as opposed to in kind compensation

NO.	MINUTES
	<p>Contractor, will replace damaged infrastructures such as damaged road pavements; damaged concrete driveway; damaged building structures; and disruption of public service</p>
<p>5.0</p>	<p>Closing Remarks Village Head Nyemba welcomed the project but requested LWB to live by its word in terms of compensation. He also requested that LWB should consider extending its distribution network to newly established locations following newly developed roads. Lastly, he had reservations if all this project will be implemented because similar projects have failed due to political interference.</p> <p>Mr. S. Phiri thanked all for their coming and contributions. He also encouraged them to keep attending similar expected future meetings so that they are all updated about any development regarding the project. He lastly, requested them to help with the signing of the minutes once they are developed particularly the leaders, a copy of which will be left with tem for future use and another copy will be submitted to LWB for official use.</p> <p>The meeting was closed with a word of prayer.</p>

ATTENDANCE			
NAME	POSITION	ORGANISATION	CONTACT
Mr. L. Kampira	Team Leader	Environment and Natural Resources Management Consultants	0999 916 036/ 0888 771 836
Mr. S. Phiri	Water Resources Expert	Environment and Natural Resources Management Consultants	0999 808 612
Ms. A. Kaudzu	Assistant Project Coordinator	Environment and Natural Resources Management Consultants	0884 062 701
Mr. A. Chapalika	Assistant Surveyor	Lilongwe water Board	0999 426 244
Harold Nkhunga	Chairperson	Area 50 market	0881 801 089/0993 308 020
Mr. J. Binali	Secretary	Area 50 market	0993 532 246
B. Nawera	Project Affected Person	Area 50 market	
Edina Biziwiki	Project Affected Person	Area 50 market	
Christopher Kadzombe	Project Affected Person	Area 50 market	
Mrs. Mussa	Project Affected Person	Area 50 market	
Mrs. Noya	Project Affected Person	Area 50 market	
Levison Nyemba (VH)	Project Affected Person	Area 50 market	
Chikondi Nkhoma	Project Affected Person	Area 50 market	
Mr. Evance Chimanya	Project Affected Person	Area 50 market	
Umali John	Project Affected Person	Area 50 market	
Mussa Robert	Project Affected Person	Area 50 market	
Amoni Tsamba	Project Affected Person	Area 50 market	
Mrs. Mtambo	Project Affected Person	Area 50 market	
Mr. Mtambo	Project Affected Person	Area 50 market	
Mr. Mandala	Project Affected Person	Area 50 market	
Ms. Fanezi William	Project Affected Person	Area 50 market	
Mrs. Misomali	Project Affected Person	Area 50 market	

ANNEX 2: LIST OF STAKEHOLDER CONSULTED DURING THE STUDY

Name	Position	Organization	Comment
Eng. Alfonso Chikuni	Chief Executive Officer	Lilongwe Water Board	We consider the project as a priority as we want to reach out to as many people as possible in the city of Lilongwe with potable water. We intend to implement the project to meet the growing water demand of the Lilongwe City residents but also within applicable laws and regulations
T. Mbale – Luka	Director	Environmental Affairs Department	The project is a good initiative. It will assist many city residents as well as institutions to access potable water. The developer should ensure that the necessary laws and policies pertaining to the environment are adhered to when implementing the project.
Sinosi Maliano	Project Implementation Unit Manager	Lilongwe Water Board	We intend to implement the project to meet the growing water demand of the Lilongwe City residents but also within applicable laws and regulations
Mr. Charles Kachingwe	Water Quality and Environmental Manager	Lilongwe Water Board	We intend to implement the project to meet the growing water demand of the Lilongwe City residents but also within applicable laws and regulations
Mrs. P. Kutengule	Safeguard Specialist	Lilongwe Water Project	We consider the project our priority number one. We plan to ensure that the project activities are implemented while following all the necessary laws and policies
Mr J. Chidziwisano	Senior Physical Planning Officer	Regional Physical Planning Office	The project will need to adhere to all physical planning requirements.
Mr. H. Kamela	Development Control Manager	Lilongwe City Council	The project is a welcome development. However, it needs to follow planning regulations
Mr. F. G. Mangani	Acting Commissioner for Lands and Valuation	Ministry of Lands and Physical Planning	The project should be implemented as planned to improve water supply in most areas of the city.
Mr J. Mtekateka	Distribution Engineer	ESCOM – Lilongwe	The development is within our supply area and poses no problem
Mr W. Kaunde	Regional Engineer	Roads Authority	The development is welcome as priority should be to make sure that safe water reaches out to every resident of the city. The developer will be expected to ensure that rehabilitation of broken roads and property should be done as quickly as possible.
Mr. Allan Kaziputa	Environmental and Social Performance Officer	Roads Authority	The development is fine and welcome. However, considering that in some places some roads will be cut to allow for pipelines to cross the roads, the developer should work hand in hand with us to manage such places so as not to disturb

