HARARE MASTER PLAN [2025-2045]

Written Statement

June 2025

20 June, 2025

DSA Consortium
HARARE MASTER PLAN
WRITTEN STATEMENT

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This Master Plan has been prepared in terms of Part IV of the Regional, Town and Country Planning Act, Chapter 29:12, Revised Edition, 1996 and the Regional, Town and Country Planning (Master and Local Plans) Regulations, Government Notice No. 248 of 1977. It is hereby certified that this is a true copy of the City of Harare Master Plan as Adopted by the Council on ……. by Council Resolution Number ……

…… ……
(Full Names and Signature) **DATE**
LEAD PLANNER/CONSULTANT

…… ……
(Full Names and Signature) **DATE**
CITY OF HARARE
DIRECTOR OF URBAN PLANNING

…… ……
(*Full Names and Signature)* **DATE**
CITY OF HARARE
TOWN CLERK

…… ……
(Full Names and Signature) **DATE**
MAYOR OF THE CITY OF HARARE

Preface

Harare City Council as the Local Planning Authority at its 1923rd Ordinary Full Council Meeting held on the 29th of February 2024, Minute Item 30, as guided by the provisions of Part IV of the Regional, Town and Country Planning Act, Chapter 29:12, Revised Edition, 1996 and the Regional, Town and Country Planning (Master and Local Plans) Regulations, Government Notice No 248 of 1977 resolved to prepare the City of Harare Master Plan. The preparation of the City of Harare Master Plan has been necessitated by the fact that the existing Harare Combination Master Plan of 1993 has become outdated and Combination Local Authorities had abandoned the same necessitating the need for the City of Harare to prepare its own Master Plan. The City of Harare Master Plan is aimed at addressing constraints facing the city, residents and space users and tapping on emerging opportunities for spatial planning, environmental conservation, socio-economic and infrastructural development key in improving service delivery in the Planning Area. In Compliance to the provisions of Part IV of the Regional, Town and Country Planning Act, Chapter 29:12, Revised Edition, 1996 as read with Part I to III (Sections 3-6) of the Master and Local Plans Regulations (RGN) 248 of 1977 and the Call-to-Action Blue-Print on Service Delivery and standard practice the Report of Study outlines the study findings in relation to a scientific investigation on:

- the environment,
- principal social and demographic characteristics,
- Economic Characteristics,
- Real Estate and Land Markets,
- spatial land use characteristics,
- public utilities (Portable Water, Waste and Storm Water, Roads, Waste Management and Energy) and communications (Traffic and Transportation, information communication technologies),
- the City of Harare's corporate governance structure, finance and institutional framework,
- as well as provide a summary of issues emerging critical in informing the Written Statement.

The study findings that highlight the planning issues, challenges, perceptions and aspirations of property owners and space users informs the Master Plan Written Statement and Proposals.

List of Acronyms

AFCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AI	Artificial Intelligence
API(s)	Application Programming Interface(s)
ATM	Automated Teller Machines
AU	Africa union
AA100	Accountability Assurance Standard
AI	Artificial Intelligent
API(s)	Application Programming Interface(s)
AWS	Amazon Web Services
BESS	Battery Energy Storage Systems
BRT	Bus Rapid Transit
BOT	Build-Operate-Transfer
CEO	Chief Executive Officer
CCGT	Combined-Cycle Gas Turbine
COVID 19	Coronavirus disease 19
CAGR	Compounded Average Growth Rate
CZI	Confederation of Zimbabwe Industries
CAAZ	Civil Aviation Authority of Zimbabwe
CBD	Central Business District
CBO	Community-Based Organizations
CSO	Civil Society Organizations
COBIT	Control Objectives for Information and Related Technology
CBD	Central Business District
CIC(s)	Community Information Centres(s)
CSP	Concentrating Solar Power
CSO	Civil Society Organizations
CVO	Commercial Vehicle Operations
DGI	Development Governance Institute
DoR	Department of Roads
DDoS	Distributed Denial of Service
DSPD	Department of Spatial Planning and Development
ESKOM	Electricity Supply Commission
ESI	Electricity Supply Industry
EIA	Environmental Impact Assessment
ENT	Ear, Nose and Throat care
ENS	Energy Not Supplied
EMDE	Emerging Market and Developing Economy
ERRP	Emergency Road Rehabilitation Program
EASS	East African Submarine System
EIA	Environmental Impact Assessment
EMA	Environmental Management Agent
EMDE	Emerging Market and Developing Economy
ENS	Energy Not Supplied
ERRP	Emergency Recovery and Reconstruction Project
ESAP	Economic and Structural Adjustment Program
ETs	Emergency Taxis
EV	Electric Vehicle

FDI	Foreign Direct Investment
FiT	Feed-in Tariff
GIS	Geography and Information Systems
GDP	Gross domestic product
GHG	Green House Gas Emissions
GMP	Growth Monitoring and Promotion
GoZ	Government of Zimbabwe
GV8FC	Glenview 8 Furnisher Complex
GVC	Global Value Chain
HCC	Harare City Council
HDI	Human Development Index
HGV	Heavy Goods Vehicle
HMP	Harare Municipality Police
HPCS	High-Performance Computing System
HUOC	Harare United Omnibus Company
HVAC	HEATING VENTILATION AND AIR CONDITIONING
ICT	Information and Communication Technology
IDD	Iodine Deficiency Disorders
IIP	Index of Industrial Production
IMAM	Integrated Management of Acute Malnutrition
IMF	International Monetary Fund
IMS	Incident Management Systems
IoT	Internet of Things
ITS	Intelligent Transportation Systems
IYCF	Infant and Young Child Feeding
IRENA	International Renewable Energy Agency
IAEA	International Atomic Energy Agency
IPP	Independent Power Producer
IYCF	Infant and Young Child Feeding
IaaS	Infrastructure as a Service
ICDL	International Computer Drivers Licence
ITIL	Information Technology Infrastructure Library
IoT	Internet of Things
ISPs	Internet Service Providers
LA	Local Authority
LDP	Local Development Plan
LMV	Light Motor Vehicle
LOS	Level of Service
LPA	Local Planning Authority
LR	Light Rail
LPG	Liquefied Petroleum Gas
LTE	Long Term Evolution
Mbps	Megabits per Second
ML	Machine Learning
MNO/s	Mobile Network Operators
MPLS	Multiprotocol Label Switching
MEPS	Minimum energy performance standards
MLGPW	Ministry of Local Government and Public Works
MoE	Measures of Effectiveness
MoTID	Ministry of Transport and Infrastructural Development

MR	Mono Rail
MSMEs	Micro Small & Medium Enterprises
MVA	Manufacturing Value Average
MHI	Manitoba Hydro International
MW	Mega Watts
MSMEs	Micro Small & Medium Enterprises
MVA	Manufacturing Value Average
NDS1	National Development Strategy 1
NGO	Non-Governmental Organization
NMT	Non-Motorised Transport
NRCS	National Road Condition Survey
NREP	National Renewable Energy Program
NRZ	National Railways of Zimbabwe
NRW	Non-Renewable Water
NHDP	National Housing Development Program
NDC	Nationally Determined Contributions
NIERP	National Integrated Energy Resource Plan
NMR	Nano Modular Reactors
NREP	National Renewable Energy Policy
OD	Origin-Destination
ODIN	The Operate Data Inventory
PCE	Passenger Car Equivalent
PPP	Private Public Partnership
PPP	Public Private Partnership
PSV	Public Service Vehicle
PaaS	Platform as a Service
PoE	Power over Ethernet
POS	Point Of Sale
POTRAZ	Postal and Telecommunications Regulatory Authority of Zimbabwe
PPA	Power Purchase Agreement
PV	Photovoltaic
RA	Road Authorities
RBZ	Reserve Bank of Zimbabwe
RIDA	Rural Infrastructure Development Agency
RTA	Road Traffic Accidents
RDC	Rural District Council
RE	Renewable Energy
REAZ	Renewable Energy Association of Zimbabwe
REC	Renewable Energy Certificates
SADC	Southern African Development Commit
SAIDI	System Average Interruption Duration Index
SDGs	Sustainable Development Goals
SEZs	Special Economic Zones
SIDRA	Signalised and Unsignalized Intersection Design and Research Aid Software
SMEs	Small & Medium Enterprises
SUOC	Salisbury United Omnibus Company
SaaS	Software as a Service
SEACOM	South East Asia Communication

SWH	Solar Water Heater
SEZs	Special Economic Zones
SAPP	Southern Africa Power Pool
SNR	Small Nuclear Reactors
SMR	Small Modular Reactors
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
STEM	Science Technology Engineering and Mathematics
TSCZ	Traffic Safety Council of Zimbabwe
TVET	Technical and Vocational Education Training
UC	Urban Council
UN	United Nations
UNECA	United Nations Economic Commission for Africa
UNICEF	United Nations Children
UPS	Uninterrupted Power Supply
USAID	United States Agency for International Development
UNIDO	United Nations Industrial Development Organisation
V/C	Volume to Capacity Ratio
V2E	Vehicle to Everything
V2I	Vehicle to Infrastructure
V2V	Vehicle to Vehicle
VCI	Visual Condition Index
VID	Vehicle Inspectorate Department
VoIP	Voice over Internet Protocol
VPN	Virtual Private Network
VAT	Value Added Tax
VAPT	Vulnerability Assessment and Penetration Testing
VSAT	Very Small Aperture Terminal
WHO	World Health Organisation
WTW	Water Treatment Works
WASH	Water, Sanitation, and Hygiene
ZCHPC	Zimbabwe Centre for High-Performance Computing
ZESA	Zimbabwe Electricity Supply Authority
ZIMSWITCH	Zimbabwe's National Electronic Funds Switch
ZERA	Zimbabwe Energy Regulatory Authority
ZIDA	Zimbabwe Investment and Development Agency
ZILGA	Zimbabwe Local Government Association
ZIMSTAT	Zimbabwe National Statistics Agency
ZINARA	Zimbabwe National Road Administration
ZIMRA	Zimbabwe Revenue Authority
ZINWA	Zimbabwe National Water Authority
ZIRGP	Zimbabwe Industrial Reconstruction and Growth Plan
ZRP	Zimbabwe Republic Police
ZUPCO	Zimbabwe United Passenger Company
ZPC	Zimbabwe Power Company
ZIRGP	Zimbabwe Industrial Reconstruction and Growth Plan
ZTA	Zimbabwe Tourism Authority

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1. WRITTEN STATEMENT

1.1 INTRODUCTION AND GENERAL BACKGROUND

The City of Harare Master Plan 2025-2045 has been prepared in terms of the Part IV of The Regional, Town and Country Planning Act Chapter 29:12 of 1996 and The Regional, Town and Country Planning (Master and Local Plans) Regulations, Government Notice No. 248 of 1977 as read with the Call-to-Action Blue-Print. The President of the Republic of Zimbabwe His Excellence Dr. E.D. Mnangagwa concerned by the deteriorating level of service delivery and the centrality of Master Plans in sound management of Local Authorities launched the Call-to-Action Blueprint on Service Delivery towards attainment of Vision 2030. Action Point 6 required all Local Authorities to have Master Plans by 30 June 2024.

The City of Harare Master Plan 2025-2045 has been prepared in compliance with the legal framework for master plan preparation in Zimbabwe and as informed by standard practice. The City of Harare being the capital city of Zimbabwe like any other urban settlement in Zimbabwe is experiencing significant transformation in terms of demographic, economic, social and administrative profiles with a bearing service delivery. Unlike medium sized cities Harare exhibit both characteristics of a primate city (i.e. has a disproportionate population and is significantly larger than any other city in the country and dominates the urban hierarchy) and a metropolitan city (exhibits a large expanse of urbanised area with no visible boundaries with its adjacent urban local authorities). The city faces complex urban challenges which among other issues include: Housing shortages and spatial inequality, urban informality, service delivery disparities, infrastructure dilapidation and capacity constraints, environmental pressures and the need for climate adaptation, and growing demand for inclusive governance and participatory planning all of greatest concern to the socio-economic wellbeing of the residents. The City of Harare Master Plan Written Statement therefore outlines policy prescriptions, development strategies and planning proposals addressing service delivery issues and development challenges facing the city and its space users as outlined in the Report of study and Summary of Issues.

The interpretation thereof should be read in conjunction with the Land Use Proposals Map and accompanying Infrastructure and Sectoral Maps, the definition of key terms and phrases as outlined in the glossary of terms. The 2025 – 2045 Master Plan supersedes the Harare Combination Master Plan 1993 – 2013.

1.2 STRUCTURE OF THE WRITTEN STATEMENT

The Written Statement is in five (5) parts, namely:

1.2.1 Part I: Summary of Issues

Part I is a Summary of Issues derived from the Report of Study. The issues contain principal social, economic, population, environmental and spatial land use characteristics, real estate and land markets, public utilities and communications (traffic and transportation, bulk infrastructure (water, sewer, waste management, roads, energy and telecommunications), finance and institutional framework.

1.2.2 Part II: Goals, Objectives and Strategies

Part II outlines City Vision and Positioning Statement, Goals, Objectives, and Strategies addressing the issues, problems, challenges and development constraints identified in the

study. It also outlines alternative development strategies or scenarios for the future development of the municipality as a function of prevailing opportunities and constraints.

1.2.3 Part III: Policies and Proposals

Part III builds on the Goals, Objectives, and Strategies outlined in the preceding section to formulate Policies and Proposals including capital project identification and justification of proposals.

1.2.4 Part IV: Plan Implementation, Monitoring and Evaluation

Part IV outlines Plan Implementation, Monitoring and Evaluation of the Master Plan over the Master Plan's lifespan spanning 2025 – 2045.

1.2.5 Part V: Conclusion and Appendices

Part V provides the Conclusion and Appendices.

2. PART I: SUMMARY OF ISSUES

The study established the following issues across principal Environmental Characteristics, Socio-economic Characteristics, Real Estate and Land Markets Characteristics, Spatial Land Use Characteristics and Public Utilities and Communications (Traffic and Transportation, Water, Sewer, Roads, Energy and Telecommunications) in the study area:

2.1. Environmental Characteristics

a) Atmospheric Pollution

- Nitrogen Oxide (N_2O) 1.0 micrograms per cubic meter (µg/m³) is low and within acceptable limits.
- Carbon Monoxide (CO) is at 126 µg/m³, which is way above WHO limits on CO of 10 mg/m³ particulary Dzivarasekwa, Kuwadzana, Crowborough, Mufakose, Budiriro, Glenview, and parts of the southern incorporated areas Level of 126 µg/m³ is considered a moderately high level of CO and may pose some health risks, especially with prolonged exposure. It is above the World Health Organization's recommended levels for both indoor and outdoor air. While 126 µg/m³ (around 0.1 ppm) is not immediately dangerous, it could cause health problems with prolonged exposure. Symptoms of CO poisoning can include headaches, dizziness, nausea, and confusion.
- Sulfur Dioxide (SO_2) is 33.32µg/m^3 is moderate. High Sulfur Dioxide spatial incidences were observed in areas such as Mabvuku-Tafara, parts oif Hatefield west of Epworth, Mufakose, Crowborough, Kuwadzana and Dzivarasekwa. The WHO upper limit is 125 µg/m³.
  Sulfur Dioxide (SO_2) concentration of 33.32µg/m^3 is generally considered to be in the moderate range. While it doesn't exceed the WHO's 24-hour guideline of 40 µg/m3, it's above the "Good" air quality category (10.1-33 percent of a standard) and close to the "Acceptable" category (33.1-66 percent of a standard).
- Methane (CH_4) is at 30.16×109µg/m^3 indicating high levels of methan emmission into the atmosphere. Hotspots included areas to the south-western part of the city (High Field, Mufakose, Budiriro, Glennorah, Glenview), southern areas (Hopley, Stoneridge, Southlea Park etc) and south-eastern parts of the city namely Hatefield, Greendale, Mabvuku-Tafara etc.

- Aerosol Concentration (Particulate Matter) for PM2.5 is 3.0 µg/m³ and for PM10 is 4.0 µg/m³. The north-eastern part of the city synonymous with all low density suburbs have low Aerosol Concentrations of <1 µg/m³ indicating good air quality in terms of particulate matter, whereas the southern most parts of the city spanning Mutare Road through to the city centre, second street extension to nemakonde road to the south, west and south eastern parts of the city have high Aerosol Concentrations of >4µg/m³ indicating poor air quality in terms of particulate matter. Observations between 3 – 5 indicate a significant aerosol event such as smoke, dust storms. While these these values fall below the recommended safe limits for both PM2.5 and PM10. Specifically, the World Health Organization (WHO) recommends that annual average concentrations of PM2.5 should not exceed 5 µg/m³, and the 24-hour average exposure should not exceed 15 µg/m³ more than 3-4 days per year.
- Low atmosopheric pollution levels while commendable indicate extremely low levels of industrial or manufacturing activity.

b) Accute levels of Water pollution
- spike in cynobateria populations for Lake Chivero for the October and November months of the year.
- Underground water pollution southern most parts of the city namely Glenview, Budiriro, Mufakose, High Field, Glennorah, Hopley, Southlea Park, Sartuday Retreat, Southlea Park and Shortston execebating exposure to typhoid.

c) Land pollution is significant
- Non-biodegradable waste on land surfaces (limited waste collection and waste dumping)
- Soil pH is at 7.6 indicating that the city's soils are acidic. High Levels of acidity were observed in the CBD, Workington Industrial Area, Msasa Industrial Area, Willowvale Industrial Area, all south-wester high density suburbs of Dzivarasekwa, Kuwadzana, Crowborough, Mufakose, Budiriro, Glenview, and parts of the southern incorporated areas where there are localised spatial incidences.

d) Biodiversity Intactness Index is at 0.53 indicating biodiversity is severely stressed. This means that human pressures have significantly impacted the natural state of ecosystems in the Harare.

e) Biomass is very low in the southern and western parts of the city <40t/km^2 (high density areas) and high in the north-eastern parts of the city (low density areas) ranging between 40-170 t/km^2. The city average is at 297 t/km^2 which is very low, but expected for an urban area.

f) Built up or impervious surface area is at ~69% indicating large expanse of impermeable surface/susceptible to flooding and loss of vegetation.

g) The city is suspectible to flooding risk. The spatial incidence is distributed across the city with more localised incidences in the folklowing areas the CBD, Workington Industrial Area, Tynwald North Surbub, Parts of Hatecliff High Density Suburb and Borrowdale (Brooke, Quininginton area) Mufakose High Density Surbub, Kuwadzana 6 and 7 High Density Surbubs, Glaudina High Density Surbub, parts of Highfiled High Density Surbub, Glenview 1 High Density Surbub, area between Budiriro High Density Surbub 1, 4 and 5, Hatefield Logan Park, Souther Incorporated Areas of Hopley, Sartuday Retreat, Southlea Park and Shortston.

h) The city is located in the watershed and a wetland city and urban development is occuring in wetlands.

i) Significant loss of public open spaces

2.2. Social and Demographic Characteristics

a) The City of Harare has a resident population of 1,896,092 people, projected to reach 1,952,531 people by 2030 and 2,019,855 people by 2042
b) The city is the most populous urban settlement in Zimbabwe with 34.8% of the total urban population in the country,
c) The city has a daytime population that almost doubles its regular population and in excess of 2,900 ,000 people as inhabitants of nearby towns and surrounding rural areas spend their working days in the city.
d) Historical population growth is plummeting i.e. near constant growth since 2012,
e) Population growth pushed to surrounding local authorities exponetially along transport routes. The highest population densities are in Chitungwiza, Epworth and Norton. Selected sections of Harare also exhibit high population densities especially along the peri-urban areas.
f) Metropolitan area population is 2,487,209 people The Harare Metropolitan area has over time grown to be the most densely populated urban conurbation in Zimbabwe.
g) Household sizes are declining and lower than the national average of 6. The city's population structure is youthful and has a declining aging population. Spcifically, the 0-19 age group constitute 42.74%, 20-74 age group constitute 56.57% while 0.68% constitute 75+ age group.
h) The city has a total of 500,651 Households.
i) The housing waiting exceeds 288,885 people and has been growing exponentially, against an erratic and limited council housing supply. There is a huge variance between housing delivery and the number of people in the waiting list.
j) There has been no council housing scheme for the last 25 years. Housing supply is priave sector led by developers and cooperatives (predominantly land baron led).
k) 72.8% of the respondents were married, 15.2% were single, 6.6% were widowed, 2.8% were single parents and 2.7% were Divorced in the city.
l) The city has relatively higher literacy levels with 55.3% of the respondents having attained Secondary Educational level, 21.9% University, 16.6% College, 4.3% Primary education and 1.82% had never been to School.
m) 31% of the respondents are entrepreneur/small business owners, 25.32% are General Workers, 7.65% are Pensioners, 6.45% are Informal traders/Vendors, 2.34% are Farmers, 2.24% professional workers and 1.84% are Student population.
n) Population classification by sector indicates that 6.2% are in Agriculture Sector, 7.3% Commerce and Banking, 7.9% Education, 32.1% Informal Sector, 8.7% Manufacturing, 2% Mining, 15.2% Public Service, 2.9% Security and 17.7% are Small Medium Enterprises.
o) Interms of time spent working over 74.8% work more than 6 days a week (20.7% work 7 days a week, 24.8% 6 days a week, 29.8% 5 days a week) whereas 4.4% 4 days a week, 3.1% 3 days a week, 1.45% 2 days a week, 0.8% 1 day a week, whereas 14.8% do not work at all. The working population predominantly have a single occupation or job.

p) The city has limited employment opportunities. 80.3% of the respondents noted that there are no sufficient job opportunities in the city, whereas 19.7% of respondents noted availability of job opportunities.
q) Disparities exist in educational facilities especially high density areas experiencing shortage of secondary schools, whereas low density areas have limited public schools and growing number of private schools is notable. 51.7% of respondents consider educational facilities as adequate in their area, whereas 35.2% cite inadequacy and 13.1% do not know. The reasons for inadequacy include 3.4% distance travelled to school, 6.3% fewer schools, 5.6% fewer government schools, 4.8% no schools at all, 3.6% overcrowding, 1.3% no secondary schools, 0.2% no primary schools, 1.3% limited space for schools, 0.5% hot seating, 0.2% fewer blocks, 1.9% poor standard and 2.9% are unaffordable.
r) The study observed that 58.8% of the households had school going children, 41.2% did not have any school going children. 24.7% of the households had at least one child attending school, 8.7% had 3 children, 2.8% had 4 children, 0.8% had 5 children, 0.3% had 6 children, 0.1 had 6 school going children and 0.1% had none respectively.
s) The city's health care system is precarious. Although health facilities are evenly distributed across the city they are in deplorable state and do not have adequate materials. Health facilities coverage is poor in the peri-urban areas leaving them without accessible council healthcare services. Over the years the number of visits to council health facilities significantly decreased between 2014 and 2024 owing to their deplorable state and lack of adequate materials. Whereas the outpatient department has been fluctuating across districts.
t) Council run recreational facilities are in a poor state. Stadiums in the city do not meet international standards and can not host international matches and in need of repairs and upgrades. All community level/basic soccer fields are in poor but useable condition. Of the 45 community halls, 43 are functional and 2 are closed due to dilapidated condition.
u) In Harare Province public safety and security is in dire state in Harare Central, Harare East, Harare South and Chitungwiza as they are the major hotspots of crime occurrence. The dominant types of crimes include Theft (35.3%), Assault (22.5%) Domestic Violence (9.31%), Material Damage of Property (3.82%), Fraud (1.68%).