			traffic for a long period.
Mr. Rex Kanjedza	Senior Water Resources Officer	Ministry of Agriculture, Irrigation and Water Development	The project is good and timely. The Board plans to expand its source of raw water from Diamphwe and Land Malawi and will end up with more water which it will need to distribute to different consumers. Hence expansion of the distribution network is good initiative
Mr A.D. Kwanjana	Dep. Director for Cleansing Services	Lilongwe City Council	The project is a good initiative as it will assist many people in the city to access potable water hence reducing the incidences of waterborne diseases. The developer will need to comply with the city's requirements in waste management to avoid littering.
Mr W. Kaunde	Regional Engineer	Roads Authority	The development is fine and welcome
Mr J. Tsogolani	Director of Engineering Services	Lilongwe City Council	The developer will need to comply with the city's requirements in when implementing the project
Abel Kawonga R. D. Mkandawire Chrissy Chiumia T. Chirambo Hon. John Bande	Area 47 Residents	Central Zone	The project is welcome because it will assist to improve water distribution in the area. However since the project will cause some damages to pavements, there is need for the developer to plan for compensating for the damaged structures
Frank Ali Maxwel Masina Patricia Tebulo King Chitseko Kanthu Kambalame Tole	Area 49 Residents	Northern Zone	The project is welcome because it will assist to improve water distribution in the area. However since the project will cause some damages to pavements, there is need for the developer to plan for compensating for the damaged structures
Richard Timothy Peter MacDonald Kemiasi Gwaza	Area 23 Residents	Southern Zone	The project is welcome because it will assist to improve water distribution in the area. However since the project will cause some damages to pavements, there is need for the developer to plan for compensating for the damaged structures

ANNEX 3: DESIGNATIONS AND QUALIFICATIONS OF THE EXPERTS

3.1 Lyson Kampira: (MSc. Environmental Science, Bachelor of Education Science (Hons))

Mr. Kampira is an experienced Environmental and Social Impact Assessment expert and will be the Team Leader for the Assignment. He is a seasoned Environmental and Social Impact Assessment expert with More than 10 years of practical experience in ESIA studies and environmental management in General. He has successfully conducted a number of ESIA. In all, he has successfully conducted and led more than 20 ESIA studies and has prepared more than 20 ESIA reports and Environmental and Social Management Plans for different developmental projects ranging from irrigation, road infrastructure, hydropower generation, mining, industrial development, infrastructure developments and water and sanitation which have been approved by the Environmental Affairs Department.

3.2 George MB Kaggiah: (BSc, Civil Engineer and MSc Strategic Management)

Mr. Kaggiah is Registered Engineer and Fellow of Institution of Engineers in Kenya, UK and Malawi. He has extensive experience in consultancy services in Kenya, Swaziland, Mozambique and Malawi and has been in charge of various development projects such as: Irrigation and Drainage Schemes; Civil Works (Dams, Micro Hydro Power Stations, Intakes, Retaining Walls, Dykes, etc); Water Supply (Urban and Rural Supplies); Buildings & Infrastructure (Industrial, Commercial, & Residential Buildings and Estates); Transportation (Roads, Railways, Airfield, Bridges, jetties); Sewerage and Sanitation (onsite and offsite disposal); and Waste management and pollution control (Industrial Waste, Municipal Solid Waste, Pollution Control etc).

Mr. Kaggiah has over 26 years postgraduate experience with leading consulting firms as a professional Civil Engineer in civil engineering projects specialized in infrastructure, water supply and sanitation engineering. He also has extensive experience as senior resident engineer, projects engineer, team leader involved in project planning, preliminary and detailed design, tender documentation, contract supervision, administration, and management.

3.3 Martna Chimzimu: (Bachelor of Arts in Social Science) - Majoring in Sociology with minors Political Science & Administrative Studies

Ms. Chimzimu is a seasoned Social Development Expert with wide experience in Environment and Natural Resources Management, Climate Change, Gender and HIV/AIDS management. She has more than 5 years' experience in conducting socio-economic surveys and preparation of social impact assessment and mitigation plans. She has vast experience in public consultation.