2.3. Spatial Land Use Characteristics

a) The proposals of the Harare Combination Master Plan were not fully implemented. There is scope for this current Master Plan to consider some of the proposals that were not implemented.
b) The Harare Combination Master Plan was not followed at metropolitan scale. Areas reserved for farming around the peri-urban areas of the city have been taken up by urban development (parasitic) in Zvimba RDC, Manyame RDC, Goromonzi RDC and Mazowe RDC all dependent on services from the city of Harare and as a result there is no expansion space for Harare,
c) The study observed an overall development conformance of 42.3%. The Cohen's Kappa Coefficient of determination was 0.4705 (the master plan hardly followed at metropolitan level),

d) This implies that there was weak agreement between plan intentions and plan implementation outcomes for the area spanning City of Harare and adjacent local authorities. It is apparent that adjacent local authorities disregarded the 1993 Harare Combination Master Plan and established developments at the urban fringe exacerbating urban sprawl as opposed to containment and densification strategies prescribed by the 1993 Harare Combination Master Plan. Even so for southern incorporated areas previous reserved as green belts and school sites have been invaded for urban development.
e) 77.27% of the City's land area had statutory plans prepared, whereas 22.73% is still under pre-1980 town planning schemes. However, 88% of the Local Development Plans require review and all areas under schemes require urgent preparation of Local Development Plans,
f) Land Development Indicator Trends indicate that:
- special consent change of use applications has been constant over the last 10 years with a peak period between 2017 and 2018,
- Land Subdivision applications have been growing exponentially since 2014 indicating a growth in private land supply into the market,
- Land Consolidations have been growing exponentially since 2014,
- Cluster housing applications have been on a steady decline from 174 permit in 2014 to 54 permits in 2024.
- Building plan submissions have been growing exponentially from 159 in 2014 to 1949 in 2024,

g) Spatial growth trends show a spiralling or unprecedented spatial growth of the city between 2013 and 2024. Projections up to 2040 indicate exponential growth over time and continued loss in historically non-built up area,
h) Directionality of growth biased towards the urban fringe,
i) The dominant land use land cover types are bare ground, urban built-up (concrete) and forested cover type.
j) 65.18% of building types in Harare are single dwelling houses, 17.35% are cottage, 11, 49% are attached dwelling houses, 5.8% are cabins or other temporary structure and 0.8% are flats and apartments.
k) Informal settlements are prevalent in southern incorporated areas such as Saturday Retreat, Hopley, Chulu Farm, etc
l) The Harare Metropolitan Province faces complex interdependencies between Harare City Council (HCC) and its dormitory towns (Chitungwiza, Ruwa, Epworth, Norton) and rural neighbours (Mazowe, Zvimba, Goromonzi RDCs). These relationships are strained by unplanned urban expansion, competing resource demands, and fragmented governance. All surrounding local authorities are dependent on Harare in terms of water, sewer, employment, administrative functions, education and shopping facilities.
m) The city has extremely low levels of densification. Single detached Dwelling Houses and Low-Density Residential coverage is extremely high, whereas the Flats/Clusters coverage is extremely low. The study established that Low Density Residential is the dominant land use in the city constituting 22.71% (19475.75 hectares) followed by High Density Residential constitutes 21.57% (18501.2 hectares) of the city. Industrial area constitutes 9.81% (8413.88 hectares), while Institutional constitutes 9.21% (7899.16 hectares), Medium Density Residential constitutes 8.69% (7455.41 hectares) followed by Open Space Reservations which constitutes 7.45% (6392.41 hectares) respectively. Another land use category to note is the area covered by Flats/Clusters which constitutes 3.93% (3368.7 hectares) in extent.

n) There is limited use of vertical space in the city. Single detached dwelling houses constitute 65.18% (dominant housing model), flats (apartments high-rise) 0.795%, Attached Dwelling House 11.49%, clusters 0.573%, cottage and main house under construction 6.248%, cottage 11.31%, cabin and main house under construction 1.177%, cabin 2.173% and other types of structures (main house offices, main house church etc) 1.056%.

o) The study observed highly variable secondary land use typologies or non-residential uses operating on residential properties across the city. 94.33% of residential properties had residential use only, while 0.573% were residential and office, 1.992% were residential and retail commercial, 0.463% were residential and horticulture, 0.916% had residential and poultry, 0.020% had other uses such as lodge, 0.070% were residential and church and 0.010% were residential and grinding mill. Despite the predominance of residential use only,

p) Industrial land uses are predominantly storage or wholesale warehouses and retail and manufacturing is almost non-existent. Notable manufacturing is on agro-products and packaging materials.

2.4. Economic Characteristics

a) National Economy

- The economy is constrained although it has shown resilience post-Covid-19, recording growth of over 5% (ZimStat, 2024).
- Between the years 2020 and 2022, the country experienced GDP growth rates of 8.5%, 6.5% and 5.4%, respectively (ZimStat, 2024).
- In absolute terms, GDP increased from ZW$212.17 billion in 2019 to ZW$237.19 billion in 2023Q1 (ZimStat, 2024).
- The Ministry of Finance and Economic Development of Zimbabwe suggested a modest growth forecast of 2.5% (ZimStat, 2024).

b) Harare's Economic State

- At the end of 2022, Harare's economy was estimated to be worth ZW$52.12 billion and its share of the national GDP was approximately 24.2% (ZimStat, 2024).
- The inflation rate for Harare was 1.2% and 14.5% higher than the overall annual inflation rates for the 2021 – 2022 fiscal years (ZimStat, Quarterly Digest of Statistics Q4 2022).
- The city of Harare is ranked 3rd in 2023 on the cost-of-living index (Numeo, 2024), showing that the economy is relatively cheaper with average-income households being able to access essential services, although not comparable to regional cities like Johannesburg which is ranked number 1 (Numeo, 2024).
- Over the past four years, between 2019 and 2022, the sectorial contribution to GDP has not changed significantly. The tertiary sector accounts for most of the city's economic activities, contributing on average 68.8% to GDP, whilst secondary and primary activities share 28.9% and 2.5%, respectively (ZimStat, 2024).
- The top five industries that have dominated the economy of Harare are (i) Wholesale and Retail; (ii) Manufacturing; (iii) Finance and Insurance Activities; iv) Information and Communication; and (v) Construction, with four-year average percentage contributions of 25.3%, 19%,10.4%, 7.3% and 4.34%, respectively (ZimStat, 2024).

c) Industrial activity is very weak.

d) Disposable Income and Consumption

- The average growth rate of GDP per capita in Harare between the years 2020 and 2022 was 4.26%, together with 7.4% for disposable income, which implies rising buying power with time (ZimStat, 2024).

e) Socio-Economic Indicators

- In 2021, data from the Zimbabwe Poverty Atlas revealed high income disparity and poverty prevalence. The residents of Harare are 15.6% more likely to fall into poverty. In addition, a Gini coefficient indicates that the income gap between rich and poor households is 43.5% wider, which reveals an expanding gap between the rich and poor. According to the World Bank, the income gap was projected to reach 50.3% at the end of 2024 (Zimbabwe Poverty Atlas, 2021).

f) Harare's population is predominantly poor. Household Income Distribution Data for Harare shows that more than 80% of households earn less than US$400.00 per month and approximately 1.2% earn more than US$5,000.00.

g) Harare Municipal Finance: Budgets and Expenditures

City's Budget Performance

- The budgeting environment for Harare between the years 2019 and 2023 was unfavourable. High inflation and rising informality in the economy made the goal of revenue mobilization very difficult, resulting in expenditure growth exceeding revenue growth. The size of the budget expanded slightly from 2% of GDP in 2019, to 3% as at 30 September 2024,

Revenue Mobilization

- The revenue as percentage of the city's GDP (revenue-GDP ratio) is less than 5% (this increased from 1% (2020) to 4 % (2023) and in 2024 it decreased to 3%), which highlights that city revenue is less aligned to the size of economy.

Composition of Revenue Streams

- Property tax is the main contributor to own revenue and its dominance increased after the introduction of the new currency in 2024. During the period under review, property tax obtained the highest growth rate of 40.1% or 12.8 basis points, in comparison to other sources,

Expenditure Composition

- Current expenditure share to total expenditure is three times capital expenditure. The average share increased from 74.5% to 77.4% between the 2019-2021 and 2022-2024 fiscal years.
- The city spent a higher percentage of the capital budget on Water, Sanitation, and Hygiene (WASH) programmes. For 2019 the share of allocation was 44%, and for the period 2022-2024, the allocation for WASH decreased to 24.2%.
- for the city is growing. It increased by 2,219% to $16,830.61 in 2023, from $725.69 in 2020, which implies that the city was spending on average $16,830.61 per person on capital expenditure.

h) Economic Future Forecast

- The economy of Harare is projected to reach USD1.916 billion by 2040, at a 2023 exchange rate with a Compounded Average Growth Rate (CAGR) of 4.47%. Household and firm surveys show most people prefer a USD50 billion economy by 2040 (ZimStat, 2024).

i) Economic Baseline Assessment Report

- The growth momentum of Harare surpasses several cities in Southern Africa. Between the years 2020 and 2023 the economy achieved an average growth of 6% (ZimStat, 2024).

j) Economic Sector Analysis

- Like most Emerging Market and Developing Economy (EMDE) cities, the service sector accounts for over 65% of the city's GDP (ZimStat, 2024).
- Between the years 2019 and 2022, the sector recorded a 3.1% average growth (-10.87% in 2020 to 4.9% in 2022), with food and accommodation, finance and insurance, wholesale and retail trade industries driving the growth. Job creation in the sector is higher than in the manufacturing sector. In contrast, the industry which constitutes 26% to 31% of economic activities is on a downward trend. The sectorial growth was -9.9 % in 2020 and -0.7% in 2022. (ZimStat, 2024).
- Agricultural activities (urban agriculture backyard esp. poultry and market gardening), account for between 1% and 1.6% of GDP. The sector has been expanding slowly since 2019 (from -30.6% in 2020 to 0.43% in 2022) and is the source of livelihood for urban low-income households (ZimStat, 2024).

k) Employment and Wages

- World Bank Development indicators (2024) revealed that the share of employment in service and manufacturing for Zimbabwe has gone up, from an average of 26% (between the years 2014 and 2018) to 30.5% (between the years 2019 and 2022). Whilst for the manufacturing sector it has risen from 8.7% to 12.7%. Most urban employees are in the service sector and employment in agriculture for the period recorded a decline from 65.5% to 56.9%.
- Between 2014 and 2018, employment creation was highest in Printing and Publishing; Paper and Paper Products; Textiles and Food and Beverages with the following employment rates 258.4%, 219.4%, 67.8%, and 15.7%, respectively. The top 5 subsectors with job contraction (negative employment rates) were (i) Coke, Refined Petroleum Products, Nuclear Fuel (-97.8%); (ii) Leather, Leather Products and Footwear (-77.5%); (iii) Tobacco Products (-70%); (iv) Office, Accounting and Computing Machinery (-71.4%); and (v) Electrical Machinery and Apparatus (-66.6%). The finding is consistent with claims that share of employment in highly productive and automated sectors is usually low (UNIDO, 2024).

l) Employment Data for Harare

- The number of employees for Harare decreased from 315,200 in 2018 to 307,200 in June 2023, whilst earnings significantly shifted to USD1,894,594.12 in June 2023 from USD2,488,300.45 in 2018. The decrease in number of employees is in line with the shrinking industry. On the other hand, rising earnings have implications on market demand, social welfare and economic well-being for the working class,

m) Industrial employment for greater Harare

- The economy has been having challenges with unemployment for more than two decades now. The unemployment rate increased significantly from 10.7% in 2011 to 24% by 2021. The rate marginally decreased to 18.3% in 2023 but remains among the highest in the region. Female unemployment is almost double the unemployment rate for males, revealing the structural differences and gender norms prevailing in the economy (ZimStat, 2021).

n) Manufacturing Trade

- Manufacturing Survey reveals a low appetite for export in the manufacturing sector, with an average export quantity of 7% of gross output, illustrating wood and wood product subsector as the lead exporter with a share of 18%. The manufacturing sector is regarded as a high-cost producer in the region, creating opportunities for imports from low-cost producers like South Africa (CZI, 2023).

o) Fruit and Vegetable Value Chain Greater Harare

- Average gross income for traders is almost twice the average income for producers. Results show that marketers/traders realise more income than producers due to higher mark-ups in the fruit and vegetable value chain,
- Average employees at trader level is higher than at producer level. This shows that employment creation increases along the fruit and vegetable value chain
- 50% of producers and 60% of traders do pay council fees.
- 70% of traders are unregistered,
- 52% of farmers store their produce on open space,
- 92% of farmers said their storage facilities are not refrigerated and 47% of the storage facilities are council owned, 39% said they are not fumigated against 35% who reported constant fumigation daily or once per week,
- Findings from surveys show that most traders raised concerns over water supply, infrastructure and health standards. 61% of these traders raised the problem of clean tapped water and toilet facilities. 50% reported that water was never delivered. The industry uses water for cleaning fruits and vegetables. Evidence shows that 1kg of fruit or vegetables requires at least 5 litres of water for cleaning,
- 19% of traders ranked poor infrastructure whilst 14% reported space (warehouse or marketing space) as major constraints. The markets are overcrowded to the extent that traders use open spaces,
- The sector can meaningfully contribute to Local economic Development (through Value Addition).

p) Iron, Steel and Metal Industry

- 74% of metal processors and metal and steel suppliers rank shortage of electricity as a major constraint and 20% listed poor roads,

q) Meat Industry

- 63% of butcheries and supermarkets receive running water either once per week, once per month or never which created demand for bulk water deliveries and boreholes.
- 58% use bins for waste disposal and 21% dump waste. 43% report refuse collection once per week and 24% never collected. The problem is leading to accumulation of refuse in business premises,
- 53% ranked electricity as a major constraint. Energy crisis caused higher operating costs and reduced margins in the industry,

r) Key Economic Sectors and Performance

- In 2019, Whole and Retail Trade; Manufacturing; Financial and Insurance activities; Information and Communication Technology (ICT); and Education dominated with 25.1%; 21.1%; 8.6%; 5.9%; and 5% contributions to GDP, respectively. The Construction sector was in the top 5 with a 4.5% percentage contribution to GDP and registered an average growth of 4.2%, compared to -5.4% for manufacturing (showing sluggish growth) and 2.8% for wholesale and retail trade. ICT, together with the Financial and Insurance activities had the highest growth rates of 14.7% and 12.4%, respectively (showing High Growth Potential). These sectors are on a positive growth trajectory except for manufacturing, even though the sector is key to the city's economic development (ZimStat, 2024). Overall the industrial sector is and those

s) Technology

- Over the past three years between 2019 and 2023, an average of 45.8% of manufacturing firms upgraded their technology, with the upgrading being the highest in foodstuff subsector, chemical and petroleum products and pharmaceutical industries (CZI, 2023).

t) Job Creation and Workforce Development

Status of Job Creation and Workforce Development in Harare

- Persistent economic shocks have made the goal of job creation difficult. The unemployment rate for Harare increased from 9.2% to 20.5% between the years 2019 and 2023. The rate is higher amongst female and youth unemployment, which was 44.7% in 2023, a significant increase from 12.3% in 2019. Permanent job creation in the manufacturing sector decreased in 2023 to 11%, from 23% in 2022. Higher employment opportunities were created in small scale firms, which sat at 18% (CZI, manufacturing survey, 2023).

2.5. Real Estate and Land Markets

Housing Crisis and Shortage

- Severe housing backlog: 288,885 persons on the waiting list, with limited housing supply.
- High demand for affordable housing: 43% of households are lodgers.
- Overcrowding: Many households share one house.
- Limited middle-income housing options: The majority of stock is high-density (67%).
- Poor housing conditions: Aging infrastructure and lack of repairs, especially in pre-independence suburbs.
- Unfinished housing projects: Many developments lack proper water, sewerage and roads.
- Unregulated informal housing growth: Rapid expansion of informal settlements without services.
- Difficult approval processes: Slow, expensive and bureaucratic housing development approval system.
- Alleged corruption in land allocation: Council lists not being followed; land barons taking over.

Urban Decay and Infrastructure Collapse

- Deteriorating water and sewerage systems: Old, overburdened infrastructure leading to frequent breakdowns.
- Road network decline: Potholes, congestion and lack of maintenance.
- Electricity shortages: Power outages affecting residential, commercial and industrial areas.
- Sanitation and health risks: Poor waste management, uncollected refuse and frequent outbreaks of diseases like cholera.

Declining Central Business District (CBD)

- Mass exodus of businesses: Major companies relocating to suburban areas due to high crime, high rentals, poor parking, congestion and deteriorating services.
- High office vacancy rates: 60% of office space remains empty.
- Retail sector transformation: Small-scale informal traders replacing large businesses.
- Variation and segmentation in space utilisation in the CBD with wholesale and agro-retail dominant in the south eastern part of the city, down town dominated with groceries retail, clothing and electronics displacing other uses in most parts of the CBD, motor vehicles accessories and spare parts dominant in the western parts of the CBD, educational supplies (uniforms and stationary) predominant in the southern most central parts of the CBD.
- Aging and neglected buildings: 31% of CBD buildings are in poor condition.

Industrial Sector Decline

- Reduced manufacturing activity: Industrial areas are now dominated by warehousing, retail and logistics.

- Deteriorating industrial infrastructure: Poor roads, unreliable water, and frequent power outages.
- Weak demand for industrial land: Low rental prices fail to encourage new developments.

Retail Sector Shifts

- Growing suburban retail market: New malls (e.g., Highland Park, Madokero) thriving in affluent areas.
- Decay of older shopping centres: Small suburban shopping centres (e.g., Machipisa, Cheviot) are neglected.
- Expansion of informal trade: Street vendors outcompete formal retailers, leading to unregulated markets.

Mbare Mixed-Use Regeneration Needed

- Severely deteriorated hostels: Overcrowded, unsanitary living conditions in Shawasha, Matapi, and Nenyere hostels.
- Decaying "Joburg Lines" housing: Unsafe, overcrowded buildings in need of renewal.
- Unregulated home industries: Siyaso and Magaba home industries operate illegally, with poor infrastructure.
- Transport congestion: The main bus terminus in Mbare is chaotic, lacking proper planning.

Land Management and Governance Issues

- Weak land administration: Corrupt allocation of stands, leading to unplanned developments.
- Inadequate land-use planning: Poor enforcement of zoning laws.
- Lack of city council capacity (Limited resources) to implement real estate projects.

2.6. Public Utilities, Communications – Bulk Infrastructure Scoping

2.6.1. Traffic and Transportation

- Traffic lights often not working. Condition of traffic lights in the Harare Municipality indicated that 59% of the traffic lights are functional and 41% are not functional.
- Street lighting is poor. Condition of street lighting established there is a total of 85 000 streetlights and most tower lights in the planning area. Currently, only 32 000 (37.6%) of these are functional while 53 000 (62.4%) are dysfunctional
- the drainage indicator shows that 38.9% of roads have ‘poor’ conditions while 85% of the road network ‘fair’ drainage conditions,
- road network condition is poor and has deteriorated over time. 23.7% of the total road network for the Harare Metro is in ‘very poor’ and ‘poor’ condition and for Harare Municipality Roads, a combined statistic of 30.5% of the road network is in ‘very poor’ to ‘poor’ condition. Comparatively, a combined statistic of 37.5% and 33% for the Harare Metro and Harare Municipality roads were found to be in ‘good’ and ‘very good’ conditions respectively,
- a low statistic of 33.7% and 9.7% of ‘good’ riding quality was established, meaning longer stretch of road network (km) do not produce smooth riding for drivers.
- 60.3% of the total road network for the Harare Metro and the Harare Municipality did not have visible road markings,
- Level of service for primary intersections (major roads) and secondary intersections (neighbourhood nodes) is poor based on 15hrs of average daily data. During the morning and evening peak period the level of service is beyond poor what is called a

gridlock situation (it's a total chaos) serve for corridors recently upgraded under the SADC Program.

- Most intersections and mid-block sections were observed to be congested especially during the morning and evening peak periods. The causes of congestion were found to be:
    (a) Minor roads, joining major roads at the same level (at-grade), case of Samora Machel Road Corridor
    (b) High private car ownership
    (c) High level of motor-vehicle and pedestrian mix, pedestrians using roadways due to occupied pavements by informal traders
    (d) Malfunctioning traffic lights
    (e) Traffic lights that are not synchronised to optimise on traffic flow
    (f) Poor driver behaviour from all road users (private motorists, to pirate taxis (*mshikashikas)* and commuter omnibus drivers).
    (g) Imbalanced public transport modal split, with a lot of illegal pirate taxis, commuter omnibuses and less of conventional buses which ferry a lot of passengers at the same time and are an efficient user of road space.
- Public transport system in Harare is dysfunctional with the modal split as follows 53% pirate taxes, 43% registered commuter omnibuses, 2% ZUPCO buses,1% metered taxis, 1% private buses.
- Annual number of road traffic accidents (RTA) increased exponentially by 87.5% from 12089 in 2021 to 22670 in 2022 and maintained a high statistic above 21000 till 2024.
- the majority of accidents were observed to be occurring in the Harare CBD, along Kirkman Road, Bulawayo Road, Borrowdale Road, Seke Road, Mutare Road, Simon Mazorodze Road, Willowdale Road and in the high-density suburbs of Kuwadzana, Budiriro, Highfields and Glen view.
- Most accidents occur during the morning peak and evening peak and are constant throughout the week and the dominant types are nose to tail, side swipe same direction, vehicle pedestrian collision and right turning Infront on oncoming traffic,
- Dominant causes of accidents are misjudgement/inattention, following too close, fail to give way, reversing error, turning error, excessive speed, overtaking error, parking error, negligent pedestrian, obstructed roadway, vehicle defects etc.
- Dilapidated and vandalised rail infrastructure (poor tracks and signalling systems) to support passenger rail

2.6.2. Existing Bulk Infrastructure Assessment: Water Supply Services and Infrastructure, Bulk Wastewater Infrastructure, Roads and Storm Water Drainage and Flood Management Assessment and Solid Waste Management Facilities

- Harare's main raw water source is heavily polluted by raw sewage and polluted river streams from upstream urban settlements i.e. Harare and Chitungwiza. Seke and Harava Dams are seasonal supplies. Lake Manyame intakes are not in use due to old and non-operational intake infrastructure.
- The two water treatment plants are operating at less than 50% due to infrastructural issues and expensive running costs after the completed Urgent Water Supply and Sanitation Rehabilitation Programme (UWSSRP) Phase 1.
- The potable water supply system predominantly (aged 50 years), comprises of 33 service reservoirs, 16 booster pump stations, and nearly 6500 km of transmission and

distribution pipework feeding into approximately 300 000 metered domestic consumer connections.

- Harare water supply is thinly spread over the city's administrative boundaries and satellite towns (Chitungwiza, Norton, Ruwa and Epworth, Rydale Ridge and Whitecliffe in Zvimba, Inkomo Barracks in Darwendale and Domboshava).
- Non-revenue water amounted to 68% primarily due to leakages and unmetered connections, while recovery on billing is at 48%.
- Water supply has been augmented at the consumer level by digging wells and drilling boreholes. Others pay for bulk water deliveries marketed as borehole water. Some of the service providers draw water from the COH fire hydrants stationed in the supply system.
- The city uses both onsite and offsite sanitation systems. Southern Incorporated Areas mostly use dry sanitation methods such as pit latrines on small stand sizes.
- The reticulated sewerage system, mostly over 50 years old, makes up to 5500 km of pipework over the 5 main catchments and flow from minor catchments is conveyed by sewer pump stations.
- COH has rehabilitated more than 30 of the pipe mains crossing water streams to reduce pollution from pipe bursts close to streams.
- 70% of the raw sewage received in treatment plants spills into the environment as there is less than 40% available treatment capacity. The inadequate capacity is due to old infrastructure.
- Sewerage systems are overwhelmed by the densification of properties and numerous households residing in single-dwelling units. The system needs upgrading.
- Several proposals for water supply and sanitation systems are on record at the COH. These include rehabilitation works, system upgrades, Kunzvi-Musami water supply and the proposed wastewater treatment works of 445 megalitres/day. Most have not started due to lack of funding.
- The city roads have deteriorated leaving gravel bases exposed and numerous potholes. Regional and statutory roads that link Harare to surrounding urban settlements and rural hinterland are in need of urgent carriage way and interchange construction and upgrading works. SIA developments do not have roads and stormwater infrastructure and are flood-prone areas.
- The CBD is also a flood-prone area due to the overburdened underground drainage system requiring dredging and rehabilitation of the covers and litter traps.
- Most of the city's ranks are in a dilapidated state. Some have since become marketplaces.
- The city produces 798 tonnes/day in solid waste. 26% is collected daily and 2% is treated at the controlled facilities. There is a need for additional plants to facilitate waste collection and disposal.
- Residents illegally dump waste in wetlands and open channel stormwater drains.
- There is one operational solid waste management site, Pomona Dump Site. Geo Pomona Waste Management is in the process of constructing a Waste Recycling Plant at the Dumpsite. There is no second or alternative dumpsite for the city.
- Industrial waste disposal site is no longer available; some notoriously dispose into the sewerage system through the open manhole, after operating hours.

2.6.3. Power Supply and Distribution

- Electricity access in Zimbabwe is currently at 62% (2022 Census) and is primarily from coal at 57% followed by hydropower at 40% with renewable sources of energy

still behind at 3%. The main sources of energy are fuel wood at 61%, coal 8%, liquid fuels 18% and electricity 13%.

- The Harare Metropolitan Area is mainly supplied via National Grid of Zimbabwe. The old thermal power station is now not reliable or viable due to ageing, environmental issues and bloated costs of production. Zimbabwe's electricity access rate stands at 62%, with Harare Metropolitan facing acute power shortages, frequent load shedding, and aging infrastructure. The energy mix is dominated by coal (57%) and hydropower (40%), leaving renewables at just 3%.
- The Harare Metropolitan 132kV Primary Network enters the region from a westerly direction.
- The study established that the dominant users are Residential Users (77%), Business/Industrial Users (12%), Government Entities (4%), NGOs/Civil Society (4%) respectively
- The study established that power supply is inadequate for all users i.e. Residential Use, Business/Industrial Use, Government Entities, NGOs/Civil Society in the city. 54,2% report that their power supply is very inadequate, whereas only 2.6% report that their power supply is very adequate. The main causes of power supply gaps include Load shedding (80.65%),
- Inadequate power supply is constraining industrial production and increasing the cost of business,
- 77.8% of the respondents noted that they received more than 6 hours of power outages per day which is alarming.
- 80.6% of the respondents noted that power outages affected their daily activities and business operations severely and minimal disruption and no disruption was noted by 0% of the respondents.
- 82% of the respondents experience fluctuations in power quality (e.g., voltage instability, surges, and frequent blackouts) which indicates that the power and distribution system is not performing well. 97% of the respondents noted that they are willing to transition to cleaner and more sustainable energy sources. 84% of respondents noted that there is a high initial cost of solar and renewable energy systems, 25% inadequate infrastructure support, 21% limited knowledge and awareness and 9% lack of government incentives which acts as a barrier to adoption of green energy sources.
- 81% of respondents suggests subsidies for solar and other renewable energy technologies as key policy enablers to transition to cleaner energy.
- 75% of the respondents report that there in need to invest in renewable energy 50% of the respondents also report that there is a need to upgrade existing infrastructure and create decentralized energy systems. 67% (majority) of the respondents feel that the Private Sector has as major role to play in energy supply and distribution.
- Most of the Stakeholders of the Harare Master Plan-Power Supply and Distribution are household residents
- The state of the power supply in Zimbabwe is very alarming as noted from the survey results
- Load shedding is the major cause of power supply gaps in Harare and their needs to be measures to mitigate this lack in power. This therefore backs the initiatives of the master plan
- The high cost of implementing renewable energy systems and green technologies is the main barrier to implementing renewable energy in Harare
- Most of the people in Harare are willing to transition to cleaner and more sustainable energy and would be in support of the master plan

- The master plan can aim at introducing subsidies for the Solar and other renewable energy sources instead of having taxes and tariffs – as reported through the survey.