3.4 Stanley Phiri (B.Sc. in Irrigation Engineering)

Mr. Phiri is a Water Resources (Irrigation) Expert. He specialised in Hydrology; and Water Resources. Mr. Phiri has wide professional experience in the water sector; irrigation, water supply, disaster risk management, environment and climate change management and related water disciplines of water, sanitation and hygiene. This includes water resources policy reforms for complex water demands for urban and rural water supply, Sustainable Environmental Management of Water Schemes, Designing of Water Infrastructures and Rural Development, Surface and Groundwater Hydrology, Catchment Analysis and Management, Hydrological Modelling and Water Management, Rural Water Supply and Construction Management.

ANNEX 4 A STRUCTURED QUESTIONNAIRE FOR DATA COLLECTION

HOUSEHOLD QUESTIONNAIRE FOR SOCIO-ECONOMIC ISSUES ALONG THE PROPOSED ROUTE FOR THE WATER DISTRIBUTION NETWORK

Greetings to you. My name is I am working for Environment and Natural Resources Management Consultants a Malawian company based in Lilongwe. Environment and Natural Resources Management Consultants has been contracted by Lilongwe Water Board ESMP and RAP study for the proposed development of a water distribution network project in the City of Lilongwe. As part of the study we are supposed to consult stakeholders who live in the area along the proposed route of transverse for the distribution network. This consultation uses several methods (questionnaire/Focus Group Discussion and Key Informant interviews) and I am here to administer a questionnaire to your household. I am asking for your permission to go ahead. Your name will not be recorded. Whatever you say will be confidential and will not be related to you specifically. The interview will take about 15 -20 minutes of your time.

Questionnaire Code Number _____

Enumerator Name _____ Date _____

District Name _____ Group Chief _____

Village/Area _____ No. of people in Household (HH) _____

No.	Question	Response
1	Sex of Respondent (<i>Circle the one applicable</i>)	1= Male 2= Female
2	Age of respondent (<i>Circle the one applicable response</i>)	1 = Less than 15 years 2 = Between 15-18 years 3 = Between 18-30 years 4 = Between 30- 50 years 5 = Over 50 years
3	What are the sources of income for your household? (<i>Circle all responses that apply</i>)	1= Formal Employment 2= Self-employment/Small business 3= Casual Labour 4= Crop cultivation 5= Horticulture 6 = Fisheries 7= Mining 8=Forestry /Firewood/Charcoal 9= Other/Specify
4	Rank these sources of income from question 3 above in terms of importance to your family's income? (<i>Indicate the rank for each</i>)	= Formal Employment = Self-employment/Small business = Casual Labour = Crop cultivation = Horticulture = Fisheries = Mining =Forestry /Firewood/Charcoal = Other/Specify

5	<p>What is the average income for your household per month in MK? (Circle one response that apply)</p>	<p>1= Less than 1 000.00 2= 1 001.00 – 2 000.00 3= 2 001.00 – 3 000.00 4= 3 000.00 – 4 000.00 5= 4 001.00- 5 000.00 6= 5 001 – 8 000.00 7 = 8 001.00- 10 000.00 8 = 11 001- 12 000 9 = 13 001 – 15 000.00 10 = More than 15 001.00</p>
6	<p>Which types of crops are you growing/planning to grow this year? (Circle all responses that apply)</p>	<p>1= Bananas 2= Maize 3= Sorghum 4= Wheat 5= Groundnuts 6= Cotton 7= Burley Tobacco 8=Cassava 9=Sweet Potatoes 10 = Other (Specify)</p>
7	<p>Overall what changes/impacts do you think upgrading of the road will have to your area? (circle all responses that apply)</p>	<p>1=More transport 2=Better quality of transport 3=Better availability of transport 4=Displacement of people 5=Destruction of vegetation 6=More accidents on the road 7=Better markets for produce 8=Better employment opportunities 9=Increase in sexual transmitted diseases 10=Increase in crime and other related diseases 11=Others Specify</p>
8	<p>If your household or plot is found to be in the area required for the road development are you willing to be relocated in return for payment? (Circle the one that apply)</p>	<p>1= Yes 2=No</p>