2.6.4. Information Communication Technologies

- The master plan of 1993 did not mention or take into consideration the existence of Information Communication Technologies, hence no provisions were made for development of systems and policies to harness them in the growth of the city.
- The telecommunications sector in Harare is served by three major mobile network operators (MNOs): Econet Wireless, NetOne Private Limited, and Telecel Zimbabwe.
- the optic fibre network coverage for the city is more than 1,600km^2
- Harare Province has 97.3% of its households with access to network coverage and 96.4% with access to mobile broadband coverage signifying a high percentage of coverage in the city. Given the growth in network coverage and internet penetration per year at an average of 2.5 % (according to POTRAZ for the past 4 years), most of the gaps may have been addressed since the growth of the sector in Harare Metropolitan growth has been Harare Centric.
- Trends shifting to shared infrastructure and satellite based internet solutions, which enable construction of one tower where operators would set up their communications active devices,
- Applications of ICTs in smart city, cloud computing, traffic management, e-governance, GIS, city surveillance and security.

3. PART II: MASTER PLAN GOALS, OBJECTIVES AND STRATEGIES

3.1. City Vision and Positioning Statement

3.1.1. City of Harare Vision and Mission Statement

3.1.1.1. City Vision

The city has evolved through a Vision "*to Achieve a World Class City Status by 2025*" (spanning from 2012 to 2025). A New City Vision is yet to be coined since the lapse of the Vision 2025. This Master plan adopts an transformative approach to identify a rallying point that ignites the city and its citizens to aspire to a better future and place the city at the positioning level with its regional counterparts. In this master plan the planning vision stems from a recognition of Harare's prior development aspirations, particularly the "World-Class City by 2025" goal recalibrated with the Zimbabwe's Vision 2030 and the global SDG 11 targets. It is therefore imperative that the city outlines a timeless new vision statement that inspires it and its citizens towards transformation.

The planning vision is therefore to be a resilient, smart African capital-a gateway for investment, innovation and culture delivering high-quality urban services and green prosperity for all residents.

3.1.1.2. City Vision Statements of Top Metro Cities in Africa.

Table 3.1. highlights City Vision Statements of Top Metro Cities in Africa. The City Vision Statements outline each City's aspirational identity and development direction.

Table 3.1: City Vision Statements of Top Metro Cities in Africa.

	City	Country	City Vision Statement
1.	Johannesburg	South Africa	A world-class African city of the future, driven by innovation and inclusive development.
2.	Nairobi	Kenya	A vibrant and inclusive smart city providing quality services and sustainable growth opportunities.
3.	Kigali	Rwanda	The greenest, cleanest, safest and most resilient city on the continent.
4.	Addis Ababa	Ethiopia	A livable and competitive metropolitan city anchored in industrial transformation and mobility.
5.	Lagos	Nigeria	Africa economic powerhouse " a resilient mega-city built on tech and creativity.
6.	Cape Town	South Africa	A caring, inclusive, safe, and well-run city that inspires its citizens.
7.	Accra	Ghana	A smart, sustainable city that fosters creativity, equity, and economic prosperity.
8.	Cairo	Egypt	A global megacity leading in knowledge, industry, and cultural heritage.
9.	Abidjan	Cote d'Ivoire	West Africa's business-friendly, modern and resilient urban hub.
10.	Harare	Zimbabwe	To be a World Class City by 2025

3.1.1.3. Mission Statement (derived from the Vision)

To transform Harare into a digitally connected, economically competitive, inclusive and environmentally sustainable city through strategic infrastructure investments, public-private partnerships, policy reform, and responsive governance that empowers citizens and businesses alike.

3.1.1.4. The Basis for a Planning Vision for Harare City Council

The planning vision stems from a recognition that Harare's prior development aspirations, particularly the "World-Class City by 2025" goal, must be recalibrated in line with Zimbabwe's Vision 2030 and the global SDG 11 targets.

Key bases include:

- Infrastructure decay and service delivery gaps (e.g., 40% water loss)
- Urban sprawl, informality, and housing deficits
- Digital disruption and smart-city policy approvals
- The need for regional and global competitiveness
- Emerging mega-projects (e.g., Mount Hampden Cyber City)

The planning vision thus re-centres Harare as a **resilient, smart, green and inclusive capital**, with a realistic time horizon to achieve transformation.

3.1.1.5. Current-State Diagnostic (2025)

Harare stands at a pivotal moment: the first full draft of its new Master Plan has been accepted for gazetting, yet the city still faces infrastructure deficits, service-delivery gaps and intensified regional competition. This Master Plan re-casts the City's development **vision** proposes a **clear market positioning**, and sets out the **strategic pillars, flagship projects, and enablers** that will move the capital toward a resilient, inclusive and globally competitive future.

`Table 3.2: Current-State Diagnostic (2025)

Dimension	Key Findings
Economy	Contributes ~28 % of national GDP; strong in financial services, wholesale/retail, ICT start-ups and creative industries. Provincial leaders have launched an "economic power-up" campaign to lift this share above 35 % by 2030.
Infrastructure	New Master Plan highlights priority investment in water, wastewater, power, solid waste, digital backbone and an integrated transport grid.
Urban Fabric	Fragmented land-use patterns, expansive informality, and acute housing deficits documented by the African Cities Research Consortium (ACRC) studies.
Governance	Legacy target of "World-Class City Status by 2025" needs updating to align with Vision 2030 and post-2030 smart-city ambitions.
Emerging Trends	▸ Smart-city policy approvals (traffic-management, e-governance) ▸ Private-sector mega-projects such as Mount Hampden's Zim Cyber City.

3.1.1.6. Proposed Vision ("Harare 2045")

"By 2045, Harare will be a resilient, smart African capital – a gateway for investment, innovation and culture – delivering high-quality urban services and green prosperity for all residents."

The 2045 horizon synchronises with Zimbabwe's Vision 2030 mid-term targets while giving a realistic runway for deeper transformation and smart-city scale-up.

3.1.2. Positioning Statement

The positioning statement for the city is to be a:

"Capital of Opportunity: Southern Africa's Connected, Creative and Competitive City."

The city will differentiate itself as:

1. **Zimbabwe's economic and innovation nerve-centre** – anchoring financial technology, high-value business services and creative industries.
2. **A regional logistics and conferencing hub** – leveraging the airport upgrade, strategic highways and emerging MICE facilities to serve the SADC north-south corridor.
3. **An African testbed for smart-city solutions** – from camera-enabled traffic enforcement to sensor-based utilities and open-data platforms.
4. **A green and inclusive metropolis** – rehabilitating wetlands and Lake Chivero, expanding transit-oriented mixed-use districts, and mainstreaming climate resilience in all projects.

3.1.2.1. Strategic Pillars and Flagship Initiatives

The following are the city's strategic pillars and flagship initiatives:

Table 3.3: Strategic Pillars and Flagship Initiatives

Pillar	2025-30 Flagships	2031-45 Flagships
1. Smart and Integrated Infrastructure	▸ City data centre and fibre ring ▸ Intelligent Transport System pilot corridors ▸ Water-loss reduction & prepaid meters	▸ City-wide smart-grid and IoT utilities ▸ Fully automated BRT + rail extensions
2. Competitive and Diversified Economy	▸ FinTech/Creative District (CBD fringe) ▸ One-Stop Investment Centre ▸ Co-working hubs in high-density suburbs	▸ Mount Hampden Innovation Park scale-up ▸ Agro-processing export clusters
3. Liveable and Inclusive Neighbourhoods	▸ 50 000-unit Affordable Densification Programme ▸ Slum Up-grading Fund ▸ Complete-streets retrofits	▸ Transit-oriented townships ▸ Social housing trust with pension-fund equity
4. Green and Resilient City	▸ Wetland restoration zones ▸ Solid-waste PPP (waste-to-energy) ▸ Climate-proof drainage overhaul	▸ Carbon-neutral municipal fleet ▸ City-wide nature networks and river parkways
5. Good Governance and Digital Service Delivery	▸ Integrated revenue management ▸ Open-budget and service dashboards ▸ E-permitting for planning	▸ AI-driven city operations centre ▸ Participatory "digital twins" for planning

3.1.2.2. *Re-casting Harare's Development Vision*

Harare's old slogan— *"World-Class City by 2025"*—was inspirational but increasingly out-of-step with the economic shocks, climate stresses and demographic realities the city now faces. The proposed **"Harare 2045"** vision updates the time-horizon and anchors it to Zimbabwe's *Vision 2030* aspiration of an upper-middle-income economy while giving the capital 20 years to achieve deeper structural change. The re-cast vision emphasises four inter-linked outcomes:

Table 3.4: Re-casting Harare's Development Vision Template

Outcome	2045 Headline Target	Why It Matters
Resilient	Zero major service-interruption days for water, power, transport	>40 % of treated water is now lost before reaching consumers (hrw.org)
Inclusive	65 % of new housing built is affordable or rental	Informality and housing deficits remain acute (repository.uneca.org)
Smart & Green	100 % digital meter coverage; net-zero municipal fleet	Smart utility pilots and EV buses already under way
Globally Competitive	40 % share of national GDP and Top-10 rank in African Smart-City Index	Harare already contributes ≈ 34 % of GDP—room to grow (repository.uneca.org)

The vision statement therefore reads:

"By 2045, Harare will be a resilient, smart African capital—a gateway for investment, innovation and culture—delivering high-quality urban services and green prosperity for all residents."

3.1.2.3. *Clear Market Positioning*

Positioning Phrase: *"Capital of Opportunity – Southern Africa's Connected, Creative & Competitive City."*

Table 3.5: Market Positioning

Competitive Lever	Evidence and Comparative Advantage	Strategic Audience
Innovation Nerve-Centre	Dense fintech ecosystem, universities and talent pipeline	Venture funds, start-ups, global tech firms
Regional Logistics and MICE Hub	Upgrade of airport + Beitbridge-Chirundu highway; proven record hosting continental events	Freight operators, conference organisers, airlines
Smart-City Test-Bed	Cabinet-approved AI traffic-management roll-out in Harare first (allafrica.com)	Smart-tech vendors, DFIs, R and D outfits
Green and Inclusive Metropolis	Wetland buffers, waste-to-energy PPP in procurement	Climate-finance vehicles, ESG investors

This positioning differentiates the city from resource-heavy, port-oriented SADC capitals (e.g., Luanda, Dar-es-Salaam) by foregrounding **human-capital intensity, digital infrastructure, and green enterprise**.

3.1.2.4. *Strategic Pillars (Deep-Dive)*

The following are the city's Strategic Pillars:

Pillar	Key Objectives (2025-30)	KPI Examples	Lead/Partners
P1 Smart and Integrated Infrastructure	• Rehabilitate 1 000 km priority water pipes• Deploy city fibre ring and IoT sensor grid	▸ Non-Revenue Water ≤ 25 % ▸ ≥ 95 % 4G/5G coverage	City Eng., TelOne, PPPs
P2 Competitive and Diversified Economy	• Establish FinTech and Creative District on CBD fringe• One-Stop Investment Centre (paperless, 15-day licence)	▸ 10 000 new high-skill jobs ▸ FDI inflows > US$500 m p.a.	ZIDA, Min. Fin., Private sector
P3 Liveable and Inclusive Neighbourhoods	• 50 000-unit densification and slum-upgrade fund• 100 km complete-streets retrofits	▸ Urban density ≥ 120 pph in target zones ▸ 40 % trips by non-motorised modes	Nat. Housing Min., Pension funds
P4 Green and Resilient City	• Restore 700 ha wetlands• Waste-to-Energy plant (30 MW)	▸ GHG ≤ 3 tCO_2e per capita ▸ ≥ 80 % solid waste captured	EMA, Green Climate Fund
P5 Good Governance and Digital Service Delivery	• E-Permitting and cadastral portal• Open-budget dashboards	▸ Building permit time ≤ 10 days ▸ ≥ 70 % citizen e-service uptake	Council, Auditor-General

3.1.2.5. Flagship Projects (Illustrative Portfolio)

The following are Flagship Projects (Illustrative Portfolio):

Table 3.6: Flagship Projects (Illustrative Portfolio)

Flagship	Pillar Link	Scale / Cost	Status and 2025-27 Milestones
AI-Powered Traffic-Management System	P1 and P5	US$45 m (Phase 1)	Cabinet approval (June 2025); 120 junctions fitted; 30 % drop in average peak delay (allafrica.com)
Water-Loss Reduction and Smart Meters	P1	US$120 m (PPP + bond)	Pilot 50 000 meters; cut NRW from >40 % to ≤ 30 % (hrw.org)
Mount Hampden Cyber City	P2	US$500 m initial tranche	50 villas + trunk infra by Mar 2025; phase-2 CBD tower 2028 (thezimbabwemail.com)
Affordable Densification Programme	P3	US$350 m + land-value capture	10 mixed-use TOD precincts; first 5 000 units complete 2027
Wetland Recovery and River Parkways	P4	US$80 m (blended)	150 ha rehabilitated; public riverfront in CBD opened 2026
Harare-2045 Delivery Unit	P5	US$5 m start-up	Statutory instrument establishing unit and performance contracts 2025Q4

3.1.2.6. Cross-Cutting Enablers

The following Cross-Cutting Enablers were identified:

Table 3.7: Cross-Cutting Enablers

Enabler	Priority Actions	Early Outcomes
Policy and Regulatory Reform	• Modernise zoning ordinance (e-zoning)• Enable land-value-capture bonds	Faster PPP close; predictable brownfield redevelopment
Innovative Finance	• Issue diaspora green bond (US$100 m)• Pilot tax-increment financing around TOD hubs	30 % of infra spend off municipal balance-sheet
Digital Infrastructure	• City open-data platform• 5 G corridor along Samora Machel and airport	Data-driven planning; start-ups use real-time APIs
Capacity-Building and Talent	• Mayoral fellowship with UZ and HIT• Technical up-skilling in GIS, PPP structuring	200 city staff certified; reduced consultant dependence
Stakeholder and Citizen Engagement	• "Harare 2045 Labs" quarterly• Civic tech feedback apps	Trust rebuilt; citizen co-ownership of projects

These enablers create the **institutional and financial scaffolding** that allows the pillar programmes and flagship projects to scale.

3.1.2.7. Putting It All Together

By aligning a forward-looking vision with a differentiated market position, structured pillars, bankable flagships and powerful enablers, Harare can convert its **latent advantages (34 % of national GDP) into sustained, inclusive growth**. The next step is to **endorse this framework politically and publish a three-year priority pipeline** that ministries, private investors and development partners can rally behind.

3.1.2.8. Validation of the Proposed Positioning

To validate and refine Harare's positioning as "Southern Africa's Connected, Creative and Competitive City", it is essential to benchmark against peer cities within the region and select international comparators that reflect similar aspirations. The ideal cities to compare and contrast with Harare would fall into three categories:

Table 3.8: Regional Peer Cities in Southern Africa

City	Relevance to Harare	Key Differentiator
Lusaka (Zambia)	Fellow landlocked capital; similar demographic and urbanisation pressures	Major regional infrastructure investments (e.g. Kenneth Kaunda Airport, road networks); aggressive PPP agenda
Maputo (Mozambique)	Coastal capital; undergoing rapid real estate and transport transformation	Integration with port logistics and gas-based industrial corridors
Gaborone (Botswana)	Smaller but efficient capital; ranked highly for governance and ease of doing business	High transparency and digital service delivery; competitive land titling systems
Windhoek (Namibia)	Smaller population; but well-managed city with spatial discipline and service delivery	Strong in renewable energy integration and waste recycling

Johannesburg (South Africa)	Sub-continental financial and logistics hub; benchmark for market-driven growth	Robust urban governance, integrated transport systems, and strong economic clusters (finance, mining, retail)
Durban (South Africa)	Coastal city with major port and logistics role; active creative economy	Globally recognized for climate adaptation, port-city integration, and urban regeneration projects

3.1.2.9. Aspirational African Cities (Comparable Growth Paths)

The following African Cities shared a Comparable Growth Paths to Harare:

Table 3.9: Aspirational African Cities (Comparable Growth Paths)

City	Lessons or Points of Contrast
Kigali (Rwanda)	Model for urban order, digital government, green city projects, and strong urban branding ("Green, Clean and Safe")
Addis Ababa (Ethiopia)	Massive transport and infrastructure scale-up (e.g., light rail, Grand Renaissance Dam) shows the effect of state-led investment
Accra (Ghana)	Active in creative and tech sectors, with strong MICE economy (Africa Prosperity Network, AFDW, tech hubs)
Nairobi (Kenya)	Regional tech hub with strong smart-city initiatives (Konza Techno City), superior broadband access, and foreign investment inflows
Dar es Salaam (Tanzania)	Fastest growing city in East Africa; success in large-scale BRT and port expansion projects

3.1.2.10. Global MICE and Innovation Cities (Positioning References)

The following Global MICE and Innovation Cities have been identified as key Positioning References for Harare.

Table 3.10: Global MICE and Innovation Cities (Positioning References)

City	What Harare Can Learn
Kuala Lumpur (Malaysia)	Evolution from congested, under-serviced capital to a global MICE and smart city hub with targeted zones (e.g., KL Sentral, Cyberjaya)
Quito (Ecuador)	Success in preserving wetlands and integrating green spaces in fast-growing capital cities
Riyadh (Saudi Arabia)	Massive repositioning through Vision 2030—leveraging state investment and soft power (conferences, global events)
Bogotá (Colombia)	Pioneering BRT, urban inclusion, and creative sector development in Latin American context with similar socio-economic pressures

3.1.2.11. Comparative Positioning Summary

The following Comparative Positioning Summary can be deduced:

Table 3.11: Comparative Positioning Summary

City	*Connected*	*Creative*	*Competitive*
Harare	Airport upgrades, digital fibre ring underway	FinTech and creative clusters emerging	Regional HQ potential, smart-city pilots launched

Lusaka	Similar infrastructure drive	Lower creative economy presence	Aggressive FDI push
Gaborone	High institutional quality	Less diversified urban culture	High ease-of-doing-business
Nairobi	High tech adoption (M-Pesa)	Large creative economy	Global innovation destination
Kigali	Strong urban branding	Digital-first public sector	Investment-friendly
KL	World-class MICE zone	Mixed-use tech cities	Clear innovation ecosystems

3.1.2.12. Strategic Use of Comparison

Harare can:

- Align with Kigali and Nairobi for smart-city and creative economy aspirations
- Emulate Gaborone and Windhoek in service delivery and governance
- Benchmark Johannesburg in business competitiveness and infrastructure integration
- Learn from Kuala Lumpur and Bogotá for long-term spatial and branding transformations

These cities help Harare define what kind of city it wants to be, and how to measure progress within a globally competitive context.

This is the scorecard matrix comparing Harare with regional and global peer cities across three dimensions: Connected (Infrastructure and ICT), Creative (Innovation and Culture), and Competitive (Business and Governance). The scores (1–5) offer a high-level benchmarking framework, helping position Harare's strategic priorities relative to its peers.

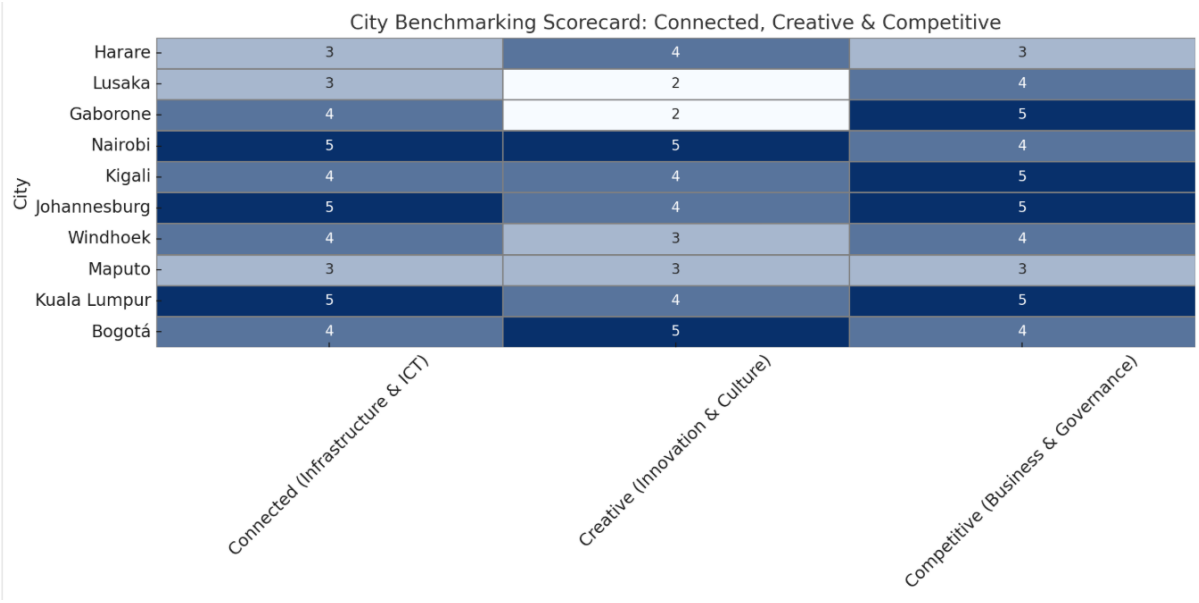

Figure 3.1: City Benchmarking Scorecard, Creative and Competitive

3.1.2.12.1. Competitive Advantage and Differentiators

- **Human Capital** – largest concentration of tertiary institutions in Zimbabwe.

- **National Seat of Power** – direct policy influence and access to sovereign infrastructure finance.
- **Innovation Momentum** – early adopters of mobile money & digital payment platforms.
- **Cultural and Creative Scene** – festivals, fashion and gastronomy that anchor destination branding.
- **Gateway Location** – equidistant air links to Johannesburg, Lusaka and Maputo.

3.1.2.13. Implementation Phasing and Governance

Table 3.12: Implementation Phasing and Governance

Phase	Focus	Key KPI examples
Quick Wins (2025-27)	Service-delivery stabilisation; digital pilot projects; PPP pipeline mobilisation	✓ <20 % water losses ✓ Online building permit time ≤10 days
Scale-Up (2028-32)	Full ITS/BRT roll-out; housing densification; green corridors	✓ 60 % commuter public-transport share ✓ 10 ha wetlands restored/year
Transformation (2033-45)	Smart-city maturity; net-zero municipal operations; global MICE competitiveness	✓ Top-10 rank in African Smart City Index ✓ USD 1 bn annual MICE receipts

Governance: a **Harare 2045 Delivery Unit** chaired by the Mayor, co-managed with the Ministry of Local Government, the Provincial Development Coordinator and private-sector captains, reporting quarterly to Cabinet.

3.1.2.13.1. Enablers and Financing

The following are key enablers for financing and investment in the city:

- **Policy and Regulatory Reform** – streamlined land-assembly, updated zoning, e-permitting.
- **Innovative Finance** – municipal bonds, diaspora bonds, land-value capture, climate-finance grants.
- **Capacity-Building** – fast-track technical-cadre training (GIS, project finance, digital operations).
- **Stakeholder Engagement** – city labs, community charters, and structured dialogue with investors.
- **Digital Infrastructure** – universal broadband; open data platform for start-ups.

Table 3.13: Risk Matrix (selected)

Risk	Likelihood	Impact	Mitigation
Macroeconomic shocks	High	High	Diversify revenue; forex-denominated PPPs
Governance inertia	Medium	High	Statutory delivery-unit authority; performance contracts
Climate events (drought, flood)	High	Medium	Green infrastructure, emergency funds
Social exclusion	Medium	High	Pro-poor housing quotas; participatory budgeting

Harare possesses unrivalled national advantages but must now **pivot from plans to performance**. By embracing a smart, green and inclusive growth trajectory – and by positioning itself as *Southern Africa's connected, creative and competitive capital* – the city can unlock sustained prosperity for its 3 million residents and the wider Zimbabwean economy.

Next Steps:

1. Endorse the 2045 Vision and Positioning Statement at Council and Cabinet level.
2. Constitute the Harare 2045 Delivery Unit within 90 days.
3. Publish a three-year Priority Investment Pipeline and mobilise blended finance.
4. Launch public engagement campaigns to build shared ownership of the vision.

3.1.3. City Positioning

Positioning Statement

"Capital of Opportunity – Southern Africa's Connected, Creative and Competitive City."

Harare aims to:

- Be Zimbabwe's innovation and financial hub (FinTech, creatives)
- Act as a smart-city testbed for Africa (traffic AI, IoT, e-permitting)
- Emerge as a regional MICE and logistics centre (airport, road corridor)
- Reignite its manufacturing industrial base (through value addition and beneficiation)
- Transition into a green and inclusive metropolis (wetlands, TOD housing)

This positioning distinguishes Harare from port-based or resource-heavy African capitals by leveraging its **human capital, governance seat, innovation clusters, and central location**.