Thank you/ Zikomo

ANNEX 5 COMPENSATION SCHEDULE FOR THE PAPS

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
TREES	MANGO	LARGE	3.00	75,000.00	30,000.00	105,000.00	142.86
ROAD	TARMAC	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
DRIVEWAY	CONCRETE	5.000	2.00	1,385,000.00	554,000.00	1,939,000.00	2,638.10
SUGARCANE	-	LARGE	8.00	15,000.00	6,000.00	21,000.00	28.57
TOMATOES (GROWING)	-	LARGE	120.00	600,000.00	240,000.00	840,000.00	1,142.86
TREES	MOLINGA	LARGE	1.00	30,000.00	12,000.00	42,000.00	57.14
TOMATOES (GROWING)	-	LARGE	120.00	600,000.00	240,000.00	840,000.00	1,142.86
CAR WASH	-	-	1.00	20,000.00	8,000.00	28,000.00	38.10
STRINGS (LINYA) PRODUCING & SELLING	-	-	1.00	170,000.00	68,000.00	238,000.00	323.81
ROAD	TARMAC	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
DRIVEWAY	CONCRETE	5.000	1.00	692,500.00	277,000.00	969,500.00	1,319.05
TREES	ACCACIA	LARGE	1.00	20,000.00	8,000.00	28,000.00	38.10
FURNITURE SHOP	-	-	1.00	75,000.00	30,000.00	105,000.00	142.86
VEGETABLE BENCH	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
FURNITURE SHOP	-	-	1.00	300,000.00	120,000.00	420,000.00	571.43
MINISHOP	-	-	1.00	40,000.00	16,000.00	56,000.00	76.19
BARBARSHOP	-	-	1.00	15,000.00	6,000.00	21,000.00	28.57
MINISHOP	-	-	1.00	45,000.00	18,000.00	63,000.00	85.71
CHIPS SHOP	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
MINISHOP and CEMENT VERANDA	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
MINISHOP	-	-					

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
			1.00	160,000.00	64,000.00	224,000.00	304.76
VEGETABLE BENCH	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
GARAGE & WELDING SHOP	-	-	1.00	150,000.00	60,000.00	210,000.00	285.71
CHARCOAL AND FIREWOOD	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
SECOND HAND CLOTHES BENCH	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
SUGARCANE (SELLING)	-	-	1.00	75,000.00	30,000.00	105,000.00	142.86
MTL MAN HOLE	-	-	1.00	50,000.00	20,000.00	70,000.00	95.24
SECOND HAND CLOTHES BENCH STRUCTURE	-	-	1.00	50,000.00	20,000.00	70,000.00	95.24
	SHOP - plastered, cement, painted	CIR, 67.800	1.00	4,712,000.00	1,884,800.00	6,596,800.00	8,975.24
ELECTRICAL SHOP	-	-	1.00	20,000.00	8,000.00	28,000.00	38.10
GROCERY SHOP	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
GRASS FENCE	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
DRIVEWAY	CONCRETE		-	692,500.00	277,000.00	969,500.00	1,319.05
METAL WORKSHOP	-	-	1.00	800,000.00	320,000.00	1,120,000.00	1,523.81
GROCERY SHOP	-	-	1.00	120,000.00	48,000.00	168,000.00	228.57
GROCERY SHOP	-	-	1.00	80,000.00	32,000.00	112,000.00	152.38
GROCERY SHOP	-	-	1.00	95,000.00	38,000.00	133,000.00	180.95
GROCERY SHOP	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
STATIONERY	-	-	1.00	25,000.00	10,000.00	35,000.00	47.62
BARBARSHOP	-	-	1.00	70,000.00	28,000.00	98,000.00	133.33
TAILORINGSHOP	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
TAILORINGSHOP	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
GROCERY SHOP	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
GROCERY SHOP	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
GROCERY SHOP	-	-	1.00	45,000.00	18,000.00	63,000.00	85.71
SALOON	-	-	1.00	15,000.00	6,000.00	21,000.00	28.57
SALOON	-	-	1.00	15,000.00	6,000.00	21,000.00	28.57
BUTCHERY	-	-	1.00	25,000.00	10,000.00	35,000.00	47.62
GROCERY SHOP	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
ELECTRICAL SHOP	-	-	1.00	12,500.00	5,000.00	17,500.00	23.81
STATIONERY	-	-	1.00	15,000.00	6,000.00	21,000.00	28.57
VEDIO SHOW ROOM	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
FURNITURE SHOP	-	-	1.00	300,000.00	120,000.00	420,000.00	571.43
VEGETABLE BENCH	-	-	1.00	15,000.00	6,000.00	21,000.00	28.57
GROCERY SHOP	-	-	1.00	150,000.00	60,000.00	210,000.00	285.71
DIP TANK	BRICK AND PLASTERED	3.375	1.00	30,000.00	12,000.00	42,000.00	57.14
TREES	MANGO	LARGE	1.00	25,000.00	10,000.00	35,000.00	47.62
TREES	ORIENAMENTAL	LARGE	2.00	15,000.00	6,000.00	21,000.00	28.57
SECOND HAND CLOTHES BENCH	-	-	1.00	450,000.00	180,000.00	630,000.00	857.14
SECOND HAND CLOTHES BENCH	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
SUGARCANE (SELLING)	-	-	1.00	8,000.00	3,200.00	11,200.00	15.24
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USSD
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
SECOND HAND CLOTHES BENCH	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
VEGETABLE BENCH	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
MANDAZI SELLING	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
SALOON	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
MANDAZI	-	-	1.00	15,000.00	6,000.00	21,000.00	28.57
TYRE FITTING	-	-	1.00	25,000.00	10,000.00	35,000.00	47.62
FURNITURE SHOP	-	-	1.00	350,000.00	140,000.00	490,000.00	666.67
METAL WORKSHOP	-	-	1.00	250,000.00	100,000.00	350,000.00	476.19
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
SHOP	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
MTL MAN HOLE	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
CLOTHES (SECOND HAND)	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
TARMAC	-	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
CHIPS SHOP	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
TARMAC RAOD	-	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
GARAGE	-	-	1.00	150,000.00	60,000.00	210,000.00	285.71
WELDING WORKSHIP	-	-	1.00	250,000.00	100,000.00	350,000.00	476.19