3.1.3.1. Global Positioning

Harare is benchmarking against aspirational and global cities such as:

- **Kuala Lumpur** – for MICE development and smart infrastructure
- **Bogotá** – for BRT success and creative sector inclusion
- **Riyadh** – for state-led rebranding and transformation
- **Quito** – for environmental integration in urban growth

These cities reflect Harare's ambition to become a **globally competitive, smart and inclusive capital**, with special focus on climate resilience, robust infrastructure development, urban innovation and strategic branding.

3.1.3.2. Positioning within the Regional Context

Within SADC and Sub-Saharan Africa, Harare compares favourably in terms of:

- **Innovation** – comparable to Nairobi and Kigali in FinTech and digital experimentation
- **Governance and Urban Management** – aiming to emulate Gaborone and Windhoek
- **Economic Potential** – contributes ~34% of national GDP, targeting 40% by 2045.

Harare positions itself as a **regional thought leader in smart-city development**, while addressing gaps in service delivery and infrastructure to catch up with Johannesburg and Addis Ababa in terms of global investor confidence.

3.1.3.3. Positioning within Zimbabwe

Nationally, Harare is a primate city and transitioning into a metro-city since 2013:

- The political, administrative, and economic capital
- Home to the largest concentration of tertiary institutions and talent
- Anchor to national digital infrastructure and innovation clusters
- A node in national development corridors (Beitbridge-Chirundu)

Its positioning within Zimbabwe is consolidated as the **engine of national economic transformation**, tasked with leading Zimbabwe into a knowledge-based, urbanized, and investment-friendly future.

3.1.3.4. Key Strategies for Effective Positioning

The following are key strategies for effective positioning:

1. **Smart and Integrated Infrastructure:**
   – Fibre rings, AI traffic systems, smart meters
2. **Economic Diversification:**
   – Creative district, FinTech zones, investment hubs
3. **Inclusive Urbanism:**
   – 50,000 affordable units, slum upgrading, TOD
4. **Environmental Resilience:**
   – Wetland recovery, green corridors, clean energy
5. **Governance and Delivery:**
   – E-governance platforms, Harare 2045 Delivery Unit
6. **Flagship Projects:**
   – Road Interchanges, Shopping Centre Developments, Waste-to-Energy plant
7. **Global City Branding and Partnerships:**
   – MICE promotion, diaspora bonds, investor summits

3.1.3.5. The Spatial Impacts of the Vision and Positioning

The spatial transformation implied by this vision will result in:

- **Polycentric Growth** – through innovation parks and TODs outside the CBD
- **Densification** – Walk-up flats, mixed-use housing (strictly vertical use mix) in high-access and key infrastructure zones
- **Transit-Oriented Development** – BRT, Airport to New City Corridor and complete-street corridors
- **Green Space Integration** – environmental beautification, wetland protection and urban parkways

- **Economic Zoning** – Manufacturing and Creative and financial innovation districts
- **Infrastructure Corridors** – linked to national and regional logistics routes

3.1.3.6. Policies and Strategies to Support the New Vision and Positioning

1. **Urban Policy Reform:**
   – Land use intensification/ Densification, Regularisation and re-organisation of Informal Settlements, strengthening development control and updated zoning frameworks, e-zoning frameworks.
   – Land bank development
2. **Incentive Policies:**
   – Land-value capture, tax increment financing, PPP incentives
3. **Infrastructure Investment**
   – Aggressive pursuit of infrastructure development, upgrade and re-placement, PPP incentives
4. **Housing and Land Policies:**
   – Affordable housing trust, densification guidelines
5. **Environmental Regulations:**
   – Wetland buffers, ESG-linked urban projects
6. **Digital Governance Policies:**
   – Open data, e-permitting, citizen dashboards
7. **Finance Mobilisation:**
   – Expenditure Control, Diaspora green bonds, municipal bonds, blended finance
8. **Capacity Building:**
   – GIS, planning, and smart-infrastructure training programs

3.2. MASTER PLAN GOALS AND OBJECTIVES

The Goals, Objectives and Strategies are informed by a city positioning framework for the City outlined in the preceding section. The Goals and Objectives are an expression of planning intention to achieve solutions to the issues or problems, opportunities and constraints identified in the Report of Study and presented under Summary of Issues. The goals focus on broader sectoral issues while the objectives are the specific quantifiable intentions to achieve the goals. The goals and objectives will be tested for appropriateness against alternative strategies in order to select a preferred development strategy. The following goals and objectives have been identified:

3.2.1. Population Growth and Distribution

3.2.1.1. Goals and Objectives

Goal A.
City population growth to evolve with national population policy.

Objective 1
A national policy on population growth rate and control should be adopted.
Objective 2
Improve access to family planning services by planning for the establishment of family planning and health centres.

Goal B
To rationalise population distribution disparities in the city.

Objective 1
Provide opportunities for voluntary population movement through housing options and economic opportunities in growth areas and nodes.

Objective 2
Promote accumulation of critical population threshold around growth areas and nodes for demand for certain goods and services e.g through redevelopment and densification around the CBD, Hillside, Braeside, Mbare, Adbernie, Machipisa and Highfield. Apart from people enjoying proximity to work places promoting accumulation of critical population threshold can create demand for goods and services through expenditure and improvement of purchasing power.

Goal C
To address infant mortality in the city.

Objective 1
Provide access to basic health care services or primary health care facilities in deprived areas such as Southern Incorporated Areas to offset infant mortality.

Goal D
Achieve minimal disruption of life during population movement of illegal settlements, street kids and destitutes in the city.

Objective 1
Provide self-help reception centres before resettlement of all able bodied destitutes throughout the planning area.

3.2.2. Infrastructure and Land Development Potential

3.2.2.1. Goals and Objectives

Raw Water Supply

Goal A
Address underground water pollution in the city

Objective 1:
Provide inline chlorination along the supply chain

Objective 2:
Identify pollution sources and take appropriate remedial measures.

Goal B
Address siltation and water pollution in Lake Chivero

Objective 1:
Lower the cost for water purification at primary raw water supply source for the city.

Objective 2:
Manage pollution and siltation coming from the city.

Goal C
Expand raw water intake structures for Lake Manyame and expansion of Morton Jaffray for Harare West and Mt Hampden.

Objective 1:
To improve supply by 160 ML/day for Harare and 40 ML/day for Norton

Goal D
Draw water from alternative raw water supply sources such as Kunzvi Musami Dams.

Objective 1:
Kunzvi Musami to supply areas without water supply mainly Harare North and East at 250 ML/day

Goal E
Promote rainwater harvesting at household level.

Objective 1:
To reduce reliance on water grid through innovative roof-top rainwater harvesting techniques.

Water Treatment

Goal A
Upgrade and expand primary water treatment facilities.

Objective 1:
Rehabilitation of the existing intake infrastructure at Lake Chivero and Lake Manyame to Morton Jaffray for supplying water

Objective 2:
Replacement and reparative works on existing treatment plants to improve from 400 ML to 614 ML per day

Objective 3:
Construction of a dissolved air flotation plant to remove algal blooms before treatment.

Goal B
Upgrade and expand secondary water treatment facilities.

Objective 1:

- rehabilitate and improve capacity at Prince Edward from 65ML to 90ML per day
- expand capacity Prince Edward to 50 ML/day after the proposed Lyndhurst Sewer Treatment Plant is running

Water Transmission

Goal A
Upgrade water transmission infrastructure in the city and rid off non-revenue water.

Objective 1:

- Replace high lift and booster pumps in the city

Objective 2:
- Construct a ring main transmission line along Harare Drive and the Kunzvi Musami supply to improve system pressure.

Objective 3:
- Replace Asbestos Cement pipes with U PVC pipes to improve water transmission.

Objective 4:
- Replace reservoir bulk meters and at points fed to surrounding local authorities

Objective 5:
- Replace meters at the household level

Objective 6:
- Rehabilitate reservoirs.

Objective 7:
- Add 419 ML of reservoirs for the new development after rehabilitating the tanks not in use.

Objective 8:
- Replace faulty valves in transmission systems.

Objective 9:
- Add water lines in new developments within Harare

Objective 10:
- Improve fault response and billing to reduce non-revenue water

Sewer Conveyance and Treatment

Goal A

Upgrade Sewer Conveyancing infrastructure in the city and rid off sewer bursts.

Objective 1:
- Replace Asbestos Cement pipelines

Objective 2:
- Replace pipe crossings at water streams

Objective 3:
- Upgrade sewer lines in Firle and Crowborough sub-catchments to 750mm (minimum size) to accommodate densification.

Objective 4:
- Rehabilitate pump stations

Objective 5:
- Add sewer lines in new developments within Harare particularly southern incorporated areas and densification areas such as Braeside, Hillside, Mbare, Highfield etc.

Goal B

Rehabilitate and upgrade treatment plants to improve capacity.

Objective 1:

- improve existing design capacity on the following treatment plants:
    1. Firle
    2. Crowborough
    3. Marlborough
    4. Hatcliffe

Goal C

Construct new treatment plants for Donnybrook, Manyame, Southern Incorporated Areas Umwinsdale and Budiriro.

Objective 1:

- Construct new treatment plants for the following areas:
    1. Donnybrook
    2. Manyame
    3. Southern Incorporated Areas
    4. Umwinsdale
    5. Budiriro

Goal D

Promote DEWATS in areas without existing infrastructure.

Objective 1:

- To provide reticulated sewerage through DEWATS in areas without existing infrastructure and requiring inter-basin transfers such as Marlborough, Chisipite, Borrowdale, Vainona etc.

Objective 2:

- Promote DEWATS in areas without existing infrastructure as an interim measure.

Objective 3:

- Generate comprehensive design guidelines for DEWATS in areas without existing infrastructure.

Solid Waste Management and Treatment

Goal A

Address solid waste management and treatment disparities in the city.

Objective 1:

- Promote waste to energy waste management model

Objective 2:

- Improve household waste collection across the city

Objective 3:

- Clear all illegal dumpsites across the city.

Goal B
Develop a second dumpsite (as an alternative) in the Southern areas at farms adjacent to Firle Sewage Treatment Works

Objective 1:
- Improve waste collection efficiency and lower the cost of transportation of solid waste to geo-pomona site.

3.2.3. Economic Development and Employment Creation

3.2.3.1. Goals and Objectives

Industrial Growth and Development

Goal A
Promote and attract industrial growth and development in the city.

Objective 1:
- Discourage conversion of industrial land to other uses.

Objective 2:
- Provide 5-to-10-year incentives (statutory fee and building plan exemptions and tax breaks) for manufacturing oriented industries (with an employment threshold above 100 employees onsite) in the city.

Goal B
Engage central government to address factors of production which are limiting industrial activity especially reliable power, water, constrained macro-economic environment, national to extractive trade (exporting raw materials).

Objective 1:
- To lower barriers to industrial production and competitiveness

Objective 2:
- To stop extractive industrial trade (exporting raw materials) and promote utilisation of industrial space for value addition and beneficiation for chrome, lithium, gold, diamonds and agro-produce among other critical raw materials etc.

Objective 3:
- Promote green industry or circular economy in the city.

Local Economic Development

Goal A
Promote development of local economic production hubs across the city particularly across key growth nodes such as Mbare, Siyaso, Machipisa along fruit and vegetable, horticulture and market gardening, timber, steel and metal value chains.

Objective 1:
- To provide for modern industrial spaces for local economic production hubs across the city.

Objective 2:

- To provide for use of bio-degradable products or waste from industries into inputs for down streams industries.

Informal Sector

Goal A

Promote development of informal sector growth and formalisation value chains.

Objective 1:

- To designate and provide for modern flex-spaces, work spaces and informal sector hubs for across the city and in close proximity to market spaces and in the CBD.

Objective 2:

- To designate certain streets for informal trading for specific or hours of the day or days of a week.

Objective 3

- Address space barons and promote community management of informal sector hubs to improve collection of taxes and revenue to the city.

3.2.4. Resilience, Safety and Security

3.2.4.1. Goals and Objectives

Flooding

Goal A

To address spatial incidence and susceptibility to flooding events in the city.

Objective 1:

- Development a combination of strategies aimed at preventing, mitigating, and responding to flood events.

Objective 2:

- Rehabilitate drainage infrastructure in major hotspots particularly the central business district and Mbare, Highfield, Mufakose Budiriro, Glenview 1 and Southern Incorporated Areas (Hopley, Ordar, Stone Ridge, Southlea Park) etc.

Crime

Goal A

Lower Crime rates in the city.

Objective 1:

- Designate police post in major population area and business nodes.
- Capacity Building of Municipal Policy and Improved Surveillance in Crime Hotspots.

Disaster Preparedness Risk Reduction

Goal A

Low disaster risk in the city

Objective 1:

- Create a Disaster Risk Reduction Department in the City and resource it with personnel and tool of trade.
- Establish Fire Department Posts in each Region of the City.

Objective 2:

- Establish linkages of Disaster Risk Reduction Department and other related departments in the City.

Objective 3:

- Develop a Disaster Risk Reduction Policy and Framework for the City.
- Implement Disaster Risk Reduction Mechanisms.

3.2.5. Land Use

3.2.5.1. Goals and Objectives

Residential Development

Goal A

Provide for traditional land uses e.g high density, medium density, low density, and institutional uses and provide for minimum subdivision restrictions.

Objective 1:

- Designate land for all residential land use typologies and classes and densification zones including areas for renewal and regeneration.

Commercial Development

Goal B

Provide strategic nodes for all classes of commercial centres i.e. central business district, suburban shopping centres, regional shopping centres, neighbourhood shopping centres and market areas across the city following a district hierarchy.

Objective 1:

- Designate nodes for all classes of commercial centres

Industrial Development

Goal C

Designate and reserve land for industrial development i.e. General Industrial, Light Industry, Service Industry and Home Industry.

Objective 1:

- Provide land for industrial development typologies and classes and curb loss of industrial to other uses.

Economic Corridors Development

Goal D

Provide strategic zones for economic corridors and mixed use development

Objective 1:

- Designate economic corridors and mixed use land use zones along the Airport-New City freeway, Enterprise Corridor, Mutare Road Corridor, High Glen Road Corridor

Informal Settlements Regularisation, Upgrading/Re-organization and Displacement

Goal E

Provide for Regularisation/Upgrading/Re-organization and Displacement of informal settlements.

Objective 1:

- To regularise, upgrade insitu/re-organise informal settlements in the Southern Incorporated Areas and elsewhere in the city including demolishing of development on reserved lands for schools, clinics, roadways (freeways), sewer lines, powerlines, riverine areas etc.

Development Control

Goal F

To promote compliant and orderly development in the city and curb lawlessness

Objective 1:

- To provide for strengthening of the city's development control division through resourcing with essential tools of trade and adequate staffing.

Objective 2:

- To provide for near-real time monitoring and surveillance of development within the city.

Objective 3:

- To take a pro-active role to development control.

Statutory Plans Preparation

Goal G

To prepare statutory plans for the city particularly lower tier family of plans such as Local Development Plans, Local Subject Plans, Local Priority Plans etc.

Objective 1:

- To keep the master plan under constant examination in terms of Section 20 of the Regional, Town and Country Planning Act Chapter 29:12 of 1996.

- To provide for review/alteration or amendment of the master plan during the plan period.

Objective 2:

- To prepare Local Development Plans for all areas in the city starting with the following priority areas: the Central Business District, Southern Incorporated Areas, Economic and Mixed Use Corridors, Areas for Environmental Beautification and Conservation (Mukuvisi Corridor, Lake Chivero Corridor), Prepare a Local Development Plan for Portion of Upper Manyame Catchment within the planning area.

SI 216 Infusion

Goal G

To infuse SI 216 in all Local Development Plans

Objective 1:

- To provide for harmonious and orderly development in the city

3.2.6. Land Development, Management and Acquisition

3.2.6.1. Goals and Objectives

City Land Bank Development

Goal A

To grow the depleted city land bank

Objective 1:

- To stop continued acquisition of city land for private land hoarding or development

Objective 2:

- To improve the city's wealth and credit worthiness through asset base growth.

Objective 3:

- To receive all subdivision endowment monies in kind or through land and to receive transfers all land not transferred or claimed paid to the city for endowment purposes.

Objective 4:

- To review performance of those leases of leased residential, commercial, institutional, recreational and industrial land spread across the city
- To cancel all non-performing agreements or joint ventures to develop municipal lands or leases not implemented and repossess council land incumbered by non-performing agreements or leases within six months from the date of operation of this master plan.

Goal

Promote the development of City Land Bank and stewardship of the same to avoid depletion,

Objective 1

- Exercise austerity in land allocation to competing uses and in the process of development as the land bank for the city is fast dwindling and no room for incorporation of surrounding farms,

Objective 2

- Development freeze on all self-help housing schemes. All subdivisions and development at the urban boundary and within the city boundary without requisite infrastructure seeking connection to municipal services are considered premature and frozen pending incorporation and extension of bulk infrastructure services.

Objective 3

- Repossess land or cancel or renegotiate (the terms) agreements of all forms relating to Municipal Land undeveloped and locked in non-functional or operative development schemes.

Objective 4

- Freeze allocation of municipal land for lease or acquisition for the next 10 years in order to growth the city's land bank which improves the city's bankability ratings and access to finance with exception of critical sectors such as low-income housing, SMEs facilities and manufacturing oriented industrial development,

Objective 5

- Payment of endowment fees shall be in kind through land as opposed to cash to grow the city's land bank as well as hedge value for the estates account.

Objective 6

- Prioritise receipts of all land in private hands yet to be surrendered to city.

Objective 7

- Ensure densification by reducing subdivision sizes in previously ultra-low density residential areas,

Objective 8

- Cancel or where in the interest of the city renegotiate all leases on council buildings and properties and mainstream value sharing over and above rental receipts as opposed rental receipts,

Objective 9

- Regularise, re-organise and replan (including displacement where regularisation and re-organisation) illegal settlements in the southern incorporated areas,

Objective 10

- Densify areas (through vertical growth) close to existing infrastructure (consider infrastructure upgrades) to improve efficiency,

Objective 11

- Preserve industrial land from conversion triggered by the presently inactivity or slump in industrial development.

Objective 12

- Acquire all lands under absentee ownership to release such land to active use or development.

Land for Limited Lateral Expansion

Goal A

Out of necessity and strategic importance negotiate with the State, surrounding Local Authorities and private landowners for acquisition of land earmarked for limited lateral expansion.

Objective 1:

- To acquire land for limited lateral expansion around Lake Chivero and its environs to the South and Noth-West as a strategic resource for water resource development as shown on the land use proposals map.

Objective 2:

- To provide for stewardship and management of Lake Chivero and its environs as a strategic resource for water resource development for Harare and Metro region.

3.2.7. Housing Development and Rented Accommodation

3.2.7.1. Goals and Objectives

Goal A

Address housing shortage through provision of rented accommodation.

Objective 1:

- To shift from provision of stands (home ownership) to provision of rented accommodation for low to middle income brackets.

Objective 2:

- Council should revert to being the main provider of serviced land for housing on existing municipal land, land acquired from limited literal expansion or land received from endowments payments

Goal B

To ensure equitable development of all residential typologies to lower the housing access disparities and achieve the shelter for all targets for the planning period.

Objective 1:

- Promote flats housing development and regenerate or renew old and dilapidated apartments in areas such Mbare Matapi and Ma Joburg Flats.,

Objective 2:

- Preserve historic suburbs such as Mbare, Highfield and Mufakose in the process of regeneration,

Objective 3:

- Balance the proportion of residential land typologies through prioritising low income/low-cost high density and medium density residential use.

Objective 4:

- Promote mixed densities in residential subdivisions to address existing disparities and improve community vibrancy and competitiveness of housing product typologies,

Objective 5:

- Encourage smart growth through development of flats or apartments in all residential areas and around the central business district,

Objective 6:

- Ensure relaxation of height restrictions for residential development to ensure use of vertical space to minimise unsustainable lateral expansion of the city without services,

Objective 7:

- To make available serviced municipal stands for all types of housing and ban participation of self-help housing schemes and cooperatives in housing delivery,

Objective 8:

- Cancel all non-performing agreements for housing development on municipal land,

Objective 9:

- Develop a city housing policy consistent to national policy and internation conventions including tracking the housing waiting list and ensuring housing land is made available to first time homeowners.

Objective 10:

- Only allocate stands to first time homeowners to address existing housing disparities.

3.2.8. Social Amenities and Health Facilities

3.2.8.1. Goals and Objectives

Goal A

To ensure development and maintenance of social amenities and health facilities in the city to address all social dimensions aiming to improve access to quality health care, enhance quality of life and reduce inequalities.

Objective 1:

- establish public educational facilities in low-income neighbourhoods and redress existing gaps and inequalities in educational levels and offset ‘hot seatings’,

Objective 2:

- establish vocational training centres around critical skills particularly income neighbourhoods.

Objective 3:

- to establish and refurbish council owned community health facilities in all neighbourhoods and ensuring they are equipped state of the art facilities and motivated workforce.

Objective 4:

- Encourage development of a major hospital and provide morden maternity health facilities and community services in high density residential areas,

Objective 5:

- Establish new and refurbish existing sporting facilities in the city as well as programmes to engender private sector participation and attract talent in the city.

Objective 6:

- Refurbish and maintain public parks including development of support or ancillary facilities and ensuring public safety.

Objective 7:

- Encourage and attract hosting of mega social events in the city to ignite vibrancy and social enterprise in the city.

3.2.9. Commercial Development

3.2.9.1. Goals and Objectives

Goal A

Establish a modern, vibrant, attractive and 24hr Central Business District

Objective 1:

- Prepare a new local development plan for the Central Business District,

Objective 2:

- encourage revitalisation, regeneration, re-development and upgrades to facades, street furniture and buildings in the central business district and

Objective 3:

- De-congest the Central Business District

Objective 4:

- Prohibit compartmentalisation of shop spaces in the Central Business District

Objective 5:

- Encourage property owners to redevelop or regenerate old and dilapidated buildings in Central Business District,

Objective 5:

- Promote development of flexi-spaces without stringent permitting or zoning restrictions space usage to conform to variability in demand for spaces usage by product typologies

Objective 5:

- Develop a Local Development Plan that allow for the development and repurposing of existing buildings to vertically integrated mixed-use structures,

Objective 6:

- Promote development of flexi-spaces without stringent permitting or zoning restrictions space usage to conform to variability in demand for spaces usage by product typologies

Objective 7:

- Discourage invasion of Central Business District by Motor Mechanics, Wholesale Business and Agro-Retail Industrial Uses.

Objective 8:

- Ban informal traders from pavement trade adjacent to an established or major retailer, invasion of Central Business District by Wholesale Business and Agro-Retail Industrial Uses.

Objective 9:

- Designate dedicated spaces for informal traders in the Central Business District.

Goal B

Promote the development and redevelopment of neighbourhood commercial centres closer to where people live.

Objective 1:

- Encourage development of neighbourhood shopping facilities.

Objective 2:

- Revitalise suburban commercial nodes such Machipisa, Mbare, Zindoga etc.

3.2.10. Economic Development and Employment Creation

3.2.10.1. Goals and Objectives

Goal A.
Designate industrial zones in the in the city
Objective 1:
- Reserve spaces for all classes of general industry, light industry, service industry and home industry industrial uses and discourage conversion of industrial land/spaces to any other uses.

Objective 2:
- Reserve spaces for industrial uses and discourage conversion or compartmentalisation of industrial spaces to any other uses.

Objective 3:
- Encourage development of value addition and beneficiation facilities through tax breaks and other relevant incentives,

Objective 4:
- Encourage re-development of dilapidated industrial buildings,

Objective 5:
- Ensure all industrial areas are well linked with efficient transportation routes and within close proximity to major population centres,

Goal B.
Create an environment conducive for industrial development in the city
Objective 1:
- Reserve power supply for all industrial districts to lower cost of production,

Objective 2:
- Reserve Water Supply for all industrial districts to lower cost of production,

3.2.11. Environmental Protection and Conservation

3.2.11.1. Goals and Objectives

Goal A:
Protect sensitive ecosystems and critical natural habitats from fragmentation and disturbance
Objective 1:
- Designate sensitive ecosystems and critical natural habitats in the city.

Objective 2:
- Designate critical wetlands in the city.

Objective 3:
- Designate Areas of natural beauty as protected areas

Objective 4:
- Conserve of river courses and water supply resources through enforcement on Streambank Cultivation.

Objective 5:
- Designate environmental enhancement areas for the following areas; Mukuvisi Corridor, Monavale-Marimba Corridor, Lake Chivero and Cleveland Dam etc

Objective 6:

- Promote tourist amenities ie in corridors mukuvisi, Cleveland Dam, Lake Chivero area

Objective 7:
- Contain urban sprawl with greenbelts

Objective 8:
- Prepare Statutory Plans (LDPs), Environmental Action Plans and undertake rehabilitation programs for Conservation Areas

Objective 9:
- Ensure EIA are approved by the EMA for all development projects before commencement,

Objective 10:
- Acquire (State and/Local Authority) land designated as critical ecosystems and habitat and or wetlands in the city,

Objective 11:
- Designate the city a wetland city,

Objective 12:
- Undertake a detailed study of all properties with existing use rights blighted by the EMA Wetlands Gazette and negotiate with EMA and critical stakeholders.

Goal B:
Contain land, air and water pollution in the city.
Objective 1:
- Ensure collection of refuse or solid waste in the city

Objective 2:
- Clear all illegal dumpsites and enforce of waste dumping in the city

Objective 3:
- Install bins all public areas in the city

Objective 4:
- Promote reuse and recycling and waste separation from source in the city

Objective 5:
- Rehabilitate all sewerage bursts to contain faecal contaminant of underground water resources in the city

Objective 6:
- Rehabilitate all sewerage treatment plants and contain waste pumping into Lake Chivero

Objective 7:
- Rehabilitate and protect Lake Chivero through catchment management plan and strategies.

Objective 8:
- Designate a second dumpsite in Harare South to improve waste collection efficiency.

Objective 9:
- Encourage waste to energy waste management practices and well as enter meaningful partnerships to manage waste in the city.

3.2.12. Financial Self Sufficiency of Council

3.2.12.1. Goals and Objectives

Goal A.
To ensure the continued financial self-sufficiency of council over the plan period and beyond.
Objective 1:

- To provide an integrated but flexible development strategy which will enable implementation of proposals within the financial, technical and personnel constraints of council,

Objective 2:

- Encourage joint ventures between council and private sector to improve financial ability of council deliver critical infrastructure projects and service delivery,

Objective 3:

- Streamline annual budgets with the master plan projects and programmes to minimise implementation of off-track initiatives and programmes,

Goal B.

Balance recurrent consumptive and capital expenditure

Objective 1:

- Cut recurrent consumptive to hedge funds for capital expenditure,

Objective 2:

- Review lease fees for properties being used for commercial purposes,

3.2.13. Infrastructure Development

3.2.13.1. Goals and Objectives

Traffic and Transportation

Goal A.

To develop integrated, efficient and modern public transport system in the city

Objective 1:

- Create dedicated lanes for Public Passenger vehicles only to improve efficiency, conveniency and ridership. Phase out commuter omnibuses in the next 2 years

Objective 2:

- Hedge foreign currency for importation of conventional buses and encourage private sector investment in conventional buses and incentives for a period of 5 years including tax exemptions on spare parts for the same period,

Objective 3:

- Promote development of a light rail mass transport system to serve all major population areas thought PPPs,

Objective 4:

- Phase out commuter omnibuses in the next 2 years

Objective 5:

- Immediately ban pirate taxis to the full extent of the city.

Objective 6:

- Establish a regional bus terminal and interchange Mbare Site, National Railways and associated link roads to regional roads.

Objective 7:

- Prioritise development of shelters at bus stops and terminals to protect passengers from adverse weather.

Objective 8:

- Designate new bus stops across the city to respond to improvements in the transportation system.

Goal B.

Develop an efficient city-wide Non-Motorised Transport System

Objective 1:

- Create cycle tracks along all major roads throughout the city

Objective 2:

- Create a continuously network of cycle tracks and walkways in all public open spaces throughout the city.

Goal C.

Improve traffic flow throughout all major intersections and traffic corridors.

Objective 1:

- Construct mini-interchanges at all major intersections throughout the city namely Rothmans and Simon Mazorodze, Simon Mazorodze and Remembrance Drive, Litton and Paisely, Crips and Seke Road, Chiremba and Glenarah Ave, E.D Mnangagwa Road and Samora Machel, Mutare Road and Mutare Road, Mutare Road and Delport Road Second Street and Harare Drive, Nemakonde and Harare Drive.

Objective 2:

- Grade level separate traffic along all national roads,

Objective 3:

- Widen all national roads and district distributors roads to anticipate future growth during the planning period

Water Reticulation

Goal A.

To overhaul the water infrastructure in the city

Objective 1:

- To replace all older pipes within the distribution network

Sewerage Reticulation

Goal A.

Create an environment conducive for industrial development in the city

Objective 1:

Road Network

Goal A.

Create an environment conducive for industrial development in the city

Objective 1:

Energy and Power Supply

Goal A.

Achieve energy self-sufficiency in the city

Objective 1:

- To encourage the use of Off-Grid Sources of Energy in the city.

Objective 2:

- All households in Harare to have at least a 5KW solar system within the next 5years and encouraged to feed excess power into the grip,

Objective 3:

- Engage central government to offer a 2 year tax break incentive for solar products for Harare residents,

Objective 4:

- Develop a solar plant in Harare South within area of Limited Lateral Expansion,

Objective 4:

- Engage with central government and energy parastals for return of City of Harare Power Plant to the City of Harare

Information Communication Technology

Goal A.

To develop a vibrant technology ecosystem in the city

Objective 1:

- To reserve space for ICT infrastructure distribution and place priority to underserved regions,

Objective 2:

- To lower barriers to technology penetration in the city through development of community internet facilities

Objective 3:

- Prioritise development (including allocating land to initiatives with a wider impact) flexi-spaces for tech innovation within the city to power the 4^{th} industrial revolution and artificial intelligence in city.

Objective 4:

- Encourage development of spared infrastructure to address damage to road infrastructure

3.3. DEVELOPMENT STRATEGIES

3.3.1. Population Growth Projections and Future Growth Strategies

3.3.1.1. Population Growth and Distribution Patterns

The City of Harare experienced phenomenal growth since 1960s to 1990s (See Figure 1.1) This growth stabilised up to the 2020 period during which the population has been growing with declining rates. The limited growth trend could possibly be due to out-migration during this time to neighbouring urban nodes like Chitungwiza, Epworth, Norton, Ruwa and adjacent Rural District Council areas (peri-urban developments). Factoring in the effects of densification there is an expectation of an upward spike in population growth for Harare from 2026 to around 2030 beyond which the population growth is expected to stabilize. (See Figure 3.2). The scenario reflects an overall fall in migration pattern, especially in the later period, and also areas approaching saturation. But more importantly, it is a resultant phenomenon of the much faster growth rates in the outlying regions.

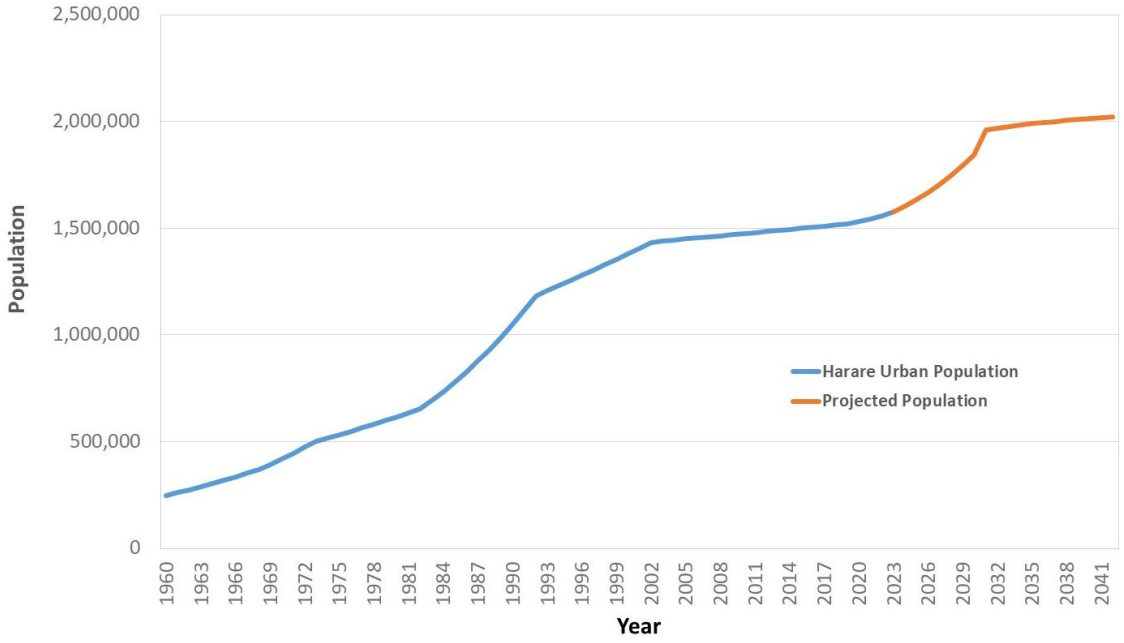

Figure 3.2: Harare Population Historical and Projected Growth (1960-2042)

Data estimates from year 2022 (base year for population projection for this study) up to 2042 for three major urban nodes (Chitungwiza, Epworth and Harare) shows Harare still dominating the metropolitan area in terms of population concentration (contributing between 76% to 77%) (See Tables 3.14 and .15). These estimates equate to three quarters of the total growth of the three major urban centres (Chitungwiza, Epworth and Harare) population in the 20-year planning period. A few factors have been considered to be pivotal during this time to influence the growth pattern onwards in Harare: -Regularisation and in situ upgrading of the settlements in the Southern Incorporated Areas, urban renewal (Flats and Clusters) in old suburbs like Mbare, Highfield, Marlborough, Avondale West, and areas around the CBD like Braeside, Cranborne, Hillside and Eastlea) and light rail systems and another north-south

traffic corridor coming into operation linking major development nodes and loosening the necessity of centrality.

Table 3.14: Projected Population Growth in three Major Urban Centres 2022-2042

Year	Harare Urban	Chitungwiza	Epworth	Total
2022	1,849,167	371,179	206,367	2,426,713
2023	1,866,283	374,556	208,210	2,449,049
2024	1,881,844	377,580	209,860	2,469,284
2025	1,896,091	380,243	211,256	2,487,590
2026	1,909,353	382,641	212,416	2,504,410
2027	1,921,520	385,050	213,488	2,520,058
2028	1,932,853	387,174	214,396	2,534,423
2029	1,943,153	389,125	215,179	2,547,457
2030	1,952,532	390,776	215,783	2,559,091
2031	1,961,243	392,118	216,259	2,569,620
2032	1,969,119	393,473	216,677	2,579,269
2033	1,976,429	394,666	216,992	2,588,087
2034	1,983,142	395,798	217,249	2,596,189
2035	1,989,349	396,745	217,420	2,603,514
2036	1,994,999	397,520	217,512	2,610,031
2037	2,000,257	398,227	217,541	2,616,025
2038	2,005,135	398,842	217,528	2,621,505
2039	2,009,544	399,413	217,504	2,626,461
2040	2,013,447	399,918	217,413	2,630,778
2041	2,016,823	400,302	217,271	2,634,396
2042	2,019,856	400,435	217,105	2,637,396

Table 3.15: Percentage Projected Contribution to Population Growth by three Major Urban Centres 2022-2042

Year	Harare	Chitungwiza	Epworth	Total
2022	76%	15%	9%	100%
2023	76%	15%	9%	100%
2024	76%	15%	8%	100%
2025	76%	15%	8%	100%
2026	76%	15%	8%	100%
2027	76%	15%	8%	100%
2028	76%	15%	8%	100%
2029	76%	15%	8%	100%
2030	76%	15%	8%	100%
2031	76%	15%	8%	100%
2032	76%	15%	8%	100%
2033	76%	15%	8%	100%
2034	76%	15%	8%	100%
2035	76%	15%	8%	100%
2036	76%	15%	8%	100%

2037	76%	15%	8%	100%
2038	76%	15%	8%	100%
2039	77%	15%	8%	100%
2040	77%	15%	8%	100%
2041	77%	15%	8%	100%
2042	77%	15%	8%	100%

3.3.1.2. Future Development Initiatives Driving Population Movement

Key components of the expected Transportation Development Initiative system include:

(1) the link from CBD, connecting the western high density suburbs terminating in Dzivaresekwa,

(2) development of the corridor linking Robert Mugabe International Airport to the New City and

(3) the High Glen Road-Nemakonde Road Link to Charles Prince Airport,

It is anticipated that the higher levels of mobility along with more choices of location for living and potential job opportunities will result in internal migration within the metropolitan from the outer to the central node of the (Harare) region before it reaches the saturation point. Overall, despite the high growth rates of the outer nodes, Harare will still hold majority of population. This is because its metro share has been overwhelming to begin with, and it is expected to retain its prominence with its very high levels of goods and services. It is logical that any growth strategy, therefore, prescribes not the limiting of the growth of core part (Harare) but accommodating the expected rapid growth of the outlying regions where feasible in a planned and coordinated manner into Harare within the plan period.

3.3.1.3. Future Spatial Growth Strategies

As a logical follow up to projected population growth and distribution and planned development initiatives driving population movement an attempt was made to explore development strategies to accommodate the expected growth in spatial terms. The exercise involved the generation of alternative scenarios utilising issues identified and transforming them into operational frameworks for development. Alternative development strategies were thus formulated based on spatial allocation of land and infrastructure, prevailing and anticipated constraints for development. The following three development strategies were identified:

1. **Containment and Densification** (develop within current boundary, promote vertical expansion, intensification (reduction in minimum subdivisions), Urban Renewal (retrofitting, re-development) (See Figure 1.2)

Figure 3.3: Containment and Densification Strategy

2. **Limited lateral Expansion** (limiting horizontal expansion to strategic nodes, corridors or places outside the city boundary). The logic stems from the growth of Harare at the centre of a growing metropole. In this strategy Harare would be given special considerations to manage strategic resources (westward expansion - to manage Lake Chivero not only for urban growth but to accord the city an opportunity to manage pollution coming from the city and also that's where the city's water treatment works are located) incorporate Chrles Prince Airport and the land south of it through Lake Chivero up to Masvingo Road and bounded by Skyline Road. Of necessity certain lands need to be managed (jointly by Harare and the state) especially the strategic water resources (see figure 1.3).

Figure 3.4: Limited lateral Expansion Strategy

3. **Hybrid Development Strategy (combination** of the above 2) recognising that Strategy (1) and (2) are not mutually exclusive. It is inevitable that Harare needs to expand following a combination of concentric and radial urban structure recognising the CBD as the core and axial routes radiating outwards from the centre also linked through ring roads proposed and existing (See figure 1.4). Under Hybrid Development Strategy is it envisaged that:
    a) Key Infrastructure of Regional and National significant will be unlocked namely: (1) the Masvingo Road-Bulawayo Road Link; (2) Masvingo Road-Mutare Road Link; (3) Mutare Road-Nyamapanda Road Link; (4) Nyamapanda Road-Mazowe to Nemakonde Road Link and the Bulawayo Road- Nemakonde Road Link. This trunk infrastructure will redefine movement patterns, regional logistics, trade and financial and commodity flows.
    b) Water Resources are at the core of life. The precarious state of Lake Chivero and its life forms will be a major determining factor of urban sustainability in the metropole. It is critical that a broad-based strategy for development and conservation inspire Harare Residents and the City to take up a leadership role to steward the critical resource. Any alternative growth strategy for Harare will be anchored not ecosystem management of the significant part of the upper Manyame catchment. An Catchment Management Plan will have to be prepared following the gazetting of this master plan to pivot interventions and investment required.

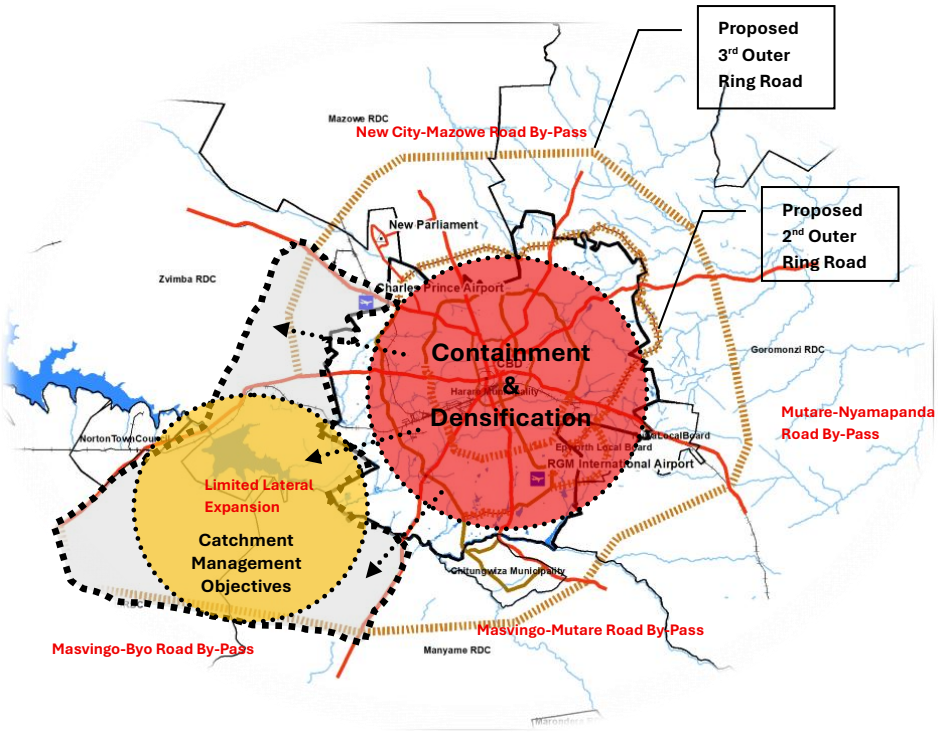

Figure 3.5: Hybrid Development Strategy

3.3.1.4. Context for the Strategy

One of the strategic options considered by Harare Master Plan was Retaining the Status Quo with densification, urban regeneration, development nodes and corridors forming the key drivers for development. In this strategy, focus will mainly be on minimising the time one takes to travel to the city centre and other major employment hubs. This option was ruled out as it is too restrictive and does not address pressing development needs of Harare as well as adjoin development nodes.

Another option was the 'Westward Expansion' of the city towards Lake Chivero and Prince Charles Airport (Limited Lateral Expansion). Central to this strategy is the fact that Harare would take a joint responsibility of managing the Lake and its environs and protect water treatment facilities which are key and beneficial to adjacent urban nodes. Although the supporting study pointed out many positive features of this option, it was considered as limited to be relied upon as the sole development strategy hence the need to a Hybrid model with emphasis on further densification of the existing built up area and accelerating growth in the fringe areas (Westward Expansion).

3.3.1.5. Guiding Principles

The main driver of the proposed concept is to create decentralized concentration i.e. diffusing the major functions performed by the core city and redistributing it to different urban nodes and corridors within the regional boundary of Harare. This will help create a hierarchical framework of different magnitudes of development providing corresponding levels of services and employment opportunities. Main components of the concept are:

1. Revitalising older suburbs and the CBD,
2. Regularising and reorganising unplanned settlements,
3. Changing urban structure

4. Reducing trip generation and traffic and
5. Enhancing local accessibility.

3.3.1.6. Key Features of the Strategy

1. Decentralizing Urban Functions

Redistributing major functions of core city to other development centres and corridors within the planning area is deemed to release the pressure currently experienced by the CBD. The aim is to use the existing urban footprint and infrastructure in those centres. On one hand, this would free up over densification of the core and assist in regeneration efforts, on the other hand, relocation of urban services means availability of those services nearer to living places. In line with this strategy, it is also suggested to promote future new developments on the western direction towards Lake Chivero and beyond. It is justifiable to consider future developments toward this direction with completion of proper flood protection measures along the Mukuvisi, Manyame and Mubvinzi Rivers. When diversifying the growth axis to other corridors like Enterprise Corridor, Aiport to New City Corridor, High Glen Corridor it is also crucial to link the already developed and proposed New City in the North.

2. Making a Structured Network of Hierarchical Urban Places

Designating certain level of hierarchy of centres based on level of service and function will create a structured urban space system/pattern. For instance, a local/community centre would be providing basic daily needs and local level demands while the core, at the top of the hierarchy, would have very high-level service supply that the city needs in addition to the services other lower tier centres provide. Along these considerations development will be directed to a series of development nodes.

3. Integration of Spatial Development with Transport and River Corridors

Planning nodes of activity along or near major transport and river corridors is intended for high levels of accessibility and environmental protection and stream bank development. This will entail purposefully putting public uses closer to major transit or public transport routes. This would imply lesser traveling for different activities between centres and also reduced trip length for in-centre activities.

4. Creating opportunities for compact development by focusing on activities in centres

The essence of the basic concept is promotional in nature by challenging development efforts to strategically located nodes. These range from intersections, transport hubs, critical points around which different public functions and urban services gather and grow. This framework is intended to set the basis for urban growth and service delivery for the city areas. Accumulation of the non-residential uses close to each other and to transport corridors is the underlying instrument that helps manifest this structure on ground. Although there would be certain restrictive mechanisms in place to protect sensitive areas, it would be underpinned by incentives to develop close to centres, shifting the focus away from fringe area development.

4. PART III: POLICIES AND PROPOSALS

Part III builds on the Goals, Objectives, and Strategies outlined in the preceding section to formulate Policies and Proposals including capital project identification and justification of proposals.

4.1. LONG TERM POLICY FRAMEWORK

4.1.1. Urban Structure

Policy 1: Promote compact urban development and well connected and hierarchical networked development nodes within city

Policy 2: Revitalize the and recast land use of the underutilized areas (residential, commercial and industrial)

Policy 3: Facilitate thriving economic activities by means of sustainable and inclusive planning

Policy 4: Establish effective linkages promoting a vibrant regional connectivity to foster the development in regional centres.

Policy 5: Prudently guide the developments in multiple activity centres or nodes through growth management plans.

4.1.2. Land Use

Policy 6: Plan for Land Use the following Land Use Zones throughout the city:

(i) Residential Zone: This zone shall comprise of High Density, Medium Density, Low Density, Clusters and Flats.

(ii) Commercial Zone: This zone shall comprise of the Mixed Use Zone, Central Business District, Suburban Shopping Centres, Regional Shopping Centres, Neighbourhood Shopping Centres, Local Shopping Centres and Markets.

(iii) Industrial Zone: This zone shall comprise of General Industry, Light Industry and Service Industry.

(iv) Public Establishments: This zone shall comprise of Public Buildings and Uses, Educational Facilities, State Institutions e.t.c

(v) Reservations: This zone shall comprise of Open Space Reservations, Roads, Wetlands, Areas Reserved for Environmental Beautification, Parks etc.

Policy 7: Plan for a strong Central Business District supported with vibrant development activity along major transportation corridors and multiple activity centres spread throughout all major population areas.

Policy 8: Plan all future developments focusing proposed strategic zones, urban core centre, regional centres, sub-regional centres, specialized centres and corridors and community centres

Policy 9: Plan for options required for establishing well connectivity among inter and intra zones and centres

Policy 10: Plan for establishing regional viz-a-viz national connectivity with zones and centres

Policy 11: Immediate Ban of Parallel Development in the city for the next 20 years (No Development Schemes shall be issued compliance and service responsibilities taken up by the city without compliance to provision of require infrastructure and services).

Policy 12: Ban Regularisation of Illegal Developments with immediate effect (The Rule of Law is not for sale or compromise).

Policy 13: All Endowment Monies shall be received (in kind) or paid through Land. Serve for where the subdivision scheme is for special circumstances such as inheritance or creates less than 5 stands (any subdivision scheme creating >5 stands shall pay endowment in land).

Policy 14: Cluster Land Use and Housing Policy to be adopted within the next 12months (No clusters shall be permitted whatsoever without express contribution towards offsite infrastructure).

Policy 15: 40% of all Residential Housing Schemes to be reserved for Flats (Walk-up Falts and not Clusters) consistent with National Human Settlements Policy.

Policy 16: Ban on use of chromadec walls (on non-brick and concrete materials) on all buildings in Mixed Use Zones in the city (Comply with Model Building By-Laws). Existing buildings to comply with redevelopment within 5 months of the gazetting date of this master plan or be demolished.

Policy 17: No Development or Town Planning Permits shall be issued to Densification Areas before provision or upgraded on major truck infrastructure, any such applications for permits prior to infrastructure upgrades shall be deemed premature.

Policy 18: Increase densities in existing low density housing areas to technically unobtrusive minimum subdivision densities following provision of sewerage reticulation or use septic tank/soak way

Policy 19: Permit Double Storey Building Types for New Medium and High Density housing areas (all new redevelopments to comply to new policy) on technically unobtrusive minimum subdivision densities of 350sqm and above and provide for innovative design to improve privacy.

4.1.3. Statutory Plans

Policy 20: Comply with the provisions of Part IV of the Regional Town and Country Planning Act, 1996 as amended and the General Master and Local Plan Regulations of 1977.

Policy 21: Keep the Master Plan under review and set a schedule (work programme) for the preparation of local plans.

Policy 22: With Immediate Effect Review and Align all Local Development Plans, Local Subject Plans, Local Priority Plans with this Master Plan.

Policy 23: Prepare Local Development Plans, Local Subject Plans, Local Priority Plans for the following areas as a matter of priority:

(i) Upper Manyame Catchment Priority Plan (Area covering Lake Chivero and the Major River Corridors and Wetlands in the Watershed)
(ii) City Centre Local Development Plan
(iii)'Southern Incorporated Areas
(iv)Mbare-Msika-Siyaso Local Development Plan
(v) Ardbennie-Workington-Graniteside Local Development Plan
(vi)Aerocity Local Development Plan
(vii) Airport-New City Economic Corridor
(viii) All Local Density Areas to respond to Densification Thrust of the Master Plan

4.1.4. Natural Environment

Policy 24: Protect and preserve places of special uses, open space and heritage value

Policy 25: Create energy efficient and comprehensive risk sensitive land use planning

Policy 26: Adequate options in plans to preserve and provide sufficient green areas in and around Harare to preserve all possible natural environment in and around Harare

Policy 27: Protect flood plains for reducing flood vulnerability, absorbing heat generated by 'urban heat island', preserving bio-diversity, and providing breathing space

Policy 28: Plan for reducing the level of environmental pollution

Policy 29: Introduce effective Effluent Treatment Plants (ETP) in all major industrial enterprises

Policy 30: All major physical development projects should be subjected to environmental impact assessments before implementation.