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
WELDING WORKSHIP	-	-	1.00	250,000.00	100,000.00	350,000.00	476.19
WELDING WORKSHIP	-	-	1.00	70,000.00	28,000.00	98,000.00	133.33
WELDING AND GARAGE	-	-	1.00	120,000.00	48,000.00	168,000.00	228.57
WELDING	-	-	1.00	200,000.00	80,000.00	280,000.00	380.95
WELDING	-	-	1.00	150,000.00	60,000.00	210,000.00	285.71
WELDING	-	-	1.00	692,500.00	277,000.00	969,500.00	1,319.05
WELDING GARAGE	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
TYRE FITTING & SALES	-	-	1.00	45,000.00	18,000.00	63,000.00	85.71
GARAGE & SPARE PARTS SALES	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
TARMAC	-	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
TARMAC	-	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
GARAGE	-	-	1.00	150,000.00	60,000.00	210,000.00	285.71
FURNITURE SHOP	-	-	1.00	250,000.00	100,000.00	350,000.00	476.19
FURNITURE SHOP	-	-	1.00	350,000.00	140,000.00	490,000.00	666.67
TARMAC	-	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
CAR WASH	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
TYRE DEALER & PANCTURE REPAIR	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
WELDING WORKSHIP	-	-	1.00	692,500.00	277,000.00	969,500.00	1,319.05
GARAGE	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
GARAGE	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
GARAGE	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
GARAGE	-	-	1.00	125,000.00	50,000.00	175,000.00	238.10
GARAGE	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
TYRE FITTER (SALES)	-	-	1.00	40,000.00	16,000.00	56,000.00	76.19
GARAGE	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
GARAGE	-	-	1.00	75,000.00	30,000.00	105,000.00	142.86
WELDING	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
GARAGE	-	-	1.00	692,500.00	277,000.00	969,500.00	1,319.05
GARAGE	-	-	1.00	15,000.00	6,000.00	21,000.00	28.57
GARAGE	-	-	1.00	692,500.00	277,000.00	969,500.00	1,319.05
SPARES' SHOP	-	-	1.00	20,000.00	8,000.00	28,000.00	38.10
GARAGE	-	-	1.00	40,000.00	16,000.00	56,000.00	76.19
TARMAC	0.001	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
TYRE FITTING	-	-	1.00	5,000.00	2,000.00	7,000.00	9.52
CHICKEN BENCH	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
CHICKEN BENCH	-	-	1.00	120,000.00	48,000.00	168,000.00	228.57
CHICKEN BENCH	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
CHICKEN BENCH	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
CHICKEN BENCH	-	-	1.00	20,000.00	8,000.00	28,000.00	38.10
CHICKEN BENCH	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
CHICKEN BENCH	-	-	1.00	25,000.00	10,000.00	35,000.00	47.62
CHICKEN BENCH	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
BUILDERS SHOP	-	-	1.00	692,500.00	277,000.00	969,500.00	1,319.05
BUILDERS SHOP	-	-	1.00	450,000.00	180,000.00	630,000.00	857.14
SALOON	-	-	1.00	40,000.00	16,000.00	56,000.00	76.19
PUB	-	-	1.00	600,000.00	240,000.00	840,000.00	1,142.86
BUILDERS SHOP	-	-	1.00	600,000.00	240,000.00	840,000.00	1,142.86
VEGETABLE BENCH	-	-	1.00	60,000.00	24,000.00	84,000.00	114.29
BARBARSHOP	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
ELECTRICAL SHOP	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
POPCORN BENCH	-	-	1.00	20,000.00	8,000.00	28,000.00	38.10
HARDWARE SHOP	-	-	1.00	10,000.00	4,000.00	14,000.00	19.05
PHOTOSTUDIO	-	-	1.00	30,000.00	12,000.00	42,000.00	57.14
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
FURNITURE SHOP	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
FURNITURE SHOP	-	-	1.00	90,000.00	36,000.00	126,000.00	171.43
CONCRETE DRIVEWAY	-	5	1	692,500.00	277,000.00	969,500.00	1,319.05
vegetable and glocery shop			1.00	50,000.00	20,000.00	70,000.00	95.24
Restaraunt			1.00	90,000.00	36,000.00	126,000.00	171.43
Bar			1.00	300,000.00	120,000.00	420,000.00	571.43