Policy 31: Impose buffer zones along major river corridors and areas of outstanding natural beauty (ecological systems).

Policy 32: Conserve buildings of historic interest and architectural merit.

Policy 33: Co-ordinate Development of a New Dump Site in Harare South and adoption of the Waste to Energy Model and waste recycling.

Policy 34: Reclaim the old brickfields in the Mount Hampden area (under the limited lateral expansion zone) by refuse infill or other alternatives.

Policy 35: Designate areas of outstanding natural beauty and natural habitat as protected areas and, where feasible, create nature reserves ad national parks.

Policy 36: Create Minimum Vehicle Pollution Standards and ban non-compliant vehicles within the next 5 years.

4.1.5. Population

Policy 37: City population growth to evolve with national population policy (policy on population growth rate and control)

Policy 38: Reduce Infant Mortality (from 20.4% to <1.5%) in the city to less than and improve life expectancy at birth from 69.9% to >95% in the next 5 years.

Policy 39: Access to basic health care services or primary health care facilities in deprived areas such as Southern Incorporated Areas to offset infant mortality.

Policy 40: Rationalise population distribution and service disparities (Wards with highest population in the city to be given priority esp. Ward 1).

Policy 41: Provide opportunities for voluntary population movement through housing options and economic opportunities in growth areas and nodes during the plan period.

Policy 42: Promote accumulation of critical population threshold around growth areas and nodes to improve demand for certain goods and services e.g through redevelopment and densification around the CBD, Hillside, Braeside, Mbare, Adbernie, Machipisa and Highfield (Apart from people enjoying proximity to work places promoting accumulation of critical population threshold can create demand for goods and services through expenditure and improvement of purchasing power) during the plan period.

Policy 43: Local Planning Authority to Adopt a Standard of Living Policy.

Policy 44: Put into effect population resettlement strategies for homeless migrants, street kids and informal settlers where regularisation is not an option such as the GunHill Informal Settlement

4.1.6. Commercial Development

Policy 45: Recognise the Harare Central Business District as the core of the Metro Region and City and put into effect redevelopment, urban renewal and revitalisation strategies for its transformation into a vibrant centre of business (Adopt measures to de-congest the Harare Central Business District with immediate effect).

Policy 46: Ban industrial use, Motor vehicle on street servicing and wholesale trade from the Harare Central Business District as within 12 months.

Policy 47: Expand the Harare Central Business District as shown on the proposals map with immediate effect and reserve areas for flats and for flats development only and no change of use to non-residential/flats use is permitted.

Policy 48: Create Mixed Use Economic Corridor Zones throughout the City starting with the Airport-New City Economic Corridor, Trabablas Interchange-High Glen to Nemakonde Mixed Use Corridor, E.D Mnangagwa Road Economic Corridor, Solomon Mujuru Economic Corridor and Mutare Road Economic Corridor and adopt measures to promote vibrant developments

Policy 49: Ensure that the population throughout the city is within easy access to competitive commercial outlets for ordinary day-to-day shopping needs of households.

Policy 50: Provide a balanced supply and hierarchy of commercial outlets and shopping centres (the Central Business District, Suburban Commercial, Regional Shopping Centres, Neighbourhood Shopping Centres, Local Shops etc) commensurate with population densities throughout the city.

Policy 51: Encourage development of new commercial outlets and or shopping centres to supplement existing ones in cases where a considerable size of the population has to travel long distances for shopping purposes.

Policy 52: Realise and encourage the role played by the informal sector by providing built facilities, flexi-spaces supported by the necessary public infrastructure needed by emerging small scale business people in this sector.

Policy 53: Develop and informal sector trading and management policy to manage negative externalities and mainstream the sector into the mainstream economy.

Policy 54: Develop Policies and Strategies to address conflict between the informal and formal sectors. Designate sites (streets/roads) from where vendors can operate hygienically throughout the C.B.Ds of urban centres of the planning

Policy 55: Develop a Policy for Fruit and Vegetable Value Chains and provide support infrastructure for fresh farm produce wholesale markets such as storage and refrigeration facilities at Market Places.

4.1.7. Housing

Policy 56: Adopt a Rented Accommodation Housing Policy for the City to amplify focus provision of rented housing (consider PPPs and Joint Ventures with private equity) as opposed to homeownership for city dwellers in accordance with the need of the increasing population. Rented Accommodation Policy. (Provide sufficient amount and choice of rented accommodation to complement that provided for purchase).

Policy 57: Halt Allocation for Stands for Housing for the next 20 years to allow for a shift to Mass Production of Rented Accommodation (Walk-up Flats) in accordance with the need of the increasing population.

Policy 58: Halt Allocation for Stands to Housing Corporatives or any related Self Help Housing Schemes for the next 20 years to allow for a shift to Mass Production of Rented Accommodation (Walk-up Flats) in accordance with the need of the increasing population.

Policy 59: Cancel all Non-performing MOUs/MOAs for Housing Corporatives and Pay-Schemes and Repossess allocated Land into the City's Land Bank.

Policy 60: No renewal of Housing Leases (with immediate effect) and Repossess all Housing Land that has not been developed within one month of the gazette of the master plan.

Policy 61: Cluster Land Use and Housing Policy to be adopted within the next 12months (No clusters shall be permitted whatsoever without express contribution towards offsite infrastructure).

Policy 62: Locate housing close to workplaces in a decentralized manner Increase housing supply for low- and middle-income group of people.

Policy 63: City Housing Policy to evolve with National Human Settlements Policy and International Covenants Zimbabwe is a signatory to.

Policy 64: 40% of all Residential Housing Schemes to be reserved for Flats (Walk-up Falts and not Clusters) consistent with National Human Settlements Policy.

Policy 65: Ban on multi-tenancy exceeding 2 families in single family dwelling unit.

Policy 66: Create planned and environmentally sound neighbourhoods consistent with new urbanism and smart growth principles.

4.1.8. Community and Social/Recreational Facilities

Policy 67: Plan for identifying suitable locations for developing public toilets and all public toilets to be operated by the Local Authority and not for Leasing.

Policy 68: Plan for school zoning concept to reduce travel demand for educational facilities.

Policy 69: Ban Lease or Sale of School Sites for Public Schools and ensure an adequate provision of public education and health facilities as dictated by the population growth rate and distribution.

Policy 70: Provision of healthcare facilities proportionate to future population and current service provision disparities.

Policy 71: Provision of regional open space systems should be developed into high quality recreational and scenic resorts for the tourist industry and motorised recreation.

Policy 72: Provide accessible passive and active recreational facilities to satisfy the demand for such by both motorist and non-motorist recreation pursuers.

Policy 73: Provide health and educational facilities throughout the planning area to meet national standards especially densification zones, southern incorporated areas and in new housing areas.

Policy 74: Develop or permit the development of the Mukuvisi, Marimba, Manyame River and Lake Chivero Corridors into a major environmental beautification (river cleaning, waste removal and development of safe water bodies, small dams and pools for aquatic activity) ecosystem rehabilitation zone and recreational belt.

Policy 75: Develop or permit the development of appropriate commercial uses and low scale residential developments where possible on parts of the Mukuvisi, Marimba and Manyame River Corridors ancillary to environmental beautification, ecosystem rehabilitation to the corridors.

Proposal 76: Develop a systematic programme of open space and recreation reservations in all low-cost housing areas in the planning area.

Proposal 77: Designate and develop fly-path zone between Seke Road and Chitungwiza Road for cemetery purposes (allow for provision of memorial parks and cemeteries on private land within the city).

4.1.9. Economic Growth and Employment

Policy 78: Create employment opportunities specially for the medium and low income groups

Policy 79: Plan and facilitate provision of essential infrastructure and services for the estimated workforce of the priority industrial locations within affordable commuting distance

Policy 80: Encourage compact and clustered industrial growth (along selected development corridors)

Policy 81: Rezone advantageously located large tracts of land for industrial development consistent with exploitable existing service infrastructure in areas such as Ardbenie, Horton park North, part of Waterfalls abutting Simon Mazorodze Road to Trabablas Interchange.

Policy 82: Immediately Ban Compartmentalisation of Industrial Buildings and conversion to retail use, residential or office use of Industrial Land.

Policy 83: Encourage the full exploitation of the existing potential for industrial expansion offered by the floor area capacity in the major industrial areas.

Policy 84: Plan housing options close to the job locations for major industrial cluster

Policy 85: Plan for lifting up informal economic activities into higher productive level

Policy 86: Facilitate development of ICT sector in the Harare CBD and part of Eastlea Mixed Use Area.

Policy 87: Encourage industrial sector manufacturing, diversification, value addition and beneficiation and the creation of more employment opportunities.

Policy 88: Encourage development of industries which have major raw material inputs locally available and which have usable by-products in associated industries.

Policy 89: Ban illegal industries or industrial uses in residential areas and demolish existing facilities.

Policy 90: Encourage development of home industries closer to where people stay to spur local economic development.

4.1.10. Traffic and Transportation Network and Accessibility

Policy 91: Plan for improved public transport services keeping options for walking and cycling

Policy 92: Plan for an integrated mass transport system (BRT/MRT) and Light Rail for Harare keeping options for rail, road and water ways.

Policy 93: Develop a hierarchical transportation system by upgrading and managing some existing roads and developing new linkages leading to future integrated metropolitan structure in order to serve the planning area efficiently.

Policy 94: Aim to achieve an efficient traffic flow and resolve likely conflicts between vehicles and vehicular/pedestrian traffic movement by adopting and incorporating up-to-date traffic management techniques and constructing walks-ways and link creating a regional walkway system through all wetlands reservations.

Policy 95: Plan for, acquire any private land or move settlements therein and implement the 2nd and 3rd ring road (as shown on the traffic infrastructure maps) and major roads to connect regional centres to increase the mobility and diffuse traffic from the core.

Policy 96: Provide a flexible system of major ring roads or grids i.e. (i) inner ring road and (ii) outer ring roads to divert traffic out of the Central Business District of Harare.

Policy 97: Identify and develop missing link roads throughout the city.

Policy 98: Develop mini-interchanges at all major intersections to ease traffic congestion and move from signalised control intersections to over and underpasses.

Policy 99: Locate and development long term transport networks for passengers and freight movement and Multi-Modal Bus Termini (consider PPPs where possible).

Policy 100: Tackle Traffic Congestion introducing Advanced Technologies (Artificial Intelligence Powered Systems for Real Time Traffic Monitoring, Control and Surveillance).

Policy 101: Cancel the free-way passing through Monavale Ramsa Site and already built-up Areas for Avondale and Marlborough.

Policy 102: Realign the Freeway from Monvale Vlei and Warren Hills Gold Estate to Solomon Road.

Policy 103: Designate Trabablas-High Glen to Nemakonde Link Road to a Freeway and prohibit any encroaching developments therein.

Policy 104: Prioritise development of two major freeways i.e. R.G. Mugabe to New City Freeway and the Trabablas-High Glen to Nemakonde Freeway within the plan period.

Policy 105: Ban (and cancel leases on freeways and reserve any sales of land thereon) Leasing of Land or Development (and demolish any structures erected on freeway reservations) on Freeways with Immediate Effect.

Policy 106: Reserve the Chitungwiza-Harare Rail Link and demolish all illegal structure with immediate effect.

Policy 107: Create and develop dedicated lanes for public passenger vehicles in Harare with immediate effect. Public passenger vehicles should not be allowed to use other un-dedicated lanes.

Policy 108: Encourage investment in mass transit public passenger vehicles in Harare with immediate effect.

Policy 109: Ban Commuter Omnibuses in Harare within the next 3 years.

Policy 110: Ban pirate taxis (Mushikashika) in Harare with immediate effect.

Policy 111: Three wheeled taxis should not be allowed to operate or move on Harare Roads as a means of Public Transport.

Policy 112: All Cab Hailing Facilities and Companies (or Applications) to submit GPS telemetry data on all trips and monthly ridership reports to the Director of Urban Planning with Immediate Effect. Noncompliant companies should be banned from operating.

4.1.11. Public Utilities: Water, Wastewater Infrastructure and Solid Waste Management, Roads, ICT and Energy and Power Development

Policy 113: Plan for loop closing system for integrated water management in the city.

Policy 114: Plan for loop closing system for integrated water management

Policy 115: Policy Introduce 3R strategy to minimize waste generation,

Policy 116: Connect the Tynwald/ Bluff Hill Area into the existing Crowborough sewage network.

Policy 117: Within the initial five years of the plan period connect presently un-sewered and sewerable areas of Hopley, Stoneridge, Eye Stone, Ushewekunze, and the rest of the Southern Incorporated Areas into the New Marimba Sewage Works.

Policy 118: Within the initial 2 years of the plan period develop a new treatment works along Manyame River and into the area for Limited Lateral Expansion connect presently un-sewered and sewerable areas of Waterfalls, Southern Areas and Chitungwiza and to create more capacity for densification in those areas.

Policy 119: Within the initial 2 years of the plan period develop a new water network to connect presently unconnected areas of Southern Areas.

Policy 120: In the short term, carry out investigations for the laying of a tunnel to convey sewage waste and storm water from the Manyame catchment near the Firle to the Mupfure catchment to the south in order to open up that area for urban development;

Policy 121: Connect the Chitungwiza sewage works by outfall sewer to the tunnel inlet thereby opening up the area south of Chitungwiza and the ridge between the Nyatsime and Mupfure catchments to urban development and encourage Chitungwiza Municipality to lay appropriate trunk sewer linkages at the same time.

Policy 122: Encourage Development of Decentralised Waste Water Treatment Plants and Biodigester Systems in Areas requiring inter basin transfers as an interim measure pending connection into the main sewer mains.

4.1.12. Governance and Finance

Policy 123: Specify the responsibilities in implementing the plan in effective manner Plan for capacity building of concerned agencies/ individuals required for implementing the plan

Policy 124: Identify mechanism for facilitating effective coordination among the concerned agencies

Policy 125: Identify a single organization/ institution for looking after city development and management

4.1.13. Finance and Administration

Policy 126: Development a new vision, mission statement, values and objectives with immediate effect.

Policy 127: Restructure the City's administration and redefine department roles and responsibilities and rid off inertia and redundancy with immediate effect.

Policy 128: Ensure limited time for Senior Management to serve in acting capacity and fill all vacant posts with immediate effect.

Policy 129: Identify a single organization/ institution for looking after city development and management

Policy 130: Develop a City Revenue and Expenditure Policy that allows for improved revenue generation, collection and responsible spending with immediate effect

Policy 131: Review all Council Lease and Rental Fees (Collect not less than 20% of revenue generated from council properties being used for what they are intended for or any other secondary uses) and abolish subletting of Council Properties.

Policy 132: Grow Revenue Contribution from Council Lease and Rental Fees (Collect not less than 20% of revenue generated from council properties being used for what they are intended for or any other secondary uses) by and abolish subletting of Council Properties.

4.2. LONG TERM LAND USE PROPOSALS FRAMEWORK

The Long-term Land Use Proposals Framework contained herein are intended to transform the general policy, goals and objectives into attainable events through implementation (Refer to the Proposals Map).

4.2.1. Commercial Development

Mixed Use

- To establish a mixed-use zone that promotes vertically and horizontally integrated residential and commercial business premises in the area.
- Provide an economic corridor to incubate local economic development.

Central Business District

- The Harare City Centre to serve as the Central Business District or the City's Core
- To revitalize and renew the Central Business District.
- De-congest the Central Business District.
- To provide adequate parking and street lighting
- Accommodate Informal Sector in the CBD.

Neighbourhood Shopping Centre

- To establish neighbourhood shopping facilities closer to where people stay
- To minimise the journey to the Central Business District while decongesting the same.
- To provide adequate parking and street lighting
- Accommodate Informal Sector in the neighbourhood shopping centres.

Local Shopping Centre

- To establish localised shopping facilities at sub-neighbourhood level closer to where people stay.
- To provide extremely lower order goods and services so as to minimise the journey to the neighbourhood Shopping Centre and Central Business District while decongesting the same.
- To provide adequate parking and street lighting
- Accommodate Informal Sector in the neighbourhood shopping centres.

Markets

- To establish localised level trading areas and backyard industries
- to address the growing trend of urban informality
- to mainstream principles of local economic development.
- The Informal Sector a major stakeholder for Local Markets.

4.2.2. Residential Development

High Density Residential Housing Zone

- To provide of existing townships and creation of new ones for the rezoning of these areas to a more intensive use and to relax the existing subdivision restrictions.
- To allow for densification in the long term with the exception of where bulk infrastructure services have been scoped,
- To consider high-density subdivisions without bulk infrastructure services shall be considered premature and thus discouraged.
- To allow for double storey building typologies on minimum stands sizes of 350sqm.
- To provide for adequate privacy, onsite parking and street lighting

Medium Density Residential Housing

- To provide for the creation of medium density suburbs for the middle-income spectrum.
- To allow for densification in the long term, with the exception of where bulk infrastructure services have been scoped, commitment for provision has been met and provided for. T
- Any medium-density subdivisions without bulk infrastructure services shall be considered premature and thus discouraged.
- minimum permitted subdivision shall be 400 - 800 square meters.
- The maximum height of buildings shall not exceed two storeys.

- To provide for adequate privacy, onsite parking and street lighting

Low Density Residential Housing

- To provide for the development of low-density housing communities within existing and new subdivisions and ease any restrictions obtaining thereon.
- The minimum permitted subdivision shall be 800 square meters.
- The maximum height of buildings shall not exceed three storeys.
- To provide for adequate privacy, onsite parking and street lighting

Flats Others/ Concentrated/High Rise

- To rezone areas which are close to a commercial centre and where the cost of service is minimal for attached or detached dwelling houses and flats.
- Every new subdivision should set aside a 40% fraction of the development for Flats Development consistent with the national human settlements policy.
- Flats developments shall be on reticulated sewer system.

4.2.3. Industrial

Home Industry

- To provide of the development of vibrant home industry zones within residential areas
- mainstream neighbourhood level local economic development.
- To provide for adequate onsite parking and street lighting

Light and Service Industrial

- To provide of the development of vibrant industrial zones in sync with the region's comparative advantages
- mainstream an economic base into the city
- To provide for adequate onsite parking and street lighting

General Industry

- To provide of the development of vibrant manufacturing industrial zones in sync with the region's comparative advantages
- Rejuvenate the city industrial base
- To provide for adequate onsite parking and street lighting

4.2.4. Public Establishments

Public Buildings

- To set aside sufficient land for public establishments by the Local Authority or Central Government.
- public services that meets health, social, religious and cultural needs of the population.
- Every subdivision scheme should designate adequate space for public buildings and uses consistent with the Layout Design Manual and Guidelines for Zimbabwe.
- To provide for adequate onsite parking and street lighting

4.2.5. Reservations

Road Reservations

- To provide for the development of a road network to improve pedestrian and vehicular flow and management into, through and out of the planning area.
- To retain the Proposed Freeway, Primary and District Distributor Roads as indicated on the proposals map.
- To provide the CBD heavy vehicles by-pass.

Public Open Space (Active)

- To provide for the development of Public Open Space (Active) Reservations for recreational uses in the planning area.
- To retain portions of Open Space Recreational Reservations coloured green on the proposals map for active recreational uses.
- To allow for development of recreational facilities and maintain public amenities such as street furniture, public toilets, kiosks for the benefit of the public.

Public Open Space (Passive) (Lands Reserved from Development)

- Provide for the conservation lands restricted from development in the planning area for their ecological importance.
- To restrict from development all Passive Open Spaces (including Lands Reserved from Development) and facilitate their restoration into functional wetlands or wildlands in order to maintain their ecological integrity and ecosystem functions.
- No development of recreational facilities shall be permissible serve for walkways and cycle tracks to allow for human-nature interaction.

Lands Reserved for Environmental Beautification and Enhancement

- Provide for the Environmental Beautification and Enhancement for specific Ecological Corridors namely Mukuvisi, Marimba and Manyame Corridor
- To facilitate their restoration into functional wetlands or wildlands in order to maintain their ecological integrity and ecosystem functions.

Environmental Impact Assessments

- Ensure the preparation of Environmental Impact Assessments on all major Development Projects in the planning area with special consideration being given to the conservation of indigenous trees, rivers and wetlands.
- Submit Environmental Impact Assessments (EIA) with special consideration being given to the conservation of indigenous flora and fauna for all major projects to the satisfaction of the Local Planning Authority prior to commencement of development.

Public Infrastructure

- Address infrastructure challenges within the planning area with predominant constraints being sewerage, roads and traffic and transportation.
- Ensure the timeous provision of off-site infrastructure and parking by the municipality that will facilitate on-site development.
- Provision of Roads and Stormwater Drainage, Sewage and Water Infrastructure
- ensure (or enter into meaning partnerships) that provision is made for off-site infrastructure so that development can proceed smoothly.
- Provide infrastructure on a phased basis and in public-private partnership models.
- Special attention should be paid to water reservoirs and sewerage infrastructure improvements

Traffic and Transportation: Road Network Requirements and Improvements

- The Ministry of Transport and the Local Authority shall coordinate in the dualization of the National Roads.
- Mainstream over and under passes and mini interchanges throughout all major intersections
- All traffic lights to be upgraded and retimed and ensure their functionality on off-grid sources of energy,
- Roads rehabilitation and periodic maintenance through public private partnerships, whereas developers whose activities shall attract traffic shall ensure constant rehabilitation of roads or contribute to improvement of roads such as resurfacing or road widening and or installation of traffic lights as may be determined by the Local Planning Authority to reduce traffic friction on major access and distributor roads as well as attend to potholes which has become unpleasant.
- all roads are installed with street lights

Sewerage Reticulation

- to investigate the possibility of intensifying uses and densifying development on reticulated sewer systems so as to unlock the development potential of the Planning Area.

- The Local Authority shall prioritise installation of Bulk Sewer Mains (or enter into meaningful partnerships to) across the entire planning area and areas earmarked for urban expansion so as to promote densification and investment as well as preserve underground water resources which the population is currently dependant on.

Reservation of Roads and Servitude

- A general provision is hereby made for the reservation and vesting in the Local Authority of sewer and roads servitude to service the planning area.
- the exact location and extent of the required public utilities servitude are to be established accordingly at the implementation stage.
- Provision is also made for roads, roads widening and other arrangements and parking on the relevant plans.
- The Local Authority shall consider public private partnerships in development of road and sewer infrastructure on a cost recovery basis or on the basis of town planning gain.
- The Local Authority may at any time reserve land for new streets or the widening of existing streets for which no reservation has been made through the Proposals Maps.

Storm Water Drainage

- A general provision is hereby made for construction of Storm Water Drains and edging for all major roads at the cost of the developer to the satisfaction of the Local Planning Authority.

4.2.6. Statutory Provisions

Statutory Instrument 216/94 Provisions

- Infusion SI 216/94 in all Local Development Plans.
- Adopt and implement The Regional Town and Country Use Groups/Regulations of 1994 specified in the Statutory Instrument 216 of
- Use Groups to be accommodated in Residential Areas according to the following groups:

  (a). Group 1 – Unlicensed Residential Buildings:
  (b). Group 2 – Medical Residential Institutions and Treatment Centres:
  (c). Group 3 – Shops and Offices:
  (d). Group 4 – Service Industry:
  (e). Group 5 – Warehousing and General Industrial Use:
  (f). Group 6 – Storage and Special Industrial Use and
  (g). Part II Non-Residential Uses in Residential Areas.
- These provisions shall have effect on the implementation of the Local Plans serve where a use is deemed noxious.

Preparation of Local Development Plans for selected areas in the City,

- To prepare Local Development Plans and alignment of boundaries to take up islands or remnants for all areas still under schemes within the short-term period.

- Immediate Preparation, Review and alignment of Local Development Plans to Master Plan Provisions

- As matter of priority to prepare planning frameworks to guide development for specific areas within the municipality namely:
    1. Upper Manyame Catchment Priority Plan (Area covering Lake Chivero and the Major River Corridors and Wetlands in the Watershed)
    2. City Centre Local Development Plan
    3. Southern Incorporated Areas
    4. Mbare-Msika-Siyaso Local Development Plan
    5. Ardbennie-Workington-Graniteside Local Development Plan
    6. Aerocity Local Development Plan
    7. Airport-New City Economic Corridor
    8. All Local Density Areas to respond to Densification Thrust of the Master Plan

4.3. LONG TERM INFRASTRUCTURE PROPOSALS FRAMEWORK

4.3.1. Bulk Infrastructure Proposals for the Planning Outlook

4.3.1.1. Key planning Criteria

4.3.1.1.1. Residential Demand

Residential demand in litres per stand per day (l/stand/d) was developed by examined historical demands and planning documents by the Department of Housing, Local Government, Planning and Public Work, Ministry of Local Government and Public Works. These are also the same as the provisions presented by Considering the foregoing, the specific consumption figures presented in the table below have been applied in the calculation of the domestic water demand.

Table 4.1 Proposed Specific Water Consumption Figures for Residential Water Demand

Urban Areas	l/stand or unit/day
Low Density (LD) Areas	1200
Medium Density (MD) Area	900
High Density (HD) Area	850
Flats	900

4.3.1.1.2. Institutional Consumption

Water consumption for institutions such as schools, University, hotels, hospitals, prisons, service camps and administrative offices is closely intertwined with domestic consumption. In essence, the water requirements for daily patrons and workers of these institutions are generally included in the total water requirements, if they come from within the enumeration area (see Table 4.2). The following were derived from Design Approach to Water and Sewerage Problems Relative to Urban and Rural Communities in Zimbabwe (Ministry of Local Government and Housing, 1989) as well as the Swedish Association Water Manual.