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
Pork braai			1.00	45,000.00	18,000.00	63,000.00	85.71
Mini Pack Restaurant			1.00	70,000.00	28,000.00	98,000.00	133.33
glocery shop			1.00	90,000.00	36,000.00	126,000.00	171.43
Saloon			1.00	15,000.00	6,000.00	21,000.00	28.57
service provider shop (printing, photocopying etc)			1.00	15,000.00	6,000.00	21,000.00	28.57
flower bed		20.0	1.0	40,000.00	16,000.00	56,000.00	76.19
flower bed		20.0	1.0	40,000.00	16,000.00	56,000.00	76.19
grass Lawn		20.0	1.0	40,000.00	16,000.00	56,000.00	76.19
grass Lawn		20.0	1.0	40,000.00	16,000.00	56,000.00	76.19
concrete drive way	-	20.0	1.0	692,499.00	276,999.60	969,498.60	1,319.05
concrete drive way	-	-	1.0	692,500.00	277,000.00	969,500.00	1,319.05
grass Lawn		20.000	1.00	40,000.00	16,000.00	56,000.00	76.19
Tress	Acacia	large	2.00	20,000.00	8,000.00	28,000.00	38.10
Hedges		medium	20.00	160,000.00	64,000.00	224,000.00	304.76
food mart			1.00	15,000.00	6,000.00	21,000.00	28.57
concrete drive way		5	1	692,500.00	277,000.00	969,500.00	1,319.05
charcoal and freezes business			1.00	4,000.00	1,600.00	5,600.00	7.62
concrete drive way	SOUTHREN ZONE	1.000	1.00	692,500.00	277,000.00	969,500.00	1,319.05
potato roadside business			1.00	12,000.00	4,800.00	16,800.00	22.86
Tarmac road	near Lilongwe Technical College	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
Tarmac road	Junction to Socoal Islamic Development	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
Tree	Gmelina	large	1.00	25,000.00	10,000.00	35,000.00	47.62
Concrete drive way		5	1	692,500.00	277,000.00	969,500.00	1,319.05
concrete drive way		5	1	692,500.00	277,000.00	969,500.00	1,319.05
concrete drive way		5	1	692,500.00	277,000.00	969,500.00	1,319.05
tarmac road	near Assemblies of God church	1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
tarmac road	opposite Lilongwe Mosque	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
tarmac road	Bombey street	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
tarmac road	Zomba street	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
concrete drive way		5	1	692,500.00	277,000.00	969,500.00	1,319.05
concrete drive way		5	1	692,500.00	277,000.00	969,500.00	1,319.05
tarmac road	upper Biwi near bottles	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
new tarmac road	Malangalanga turn	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
Eucalyptus poles	Katondo Market		1.00	60,000.00	24,000.00	84,000.00	114.29
Sugarcane sellers	Katondo Market		1.00	15,000.00	6,000.00	21,000.00	28.57
Fish bench	-	0.001	1.00	30,000.00	12,000.00	42,000.00	57.14
Tomato bench	-	0.001	1.00	10,000.00	4,000.00	14,000.00	19.05
Tomato bench	-	0.001	1.00	10,000.00	4,000.00	14,000.00	19.05
Fish and charcoal bench	-	0.001	1.00	35,000.00	14,000.00	49,000.00	66.67
Mandazi bench	-	0.001	1.00	10,000.00	4,000.00	14,000.00	19.05
Mandazi bench	-	0.001	1.00	10,000.00	4,000.00	14,000.00	19.05
Mobile tearoom and sweet potatoes	-	0.001	1.00	25,000.00	10,000.00	35,000.00	47.62

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
Sugarcane sellers	-	0.001	1.00	15,000.00	6,000.00	21,000.00	28.57
Sugarcane sellers	-	0.001	1.00	15,000.00	6,000.00	21,000.00	28.57
Sugarcane sellers	-	0.001	1.00	15,000.00	6,000.00	21,000.00	28.57
Sugarcane sellers	-	0.001	1.00	15,000.00	6,000.00	21,000.00	28.57
selling eggs and zigege	-	0.001	1.00	17,500.00	7,000.00	24,500.00	33.33
Restaraunt	-	0.001	1.00	90,000.00	36,000.00	126,000.00	171.43
Restaraunt	-	0.001	1.00	85,000.00	34,000.00	119,000.00	161.90
Fish bench	-	0.001	1.00	30,000.00	12,000.00	42,000.00	57.14
Fish bench	-	0.001	1.00	30,000.00	12,000.00	42,000.00	57.14
Tomato bench	-	0.001	1.00	20,000.00	8,000.00	28,000.00	38.10
Irish potato bench	-	0.001	1.00	55,000.00	22,000.00	77,000.00	104.76
HAWKER	-	0.001	1.00	50,000.00	20,000.00	70,000.00	95.24
HAWKER	-	0.001	1.00	100,000.00	40,000.00	140,000.00	190.48
HAWKER	-	0.001	1.00	100,000.00	40,000.00	140,000.00	190.48
Hardware	-	0.001	1.00	8,500.00	3,400.00	11,900.00	16.19
Carpentry and Welding	-	0.001	1.00	80,000.00	32,000.00	112,000.00	152.38
CHICKEN BENCH	-	0.001	1.00	60,000.00	24,000.00	84,000.00	114.29
produce shop	-	0.001	1.00	55,000.00	22,000.00	77,000.00	104.76
HAWKER	-	0.001	1.00	7,000.00	2,800.00	9,800.00	13.33
produce shop	-	0.001	1.00	50,000.00	20,000.00	70,000.00	95.24
Fish bench	-	0.001	1.00	12,000.00	4,800.00	16,800.00	22.86

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
Charcoal bench	-	0.001	1.00	7,500.00	3,000.00	10,500.00	14.29
BUTCHERY	-	0.001	1.00	15,000.00	6,000.00	21,000.00	28.57
Frying irish potato	-	0.001	1.00	15,000.00	6,000.00	21,000.00	28.57
produce bench	-	0.001	1.00	15,000.00	6,000.00	21,000.00	28.57
produce bench	-	0.001	1.00	25,000.00	10,000.00	35,000.00	47.62
produce bench	-	0.001	1.00	10,000.00	4,000.00	14,000.00	19.05
produce bench	-	0.001	1.00	12,500.00	5,000.00	17,500.00	23.81
cooking oil bench	-	0.001	1.00	15,000.00	6,000.00	21,000.00	28.57
BUTCHERY	-	0.001	1.00	60,000.00	24,000.00	84,000.00	114.29
FRYING PORK	-	0.001	1.00	30,000.00	12,000.00	42,000.00	57.14
FRYING PORK	-	0.001	1.00	30,000.00	12,000.00	42,000.00	57.14
PORK BUTCHERY	-	0.001	1.00	70,000.00	28,000.00	98,000.00	133.33
FRYING PORK	-	0.001	1.00	30,000.00	12,000.00	42,000.00	57.14
BUTCHERY	-	0.001	1.00	65,000.00	26,000.00	91,000.00	123.81
BUTCHERY	-	0.001	1.00	65,000.00	26,000.00	91,000.00	123.81
BUTCHERY	-	0.001	1.00	65,000.00	26,000.00	91,000.00	123.81
BUTCHERY	-	0.001	1.00	65,000.00	26,000.00	91,000.00	123.81
BUTCHERY	-	0.001	1.00	65,000.00	26,000.00	91,000.00	123.81
GROCERY SHOP	-	0.001	1.00	50,000.00	20,000.00	70,000.00	95.24
ELECTRONICS SHOP	-	0.001	1.00	30,000.00	12,000.00	42,000.00	57.14
CHICKEN BENCH	-	0.001	1.00	25,000.00	10,000.00	35,000.00	47.62