Table 4.2: Proposed Specific Water Consumption for Institutional Water demand

Urban Areas	l/ha/day
Government Institutions	16000
Institutional	10000
Educational Facilities	16000

4.3.1.1.3. Industrial Consumption

Industrial demand on the other hand depends on activities of the industrial establishment. Most of the industrial activities use water in their production processes in addition to the water used for cleaning and consumption by the workforce. Studies have shown that the size of the property on which the industry is located, gives a good indication of the amount of water required by that industry. At this master-planning stage, detailed characteristics of the existing and future industries are not known and in the absence of such information, the industrial water requiremen).have been calculated based on area using Design Approach to Water and Sewerage Problems Relative to Urban and Rural Communities in Zimbabwe (Ministry of Local Government and Housing, 1989 (see Table 4.4) .

Table 4.3: Proposed Specific Water Consumption for Industrial Water demand

Urban Areas	l/ha/day
Light Industry	10000
Service Industry	16000
General Industry	12000
Industrial	

4.3.1.1.4. Commercial Consumption

Commercial demand depends on the particular activities of the trade. Commercial trades include both dry and wet activities. In general, both forms of trade require water consumption for cleaning and use by the workforce. Numerous factors including location and nature of trade affect water consumption hence this has been generalised to the figures shown below (Design Approach to Water and Sewerage Problems Relative to Urban and Rural Communities in Zimbabwe (Ministry of Local Government and Housing, 1989)) (See Table 4.6).

Table 4.4: Proposed Specific Water Consumption for Commercial Water demand

Urban Areas	l/ha/day
Offices	16000
Commercial	10000
District Shopping Centre	16000
Mixed Use Development	16000
Suburban Shopping Centre	16000
CBD	16000
Markets	16000
Neighbourhood Shopping Centre	12000

4.3.1.1.5. Recreational Consumption

Some parts of the city require water to operate and maintain the recreational facilities. Using the Design Approach to Water and Sewerage Problems Relative to Urban and Rural Communities in Zimbabwe (Ministry of Local Government and Housing, 1989) the following demands have been generalised as on Table 4.7.

Table 4.5: Proposed Specific Water Consumption for Recreational Water demand

Urban Areas	l/ha/day
Open Space (Active)	10000
Recreational	10000

4.3.1.1.6. Water Demand

The estimations for the proposed Harare Master Plan amounted to 1300ML/day using the land use allocation areas and is considered to be indicative for long term that is by 2045 (see Table 4.8).

Calculation Methodology

The current and projected water demand is calculated using the process illustrated in the figure and the formulae stated hereunder.

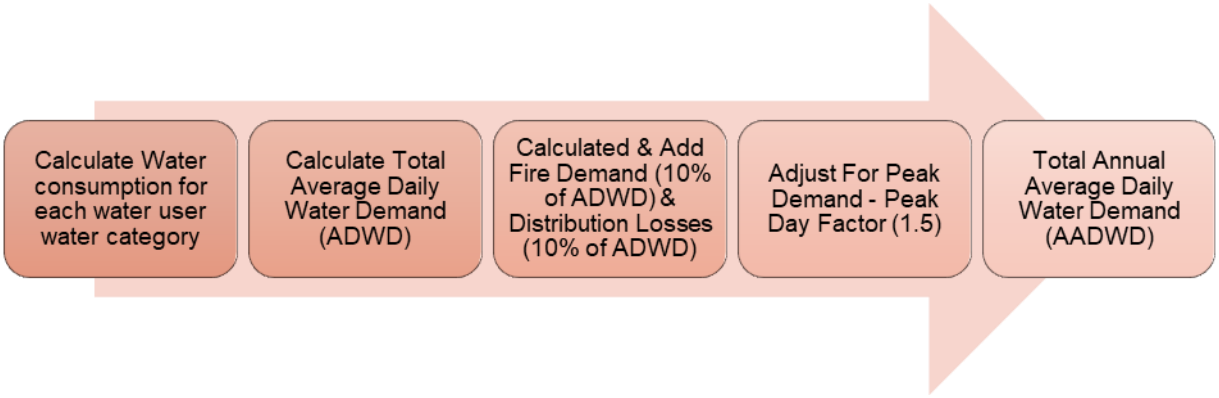

Figure 4.1: Water Demand Calculation Methodology

Domestic Consumption (DOMc) = population x per capita consumption

Institutional Consumption (INSTc) = Domestic Consumption x 15%

Industrial (INDc) or Commercial Consumption (COMc) = Unit Area Consumption x Area

Total Consumption (TC) = DOMc + INSTc + COMc + INDc

Average Demand (DEMave) = TC/ (1 – Physical loss Rate)

Peak Season Demand (DEMps) = DEMave x Peak Season Factor (Fps)

Table 4.6: Harare City Water Demand Projections 2025-2045: Land Use Demand

Reservoir Zone	Land uses	Population Density	Potable Water l/d	Potable Water ML/d	Storage Capacity	Raw Water l/d	Raw Water ML/d
Adylin	Agriculture, Low Density, Medium Density	343	10115400	10.12	16.29	11728000	11.73
Alexandra	Commercial, Educational Facilities, Flats, Flats, Gazetted Wetlands, Government Institutions, High Density, Institutional, Low Density, Medium Density, Mixed Use Development, Offices, Open Space (Active), Open Space (Passive)	4113	26528382	26.53	42.71	30757544	30.76
Arundel	Recreational, Commercial, Educational Facilities, Gazetted Wetlands, Low-Density, Mixed-Use Development, Offices, Suburban Shopping Centre	1315	4277917	4.28	6.89	4959904	4.96
Bluffhill	Agriculture, Commercial, District Shopping Centre, Educational Facilities, Flats, Gazetted Wetlands, High Density, Institutional, Light Industry, Low Density, Medium Density, Mixed Use Development, Offices, Open Space (Passive), Recreational, Service Industry	1866	20733978	20.73	33.38	24039395	24.04
Budiriro	High Density, Open Space (Passive), Gazetted Wetlands, Institutional, Educational Facilities, Low Density	116	46881358	46.88	75.48	54355197	54.36
Donnybrook	Commercial, Educational Facilities, Game Park, Gazetted Wetlands, General Industry, High Density, Low Density, Neighbourhood Shopping Centre, Open Space (Passive), Recreational	12796	62767942	62.77	101.06	72774425	72.77
Dzivarasekwa	Commercial, Gazetted Wetlands, Government Institutions, High Density, Institutional, Light Industry, Open Space (Passive), Service Industry	299	13978046	13.98	22.50	16206431	16.21
Emerald	Gazetted Wetlands, Low Density, High Density, Flats, Offices, Commercial	196	842226	0.84	1.36	976494	0.98
Epsilon	Agriculture, Commercial, Educational Facilities, Gazetted Wetlands, High Density, Low Density, Medium Density, Offices, Open Space (Passive), Service Industry	823	3976732	3.98	6.40	4610704	4.61
Glaudina	Open Space (Passive), Gazetted Wetlands, High Density, Medium Density, Agriculture, Low Density, Government Institutions, Light Industry	1248	35901309	35.90	57.80	41624707	41.62
Greendale	Cemetery, Commercial, District Shopping Centre, Educational Facilities, Flats, Game Park, Gazetted Wetlands, General Industry, Institutional, Light Industry, Low Density, Mixed Use Development, Neighbourhood Shopping Centre, Offices, Open Space (Active), Open Space (Passive), Suburban Shopping Centre	2686	8563627	8.56	13.79	9928843	9.93
Hatcliff	Low Density, Gazetted Wetlands, Open Space (Passive), Medium Density, High Density, Commercial	263	54834437	54.83	88.28	63576159	63.58
Hatfield	District Shopping Centre, Educational Facilities, Gazetted Wetlands, Institutional, Light Industry, Low Density, Medium Density, Mixed Use Development, Open Space (Passive)	1111	4391185	4.39	7.07	5091228	5.09
Highlands	Commercial, District Shopping Centre, Educational Facilities, Flats, Gazetted Wetlands, General Industry, Government Institutions, High Density, Institutional, Light Industry, Low Density, Medium Density, Mixed Use Development, Open Space (Active), Open Space (Passive), Recreational, Suburban Shopping Centre	4299	44946157	44.95	72.36	52111486	52.11
Hogerty	Commercial, Gazetted Wetlands, High Density, Light Industry, Low Density, Medium Density, Open Space (Passive)	154	3996275	4.00	6.43	4633363	4.63
Kambanji	Commercial, Flats, Gazetted Wetlands, Light Industry, Low Density, Mixed Use Development, Open Space (Passive)	3098	23052229	23.05	37.11	26727222	26.73
Kopje	CBD, Cemetery, Commercial, Educational Facilities, Flats, Gazetted Wetlands, General Industry, Government Institutions, High Density, Institutional, Light Industry, Low Density, Markets, Mixed Use Development, Open Space (Passive), Railway Reserve, Recreational	2175	15803081	15.80	25.44	18322413	18.32
Kuwadzana	Cemetery, Commercial, District Shopping Centre, Educational Facilities, Flats, Gazetted Wetlands, Government Institutions, High Density, Institutional, Light Industry, Medium Density, Mixed Use Development, Open Space (Passive), Service Industry, Suburban Shopping Centre	720	75975571	75.98	122.32	88087619	88.09
Letombo	CBD, Cemetery, Commercial, District Shopping Centre, Educational Facilities, Flats, Game Park, Gazetted Wetlands, General Industry, Government Institutions, High Density, Industrial, Institutional, Light Industry, Low Density, Markets, Medium Density, Mixed Use Development, Offices, Open Space (Active), Open Space (Passive), Railway Reserve, Recreational, Suburban Shopping Centre	7313	102256895	102.26	164.63	118558719	118.56
Lochinvah	Commercial, District Shopping Centre, Educational Facilities, Flats, Gazetted Wetlands, General Industry, High Density, Industrial, Institutional, Light Industry, Medium Density, Open Space (Passive), Railway Reserve, Service Industry	1767	115655172	115.66	186.20	134092953	134.09
Marimba Park	Commercial, Educational Facilities, Gazetted Wetlands, General Industry, High Density, Institutional, Low Density, Open Space (Passive)	224	34636290	34.64	55.76	40158017	40.16
Meyrick	Commercial, Flats, Gazetted Wetlands, Low Density, Medium Density, Mixed Use Development, Open Space (Passive), Recreational	814	3618106	3.62	5.83	4194905	4.19
Mutiny	Cemetery, Educational Facilities, Gazetted Wetlands, Government Institutions, High Density, Low Density, Medium Density, Mixed Use Development, Open Space (Passive)	1274	20253469	20.25	32.61	23482283	23.48
Philadelphia	Gazetted Wetlands, Light Industry, Low Density, Medium Density, Open Space (Passive)	1392	5418754	5.42	8.72	6282613	6.28
RidgeRoad	Commercial, Flats, Low Density	124	488826	0.49	0.79	566754	0.57
Shawasha	Gazetted Wetlands, Open Space (Passive), Low Density, Mixed Use Development, General Industry	1503	12377688	12.38	19.93	14350943	14.35
Venterburg	Game Park, Gazetted Wetlands, General Industry, Institutional, Low Density, Medium Density, Open Space (Passive), Railway Reserve	1476	23287060	23.29	37.49	26999490	27.00
Viking	Commercial, District Shopping Centre, Flats, Gazetted Wetlands, General Industry, High Density, Institutional, Low Density, Medium Density, Mixed Use Development, Open Space (Passive), Railway Reserve	1223	13247841	13.25	21.33	15359816	15.36
Waterfalls	Commercial, District Shopping Centre, Educational Facilities, Flats, Gazetted Wetlands, General Industry, High Density, Institutional, Light Industry, Low Density, Medium Density, Open Space (Passive)	1346	10661099	10.66	17.16	12360694	12.36
Harare South	Open Space (Passive), Gazetted Wetlands, Open Space (Active), High Density, Cemetery, Institutional, Low Density, Educational Facilities, Medium Density, Mixed Use Development, Light Industry, Service Industry, District Shopping Centre, Commercial	12287	323435935	323.44	520.73	374998186	375.00

Table 4.7: Water Storage Analysis

Zone	Gauff Report 2030 Demand	GAADD (AADWD + Distribution Losses + Treatment Losses)	Proposed Storage Capacity (2- day)	Proposed Water Treatment Capacity
Units	*ML/D*	*ML/D*	*ML/D*	*ML/D*
Adylin	21.78	11.73	28.32	16.07
Alexandra	23.97	30.76	74.28	42.14
Arundel	3.46	4.96	11.98	6.80
Bluffhill	16.40	24.04	58.06	32.93
Budiriro	0.00	54.36	131.27	74.47
Donnybrook	43.74	71.46	172.57	97.90
Emerald	37.00	0.98	2.36	1.34
Dzivarasekwa	4.10	16.21	39.14	22.20
Emerald	10.94	0.98	2.36	1.34
Hatcliff	0.00	63.58	153.54	87.10
Epsilon	12.26	4.61	11.13	6.32
Glaudina	26.40	41.63	100.53	57.03
Greendale	49.66	9.89	23.89	13.55
Hatcliff	8.37	63.58	153.54	87.10
Hatfield	7.35	5.09	12.30	6.97
Highlands	24.98	51.88	125.29	71.07
Hogerty	56.19	4.63	11.19	6.35
Kambanji	72.62	26.73	64.55	36.62
Kopje	53.57	18.12	43.75	24.82
Kuwadzana	24.90	88.09	212.73	120.68
Mt Pleasant	4.10	0.00	0.00	0.00
Letombo	15.15	115.80	279.65	158.64
Lochinvah	4.11	132.36	319.64	181.33
Marimba Park	3.78	39.91	96.37	54.67
Shamva Road	3.23	0.00	0.00	0.00
Meyrick	7.45	4.19	10.13	5.75
Mutiny	0.00	23.48	56.71	32.17
Philadelphia	50.47	6.28	15.17	8.61
Southview Park Fidelity	13.46	0.00	0.00	0.00
Sunway City	56.13	0.00	0.00	0.00
Harare South	0.00	375.27	906.27	514.11
	655.56	**1290.56**	**3116.70**	**1770.00**

4.3.1.1.7. Wastewater Flow Estimations and Projection

Calculation Methodology

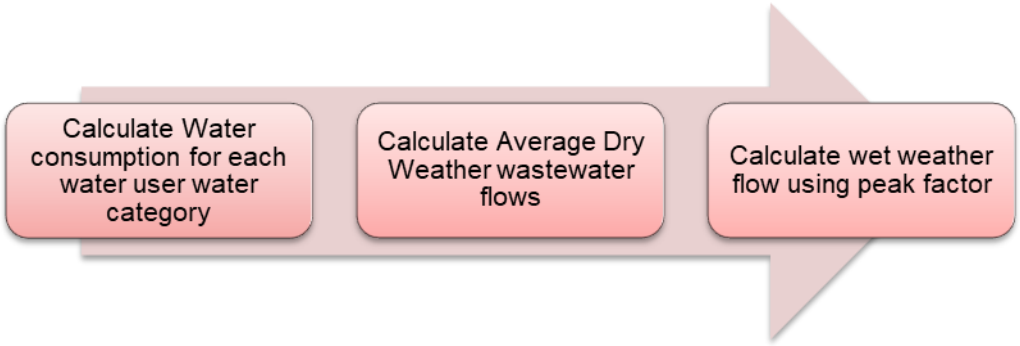

Figure 4.2: Waster water flow estimation methodology.

Average Dry Weather Flow (DWF) = Water Consumption for each Category x appropriate return rate each category

Wet Weather Flow (WWF) = Total Average Dry Weather Flow X Peak Factor

4.3.1.1.8. Wastewater Return Rates

Wastewater flows have been estimated as a function of the water demand. Studies have shown that the proportion of water that is returned as wastewater is highly dependent on the water consumption patterns. Properties such as those in low density areas with well-manicured and watered gardens will generate less wastewater (as a percentage of water consumed) than high density properties with no lawns. Table 4.12 shows the assumed water return for each service user category. Generally low-density areas are on septic tanks except that where soil conditions are not suitable for soak always, sewers are provided.

Table 4.8: Wastewater generation rates

Category	Wastewater generation rate
Low Density Areas (where connected to sewer)	50%
Medium Density Areas	70%
High Density Areas	80%
Institutional	75%
Commercial	75%
Industrial	70%

4.3.1.1.9. Waste water flow Estimates

The present dry weather wastewater flow for Harare is estimated to be around 1.8ML/day. The nominal hydraulic capacity of the treatment facilities in Harare 220ML/d. However, the treatment facilities are in a dilapidated state. It is expected that extensive rehabilitation of the wastewater treatment facilities and is necessary to restore the nominal treatment capacities in the short term. However, there is still a significant capacity deficit currently. Most of the additional sewage is expected in the newly developed areas and potential growth from surrounding rural districts that is largely zoned for high density residential.

4.3.2. Description of Proposed Infrastructure Interventions

The assessment of the existing water supply described in the Harare Bulk Water Infrastructure Assessment Report has shown that there is need for major rehabilitation investment to bring the facilities back to good working order. Once the Master Plan has become operative the municipality should ensure that funding provisions are made for reparative and new development works. This could be achieved by building meaningful partnerships for the city's development. A phasing approach of these works can be implemented in public-private partnership models.

Further analysis of the water requirements detailed in the Water Demand Estimation indicated that the infrastructure would need to be extended in the medium- and long-term horizons. The water demand production capacity in the medium term will be addressed by the rehabilitation of the existing water treatment facilities and implementation of a structured NRW reduction strategy. This report summarises the identified investment measures for implementation. The proposed investment measures have been designed to meet the service requirements for the medium-term year of 2035 and long-term year of 2045. The proposed investment measures are grouped in the broad categories illustrated in the Figure 4.3 below.

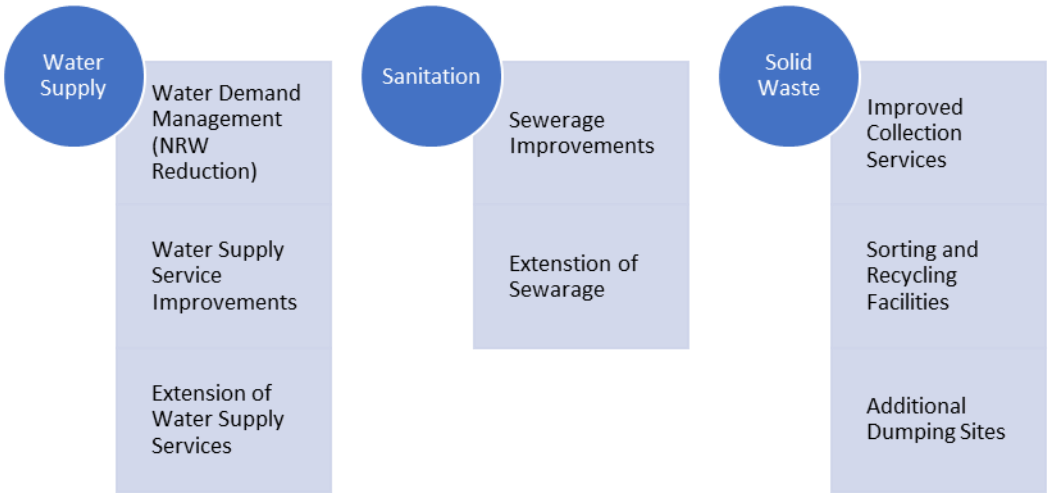

Figure 4.3: Proposed Investment Measures

4.3.2.1. Water Demand Management

City of Harare estimates its' NRW to be around 68% for the 312 ML/day delivered to the city. Efforts aimed at reducing NRW water including network rehabilitation should be preceded by a comprehensive NRW assessment and other preliminary activities such as network mapping. The NRW assessment will shade more light on the components of NRW and the results of this exercise will inform a comprehensive NRW reduction action plan.

The following activities will have to be undertaken:

1. Assessment of commercial losses: This activity will include review of billing and revenue collection processes that impact commercial losses. This activity will first quantify and categorise commercial losses. It will also identify commercial processes that contribute to commercial losses. Then a comprehensive strategy to reduce commercial losses will be developed.

2. Assessment of physical losses in some pilot District Metering Areas (DMAs): The aim of this activity is to determine the quantity of physical losses in typical areas and determine the amount of resources needed reduce the physical losses. The results obtained from the pilot areas will then be used to estimate the physical losses in the entire network and the level of effort required to reduce the losses within economic reason. The outcome of this activity will be a network rehabilitation investment programme and a sustainable strategy to reduce physical losses over a reasonable period.

3. Development and calibration of a hydraulic model for the water supply system: The objective of this activity is to have a model for predicting the behaviour of the water supply system under certain operating conditions. The model will be used to optimise the distribution network for better management of physical losses.

4. Pressure measurements: Among the many factors that affect water network leakage is pressure. Pressure affects leakage in several ways, including: the rate of leakage, frequency of bursts, location of leaks, pressure surges and pressure cycling. The objective of the pressure measurements is to establish the diurnal pressure profiles in the different parts of the distribution network. The pressure measuring exercise will yield the requisite information for the development of the performance indicators and the planning of the NRW management strategy.

5. Review of network operating procedures: this activity is necessary to ensure a sustainable leakage control programme. It is important to understand why the water is being lost in the first place. This activity will involve carrying out a thorough review of the physical characteristics of the network and the current operational practices. The outcome will be a catalogue of problems caused by poor infrastructure and poor network management practices. This information will form the basis for structural reforms in the management of the water supply system.

Establishment of a Computerised Network Information System: record keeping is an integral part of a good water network management system. A GIS database management system is preferred because of the location dimension of the network elements. Harare has no functional GIS-based network information system now. Network data is still on hard copy maps that are hardly updated. Therefore, is an urgent need for a comprehensive network mapping exercise. This should precede all the other leakage related network investigations.
Infrastructure

4.3.2.2. Water Supply Service Improvements

(a) Raw Water Supply Reservoirs

Harare City draws water from Lake Chivero and the treated wastewater from the city is emptied into the catchment of the dam. This form of water reclamation provides a constant water supply to the city. Unfortunately, the poorly operated sewerage systems and storm water outfalls have heavily polluted the system. The current sources are silted up by almost 9% due to the siltation in stormwater drains and sludge from raw sewerage. There are also harmful algal blooms in the waters. Water pollution of the lakes needs to be addressed for improved yield. Seke and Harava dams are seasonal.

Kunzvi Dam being constructed at the east of Harare is expected to yield about 250 ML/day. The supply will be upstream of the city hence is will be cheaper to treat and supply to the city. The activities and settlements upstream of the dam will result in less significant pollution

compared to Lake Chivero, Seke Dam and Harava Dam. City Harare will take up about 87% of the raw water, to be treated and shared with the local authorities according to the demands. The remaining 13% will be distributed amongst farms.

Another proposal is to rehabilitate the existing intake structure and tunnel from Lake Manyame to Mortan Jaffray plant. There is adequate capacity to treat most of the water from the intake. An additional intake facility for 200ML/day in Lake Manyame is being proposed to feed a proposed extension of Mortan Jaffray. Norton can receive 40ML/day and the remainder can be pumped to Mortan Jaffray.

With the addition of Kunzvi-Musami raw water supply and anticipated reclamation of water from the proposed treatment plants, Harare's proposed development plan, City of Harare will not be able to supply adequate water from the nearby raw water sources.

(b) Water Treatment Facilities – Prince Edwards

Intake pumps for Prince Edwards have been in operation for the past 50 years. These require replacement to improve capacity and efficiency.

The current treatment capacity is around 65 ML/day compared to the design value of 90ML/day. The plant requires rehabilitation of the electromechanical components, valves, pneumatic actuators and rapid sand filters.

Water supply from Seke and Harava dams are seasonal hence the plant is operated for a few months during the year. With the anticipated water supply for Mabvuku, treated effluent from the proposed Lynhurst WWTW will replenish the water supply to the dams. In the long term, Prince Edwards will be extended to treat an additional 50 ML/day

(c) Water Treatment Facilities – Morton Jaffray

Mortan Jaffray has old intake pumps in Lake Chivero which have to be replaced. The Lake Manyame intake pumps and tunnel are currently down. There is adequate capacity to treat more water compared to what is currently produced. Mortan Jaffray has a design capacity of 614 ML/day, 400 ML/day available capacity and only 270 ML/day of the capacity is utilized.

In the short term, electromechanical components of the plant should be replaced to improve efficiency. These include pumps, electrical control boards, chemical dosers, air blowers and actuators. A number of valves and regulatory systems need to be replaced with pneumatic actuators complete with corresponding air compressors. Metal plates and floor slabs require replacements. Missing flumes need to be replaced to reduce in overloading of treatment channels. Compressed airlines in Unit 3 are due for repairs to meet the required operating pressure of the valve actuators in the rapid sand filters.

Additional short-term works include rehabilitation of the mixing chambers, clarifiers and filters. As well as new fire hoses, chemical storage tanks, clean water meters, standby backup power generators, dewatering pumps, motors, turbine pumps and pipes. Other miscellaneous works include redecoration of the central control room and lighting of workshop and roads in plant. The clear water plant Laboratory is short of equipment for better investigations and profiling of water samples. These being the heat magnetic stir, Ultraviolet spectrometer, Biochemistry incubator, Stationery turbidimeter, Ion chromatograph, Replace Accelerator Clarifier equipment, electronic balance, BOD incubator, Viscosity meter, Gas chromatograph, Chlorine detector, Colorimeter, PH meter, Atom spectrometer, Muffle furnace, Conductivity meter, Bottom sampler, 3-way taps, E-Collilert Complete, Autoclave, Binocular microscope, Electric centrifugal machine, Distillation unit, Liquid chromatograph and Dry oven.