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
MAIZE AND IRISH POTATO SHOP	-	0.001	1.00	140,000.00	56,000.00	196,000.00	266.67
Mandazi bench	-	0.001	1.00	10,000.00	4,000.00	14,000.00	19.05
Tarmac road	Chilinde parish to CCDC	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
Tarmac road	near Glitters Camp	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
Tarmac road	Majiga close to Puma filling station	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
selling fish of all kind (representing 10 women)	Malichero market		11.00	150,000.00	60,000.00	210,000.00	285.71
selling broilers and layers	Namichimba market		30.00	692,500.00	277,000.00	969,500.00	1,319.05
selling broilers and layers	Namichimba market		40.00	150,000.00	60,000.00	210,000.00	285.71
selling maize	Namichimba market		10.00	90,000.00	36,000.00	126,000.00	171.43
selling dish and assorted	Namichimba market		1.00	50,000.00	20,000.00	70,000.00	95.24
selling sacks (in season)	Namichimba market		50.00	20,000.00	8,000.00	28,000.00	38.10
goat butchery	Namichimba market		1.00	150,000.00	60,000.00	210,000.00	285.71
goat butchery	Namichimba market		1.00	150,000.00	60,000.00	210,000.00	285.71
goat butchery	Namichimba market		1.00	150,000.00	60,000.00	210,000.00	285.71
goat butchery	Namichimba market		1.00	150,000.00	60,000.00	210,000.00	285.71
goat butchery	Namichimba market		1.00	150,000.00	60,000.00	210,000.00	285.71
goat butchery	Namichimba market		1.00	150,000.00	60,000.00	210,000.00	285.71
VEGETABLE BENCH	Namichimba market		1.00	70,000.00	28,000.00	98,000.00	133.33
farm products	Namichimba market		1.00	50,000.00	20,000.00	70,000.00	95.24
farm products	Namichimba market		1.00	50,000.00	20,000.00	70,000.00	95.24
farm products	Namichimba market		1.00	80,000.00	32,000.00	112,000.00	152.38
Cobra	Majiga		1.00	31,000.00	12,400.00	43,400.00	59.05

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
Sandals and bracelets manufacturing and selling	Majiga		1.00	30,000.00	12,000.00	42,000.00	57.14
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC	0.001	1	1	2,850,000	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
Tarmac		1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
TARMAC		1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC		0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC		1	0.001	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC	at parliament round about	1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC		1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
TARMAC	At Kadzamira,s residence1	1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
TARMAC	At Chitukuko	1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
TARMAC	At Mchinji round about	1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
TARMAC	At Petroda Filling Station	2	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
TARMAC	At KCH round about	1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
TARMAC	Opp. Mahindra House	1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
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CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC		1	0.001	2,850,000	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
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CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USSD
TARMAC	OPP. NSARU DEPOT	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
TARMAC	OPP. PACIFIC VILLAGE	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
TARMAC	Madidi Lodge Turn off.	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
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CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
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CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY	LOGS	5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC	LWB Tower	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		1	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC	Road to Madidi Lodge	0.001	1.00	2,850,000.00	1,140,000.00	3,990,000.00	5,428.57

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
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CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
TARMAC		0.001	1	2,850,000	1,140,000.00	3,990,000.00	5,428.57
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
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CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05

TYPE OF PROPERTY/BUSINESS DISTURBED	DESCRIPTION	SIZE	QUANTITY	ESTIMATED VALUE	DISTURDANCE 25%	TOTAL	TOTAL IN USDD
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
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CONCRETE DRIVEWAY		5	1	692,500.00	277,000.00	969,500.00	1,319.05
HARDWARE SHADE			1.00	190,000.00	90,000.00	280,000.00	380.95
				TOTAL		305,160,798.60	415,184.76

DESCRIPTION OF DISTURBANCE	FREQUENCY	AMOUNT (MK)	AMOUNT (USDD)
CONCRETE DRIVEWAY CUT	113	109,553,498.60	149,052.38
TARMAC ROAD SECTION CUT	41	159,600,000.00	217,142.86
BUSINESS DISTURBED	150	26,631,500.00	36,233.33
TREES, CROPS AND GRASS & FLOWER LAWN	11	2,499,000.00	3,400.00
STRUCTURE TO BE DEMOLISHED	2	6,722,800.00	9,146.67
MTL MANHOLES	2	154,000.00	209.52
TOTAL		305,160,798.60	415,184.76
TOTAL NUMBER OF PAPS	363		
NOTE THAT THE DOLLAR HAS BEEN PEGGED AT 1 DOLLAR TO MK735			