A dissolved air flotation plant will be constructed in the long term for pretreatment of water from Lake Chivero. This removes harmful algal blooms that bind to the rapid sand filters and require expensive chemicals for perchlorinating. It will improve effluent from the Pulsator type Clarifiers which are not ideal for raw water containing algae.

Mortan Jaffray WTW has adequate provisions for expansion of plant. City of Harare is evaluating a proposal to make an additional treatment stream of 160ML/day in the long term. The water will supply part of Harare West and the New Cybercity. Hydraulic mixing chambers for the new plants to be constructed and reduce the reliance on electrical machinery. This expansion could be set in the mid-term plans as it is urgently needed for the upcoming city. In the long term, an additional treatment unit of 250ML/day can be constructed and fed by both Lakes Chivero and Manyame as well as upgrading the intake infrastructure from the water sources.

A Backwash Water Treatment and Recycling Plant was partly installed 20 years ago to allow for water savings of around 12,000 to 15,000 m3/d. In the midterm, this plant could be revived for water recovery.

(d) Water Treatment Facilities – Proposed Kunzvi-Musami WTW

Kunzi-Musami dam is expected to relieve the City of Harare's need for portable water as well as the growing population in the Goromonzi and Ruwa District. A water treatment plant will be constructed at a capacity of 250 ML/day. The water will mostly supply Harare East and the surrounding satellite towns. The volumes will be apportioned as per demand. City of Harare and the Rural District Councils receiving the water should collectively be responsible for constructing and maintaining the plant.

(e) **Water Supply Facilities – Subsurface Water**

Residents, commercial entities, intuitions and the city's municipality have either dug wells or drilled boreholes. The quantity of the water drawn cannot be accurately estimated. A comparison of the rate of groundwater withdrawal to aquifer recharge cannot be made. Hence a conclusion cannot be made on its sustainability. The areas near wetlands and south of the city are generally prolific for subsurface water but could strain the municipal water sources if not monitored.

At household levels these sources are not properly protected and are prone to contamination. Residents are violating national health policies on accessing these subsurface water sources.

ZINWA must actively capture and register wells and boreholes dug in both authorised and unauthorised areas. City of Harare and ZINWA must meter and periodically inspect these wells for contamination. Groundwater sources within high density homes or stands near a dumpsite should be decommissioned once water supply has improved in the city. Low density properties can use boreholes and wells complying with the health and ZINWA standards as alternative water sources.

(f) Water Supply

The above interventions do not completely solve the issue of water demand. Table 4.14 below depicts the computed figures assuming that existing facilities are rehabilitated and proposed interventions are put in place.

Table 4.9: Water Supply Proposals

1.0	**Existing Water Treatment Works**	**Capacity ML/d**		
1.1	Mortan Jaffray	614		
1.2	Prince Edwards	90		
1.3	Groundwater	*(unknown)*		
1.4	**Sub - Total**	**704**		
2.0	**Proposals**			
2.1	Kunzvi-Musami WTW *(estimated share of volume)*		200	
2.2	Mortan Jaffray WTW *(upgrades)*		360	
2.3	Upgrading Prince Edwards		50	
2.4	Backwash Water Treatment and Recycling Plant		15	
2.4	**Sub - Total**		**625**	
3.0	Estimated Total Water Supply			1329
4.0	Estimated Land-Use Water Demand			(1777)
5.0	**Addition supply required**			**448**

At full land utilisation, there is need for an additional new treatment works with a capacity of 448ML/day. This is nearly 25% of the demand. There is adequate raw water, however, this may be costly for the next 15 years, considering the proposed rehabilitative works and additional plants. Other interventions can be made to reduce water demand and water losses as described in the coming sections.

4.3.2.3. Water Distribution Service Improvements

(a) Water Apportionment

City of Harare is also providing water to neighbouring towns of Chitungwiza, Norton, Ruwa and Epworth, Rydale Ridge and Whitecliffe in Zvimba, Inkomo Barracks in Darwendale and Domboshava. The estimated population demand for Harare and its neighbouring towns was 898ML/day for 2024. The water apportionment for was mandated by the Harare Metropolitan Combined Master Plan. Hence, City of Harare will not be able to support the proposed future developments with the burden of the surrounding towns.

(b) **Existing Water Distribution Network**

The existing high lift pumps from the treatment plant need to be replaced. Additional pump sets will be required to match the increased demands. The reticulation system pumps stations, Alex Park, New Alex, Letombo and Warren Control are to be rehabilitated. The pumps, fittings, pipework, lighting systems, and electrical materials are overdue replacement. The booster pump stations also need to be rehabilitated in a similar way to provide adequate pressure to areas such Mabvuku.

The water mains made of asbestos cement (3,731 km) need to be replaced with either steel (above surface) or U-PVC (below surface). Asbestos cement is not recommended by WHO. The existing steel pipes need to be replaced as they have been in operation for more than 50 years.

Several hydrants, valves and meters require replacement to reduce losses. The fittings' chambers need to be rehabilitated and secured. An upgrade of the water delivery system in

the form of information technology equipment is to be supplied and installed for the city. The Bluffhill Pump Station will be used to provide additional head for the water to reach the city through an ND800mm mains to the upcoming Cyber city.

(c) Extension of Distribution Network to new areas

The focus of the short term to medium-term interventions will be to supply adequate water to meet normal demands at reasonable network pressures in all areas of Harare and to supply the increased demand of the areas of new development. The water reticulation network will be extended to cover the new development areas. Most of the additional population settled in areas outside the planning boundary. Some within the city but with improperly serviced properties. There is some infill growth in a few wards that are not saturated yet. The water network requirements in the new development areas have been calculated based on population and the per capita infrastructure requirements. The per capita infrastructure requirements were calculated using the existing network quantities and the population from the 2022 census.

The parameters below were used to calculate the infrastructure requirements in extension areas:

- Household size (assuming one connection per household): 7 people
- Secondary pipe network lengths per capita – ND 200 0.45 m/ca.
- Secondary pipe network lengths per capita – ND 350: 0.2 m/ca.

(d) Non-Revenue Water Reduction

In addition to the improvements in the distribution network infrastructure, City of Harare must establish a quicker fault response system. An electronic monitor of the system needs to be installed for prompt action against tempering of pipes and hydrants by bulk water delivery trucks or residents.

Household metering is mostly analogue in most areas and should be upgraded for more accurate billing. District metering system needs to be rehabilitated and installed in recent interconnections for the city council to accurately measure water deliveries to other towns. It can also reduce water losses by closing up supply when extensive leaking is detected from other towns.

An arrangement for fixing household leaks at the expense of the municipality or the consumer should be made. City of Harare must enforce payment of water bills as the current 48% recovery on revenue is not profitable.

(e) Construction of New Storage Reservoirs

Functional reservoirs would greatly improve the city's current supply and relieve pumping hours and reduced wear and tear of the mechanical sets. Currently, storage capacity of approximately 553,740 m^3 is available making it nearly 70% of water demand in 2024. The current reservoir storage in Harare can be improved by rehabilitated the following tanks in the short term as shown in Table 4.15 below. These make up to 36.24ML.

Table 4.10: New reservoirs capacities

Reservoir Zone	Megalitres
Adylinn	1.140
Arundel	7.680
Cold Comfort	5.200

Dzivaresekwa High Level	11.400
Kambanji	5.680
Mt Pleasant Heights	5.000

In terms of storage requirements in the distribution network, the design criterion is that there should be at least 2-day storage (of the peak season daily demand). There is need for additional reservoirs to match about 2689 ML and can be constructed within the developments in the midterm horizon. Some of these areas being the new developments in Southern Incorporated Areas and extensions of historical developments such as Kuwadzana and Dzivarasekwa.

The supply zones of the different areas were established using the existing reservoirs and the supply networks. Table 4.17 below shows as detailed description of the distribution of proposed reservoirs based on the supply zones. A total of thirty new reservoir of the existing 30 are required to complement the existing as highlighted the table below. The Proposals will maintain the existing reservoirs sites, with new reservoirs to be built should the site allows and can accommodate additional works

(f) Proposed Kunzvi-Musami Water Supply and Ring Water Main

Harare Water has since proposed construction of a ring main along Harare Drive. The proposed Kunzvi Water supply main will feed reservoir tanks most likely to be sited in Damafalls. The supply main will also join into the proposed ring main from the east. This ring main will be pressurized and may result in discontinuation of some existing booster pump stations.

4.3.2.4. Summary Water Service Improvements

Table 4.18 illustrates a Summary of Measures for water service improvements:

Table 4.11: Summary of Measures

Short-Term Investment Measures	• Rehabilitation of the raw water pump station • Rehabilitation and upgrading of the water treatment works. • Rehabilitation and upgrading of the distribution network
Medium Long Term Investment Measures	• Upgrading of raw water pump station and transmission main • Upgrading of water treatment works • New storage reservoirs • Upgrading of distribution network

Table 4.12: Proposed reservoirs

Zone	COH Existing Capacity ML/day	Proposed Storage Capacity (48hrs) ML/day	Comments	Proposed additional Water tank capacity, ML/day	Suburbs Served
Adylin	1.14	28.32	Deficit	27	Mount Pleasant, Little Norfolk and Northwood areas
Arundel	7.68	11.98	Deficit	4	
Bluff hill	5.68	58.06	Deficit	52	Mabvuku, Tafara, Chikurubi, Manresa and Chizhanje areas
Budiriro	13.86	131.27	Deficit	117	Dzivaresekwa area
Donnybrook	17.08	172.57	Deficit	155	Sherwood Park, Sentosa and Mayfield Park areas
Dzivarasekwa	4.09	39.14	Deficit	35	
Hatcliff	11.4	153.54	Deficit	142	Hatcliff, Sally Mugabe, part of Sunningdale and Graniteside.
Glaudina	61.24	100.53	Deficit	39	Borrowdale, Vainona, Pomona, Colray, Borrowdale West, Rietfontein, Colne Valley and Ballantyne Park areas
Greendale	0	23.89	Deficit	24	Greystone Park Quinnington, Chiltern Hills, Glenwood, Kambanji, Glen Lorne, Grey Lichen and Carrick Creagh
Hatcliff	5.68	153.54	Deficit	148	City Centre area
Hatfield	7.96	12.30	Deficit	4	Tynwald, Nkwisi Park, Cold Comfort Westlea, Kuwadzana, Kuwadzana Phase 3, Kuwadzana Phase 4 Extension, Crowborough and Crowborough North areas
Highlands	30.9	125.29	Deficit	94	Sunningdale, Graniteside, Highfield, Ardbennie, Mbare, Prospect, Logan Park, Sunningdale, St Martins, Cranborne Park, Queensdale, Arcadia, Graniteside, Braeside, Hillside, Beverly West, Msasa, Mukuvisi Park, Amby, Bingley, Beverly, Greengrove and Lorelei areas
Kopje	23.1	43.75	Deficit	21	St Andrews, Haig Park, Cotswold Hills, Mabelreign, Sunridge, Ridgeway and Sunrise areas
Kuwadzana	2.28	212.73	Deficit	210	Mount Pleasant Heights
Letombo	11.4	279.65	Deficit	268	Winchendon, Helensvale, Borrowdale Brook, Philadelphia and Eland Park.
Lochinvah	7.58	319.64	Deficit	312	Avondale West areas
Marimba Park	3.41	96.37	Deficit	93	
Mutiny	27.26	56.71	Deficit	29	Workington, Southerton, Ridgeview, Belvedere South and Lincoln Green areas
Philadelphia	5.68	15.17	Deficit	9	Houghton Park, Park Town, Malvern, Midlands, Waterfalls, Induna and Grobee Park areas.
Harare South	0	906.27	Deficit	906	

4.3.2.5. Sewerage Service Improvements

The sewerage improvement measures will focus on rehabilitating existing sewage Collection, transmission, treatment and disposal facilities. During the assessment, Harare was divided into sub catchments following the natural terrain since water main drains by gravity.

Table 4.13: Sewer Catchment Effluent Volumes

Sewer Catchment Area	Sewage Flow m3/d	PWWF, ML/d	Existing WWTW, ML/d	Status	% Change
Crowborough	195562.25	721	54	Deficit	93%
Firle	214602.52	757	144	Deficit	81%
Hatcliff	31592.3	105	5	Deficit	95%
Marlborough	43008.1	169	2	Deficit	99%
Manyame	222031.0	814		Deficit	100%
Umwindidale	25788	108		Deficit	100%

A condition assessment was carried out on all the major facilities for each sewer sub catchment. Capacity assessments of the sewerage network were also carried out. The proposed investment measures aimed at improving sewerage services and protecting the Manyame Sub Catchment. These are briefly described below.

(a) Existing Sewerage Services

The old asbestos cement sewer lines are to be replaced by SDR class PVC pipes. This will also follow the new standards of a minimum of 160mm within properties which increases the capacity. A minimum of 750mm diameter sewer mains to be provided to drain each sub catchment into the major sewer main lines for the new proposals. Additional pipe crossings at water streams need urgent replacement and size upgrade. For example, the pipe crossing nearby Amalinda Road bridge.

In the short term, developers of property densification projects should assist in funding council to upgrade existing sewer mains to accommodate their peak wet weather flow and the treatment works. Within the Crowborough catchment urgent upgrade of sewer main lines is needed for Avondale, Alexandra park, Mabelreign, Sherwood park, Kensington, Belvedere and Milton park. In Firle Catchment, these include Chisipite, Newlands, Borrowdale, Pomona, Athlone and Graniteside.

In line pump stations are currently failing to convey their nearest convey sewage to transition chamber due to power outages. The pump stations in Avonlea and North eastern can only operate after replacement of the pumping main and subsequent gravity main. The pump station in Arundel has a safe bypass to the Marlborough treatment plant overdue for an upgrade.

City of Harare and EMA must collectively monitor disposal of liquid waste into the designated municipal open manholes 24hours a day to reduce contamination. Also, damaged manholes need to be replaced and secured. A significant part of the system also requires scouring to remove silt built up from the damaged pipes and manholes.

Stormwater drainage needs to be managed to reduce extent of inflow into sewer lines. This increases pipe bursts during rainy seasons.

(b) Extension of Sewer Reticulation System in new developments

Some high-density areas have no sewer reticulation systems draining properties. These areas use pit latrines or septic tanks. These areas are also including new developments in Southern Incorporated Areas and extensions of historical developments such as Kuwadzana and Dzivarasekwa. The new network will be extended in the short and medium term.

There will also be some infill growth in the existing areas. The sewer network requirements in the new development areas have been calculated based on population and the per capita infrastructure requirements. The per capita infrastructure requirements were calculated using the existing network quantities and the population from the recent census. The parameters below were used to calculate the infrastructure requirements in extension areas

• Household size (assuming one connection per household): 4 people

• Secondary sewer collector lengths per capita: 0.7 m/ca.

(c) Public Restrooms

Municipal public restrooms are need of urgent rehabilitation. These restrooms service municipal hostels and the general public at business districts. Coverage of public restrooms in business districts and ranks is very low and should be increased. These could be paid hence increasing revenue sources.

Municipal restrooms can also ease the environmental contamination from informal settler with no access to toilets. In the grand scheme, these settles need to be removed from the national wetland areas. It will also reduce public urination within streets.

(d) Management of Sludge Waste

Solid waste from pit latrines, septic tanks and Decentralizes Wastewater Treatment Systems called stercus waste is burdening existing treatment plants. A 5 cubic metre load of this desludged waste is equivalent to faecal waste of 5000 individuals. In the long term, provision of a large-scale sludge digestion plant at the newly proposed dumpsite to be constructed. This plant can be used to generate biogas and electricity for the city.

A sludge digestion plant was being constructed which was estimated to retain up to 40ML of water. Investments in the mid term should be made to allow for its completion.

(e) Rehabilitation of WWTW - Firle

The rehabilitation of the WWTW will require not only repairs to the existing works but the establishment of a new treated effluent pump stations, rising main and a new wastewater disposal system through irrigation of forest trees at existing farms. Firle has a design capacity of 144 ML/day with only 54 ML/day operating capacity.

In the short term it is proposed that the Sewage Treatment works be fully rehabilitated as these will remain integral to sewage treatment in Harare in the future. The rehabilitation measures shall include desludging of the basins, replacement of flow measurement devices, grit drying slabs and skip from screenings, mechanical rehabilitation and replacement of corroded steelwork. The existing effluent pump station requires new sewage pumps, dewater pump set and motor, accelerator clarifier equipment, transformer, electrical system for the station and valves. The new effluent pump station requires new flow meters, sewage pump and motor starters, valves, transformer, fans, pipes, steel grating and guard rails and all electrical systems. The plant needs a generator, transformers, breakers for transformers and portable sub pump for dewatering effluent pump station. Existing biological trickling filters require new media and distributor arms. The Humus tanks need mechanical rehabilitation and replacement of corroded steelwork. Units 3, 4, and 5 require rehabilitation throughout. The mechanical aerators are in need of replacement.

More treatment units are required to meet an additional 613 ML/day from the proposed Masterplan landuse within the catchment. The treatment methods for the sewage should be improved to allow water reclamation. The proposed treatment works will allow for biological nutrient removal. The water may be supplied to nearby farms within the Manyame catchment for further purification. Solar power can be harnessed to power some of the electrochemical processes within the plant. Sludge harvested can be used for energy production.

(f) **Rehabilitation of WWTW - Crowborough**

The effluent pumps require rehabilitation Work is in progress to provide for aerated lagoons at the WWTW. The pipework and compressors for the ponds have been purchased. There is outstanding plant which are aerators and the corresponding pipework for the project to be completed. The plant also requires replacement of flow metering devices, dewater pump set and motor, accelerator clarifier equipment, transformer, electrical system for the station and valves. There is also need of generator, transformers and breakers for transformers.

Additional treatment units are needed to upgrade capacity by 606 ML/day. The treatment methods for the sewage should be improved to allow water reclamation. The proposed treatment works will allow for biological nutrient removal. The water may be supplied to nearby farms within the Manyame catchment for further purification. The terrain in the area can be taken advantage of to allow aeration of the effluent by gravity which reduces dependency for power in aerating mechanically. Solar power can be harnessed to power some of the electrochemical processes within the plant. Sludge harvested can be used for energy production.

(g) Rehabilitation of WWTW – Marlborough and Gwebi

Marlborough WWTW uses ponds for water treatment. The whole system is operating below capacity. Additional ponds are required to treat water from the suburb and the overflow from the Avondale pump Station as a short term intervention. The additional ponds should allow for BNR treatments and allow for use of aeration to reduce land requirements. City of Harare

has proposals to construct Gwebi Treatment Plant at a Capacity of 40 ML/day with an estimated cost of 60 Million USD dollars.

In the long term, the system requires 167 ML/day treatment capacity. The plants must allow for BNR removal. There is adequate farmland that can reclaim the treated water. Hence, trickling filters can be adopted in the plant. The runoff will recharge the Gwebi River flowing into Lake Manyame that is supplying the city.

(h) Rehabilitation of WWTW - Hatciff

Hatcliff WWTW is need of additional stabilization ponds to support the current inflow above its capacity. The plant uses BNR technology to treat wastewater. There is need for replacement of flow metering devices, dewater pump set and motor, accelerator clarifier equipment, transformer, electrical system for the station and valves. There is also need of generator, transformers and breakers for transformers.

Additional treatment units are needed to upgrade capacity by 100 ML/day. The treatment methods for the sewage should be improved to allow water reclamation. The proposed treatment works will allow for biological nutrient removal. The water may be supplied to nearby farms. The effluent can be conveyed into the Gwebi River Catchment which feed into Lake Manyame. The terrain in the area can be taken advantage of to allow aeration of the effluent by gravity which reduces dependency for power in aerating mechanically. Solar power can be harnessed to power some of the electrochemical processes within the plant. Sludge harvested can be used for energy production.

(i) Donnybrook Ponds and Proposed Lyndhurst WWTW

Donnybrook ponds have been decommissioned and there is need to replace the treatment works for the recently measured effluent flows of 20 ML/day. City of Harare purchased Lyndhurst farm and requires funding of 60 million USD Dollars to construct the plant. In the short term, rehabilitation as well as securing of the existing sewage pumpstation and transformer must be done. The raw sewage from the pumpstation was being directed upstream of the Lyndhurst farm for irrigation before entering the water streams. This was a provisional measure as funding is being sourced.

A treatment plant of 150ML/day capacity is being proposed at the Lyndhurst farm for Mabvuku-Tafara and any future developments. It will allow water reclamation in the Seke and Harava dams. This in turn will provide raw water for Prince Edwards. The treatment plant units will adopt biological nutrient removal technologies. Solar power can be harnessed to power some of the electrochemical processes within the plant. Sludge harvested can be used for energy production.

(j) Proposed South WWTW

The Southern Incorporated Areas will require treatment plant once the proposed infrastructure is in place. Currently, the area has an estimated oufall capacity of 120 ML/day. The newly proposed land use produces an estimated 665 ML/day of effluent. A treatment plant allowing for biological nutrient removal technologies will be constructed. The effluent can be sourced to surrounding farms. The runoff will yield water in Lake Chivero. Solar power can be harnessed to power some of the electrochemical processes within the plant. Sludge harvested can be used for energy production.

(k) Proposed Umwinsdale (Harare North East) WWTW

In order to reduce the dependency on sewage pumps, this catchment requires nearly 108 ML/day of treatment capacity. A treatment plant allowing for biological nutrient removal technologies will be constructed. The effluent can be sourced to surrounding farms. The runoff will not yield water in Lake Chivero. However, the existing pump stations may be operated from time to time to divert flow into the Firle or Crowborough catchment. Solar power can be harnessed to power some of the electrochemical processes within the plant. Sludge harvested can be used for energy production.

(l) Proposed Budiriro Ponds

Parts of Budiriro are not within the Crowborough catchment and the pump station has been down for several years. Proposals were made by Harare Water to bypass the pump station and construct a treatment plant in a council's farm that is 400m away. The collected sludge from the plant will be used for energy generation.

An anticipated flow of 30 ML/day will require treatment. This treatment can be done by aerated lagoons. The effluent can also be supplied to the Crowborough Farms.

(m) Wastewater Treatment -Decentralised Wastewater treatment systems (DEWATS)

The predicted growth in new areas will require new facilities for wastewater treatment and disposal. Most of this work will likely be funded through private developers but there are also some areas which are already settled and where the council will be responsible for the provision of services.

The DEWATS technology comes in many forms. An example being hybrid anaerobic baffled reactors (ABR) and constructed wetlands. These are proposed as the alternative for the transformation of the sanitation situation, not only in densified settlements but elsewhere in Harare. DEWATS would lessen the burden on both the local authority and the residents of maintaining the expensive machinery that is needed to run mechanised sewer plants. In a country with regular power cuts, DEWATS is an appropriate response. The plants may require minimum to no power at all for operation.

Institutions and densified residential stands within low density areas should consider Decentralized Wastewater Treatment Systems (DEWATS) such as Anaerobic Baffle Reactors (ABR) with constructed wetlands or compact aerated bioreactor plants. These would be ideal where the effluent can be recycled for irrigation. If the water quality meets the EMA 'blue' badge, it may be directed into water channels. This encourages water recovery.

DEWATS have been included as part of the bulk sewer infrastructure scoping in existing and potential settlements. City of Harare and EMA should generate comprehensive design guidelines for DEWATS in areas without existing infrastructure. City of Harare will be responsible for treatment of the sludge waste drained from the plants. Hence, the residents in theses area must be billed for sludge treatment and disposal at the previously proposed treatment sites.

4.3.2.6. Solid Waste Interventions

Harare City had highlighted the need for additional space for dumpsites. Some areas excavated for mining can be reclaimed as dumpsites. This would be effective once a positive result from the environmental impact assessment has been established. Additional landfill is required for industrial waste and treatment plants for the liquid waste.

The following are additional interventions.

(a) The city also requires larger sorting facilities to separate desirable materials and organic matter. The recyclable materials may be sold to manufacturers.

(b) Distribution of litter bins should be increased in the city centre and emptied frequently.

(c) Waste collection equipment to be increased so as to meet the current densification in areas such as Greendale, Waterfalls and Mt Pleasant.

(d) Mechanical street cleaning equipment should be adopted in the CBD.

(e) Provisions for collecting and incinerating or disposing of dead animals should be made.

(f) City of Harare should mandate commercial and industrial properties to provide designated bin areas with a sanitary lane for an 8-tonne refuse collection vehicle.

(g) Additional offloading bins and better bin placements to be provided for convenience of city street sweepers with the CBD, Mbare and outlying shopping centres.

(h) Refuse bins to found in bus termini farmers and trading markets to be offloaded frequently, twice daily.

(i) Flats and cluster home communities to provide communal refuse areas. This area should be critical on the site layouts and accessible to the refuse collection vehicles.

(j) Waste transfer stations for waste to be emptied from smaller vehicle to larger vehicles should be stationed around the city. A good distribution along the Harare Drive ring road for easy transportation. These stations will improve regularity, collection routes and coverage of waste collection services.

(k) A large portion of the waste is organic. Organic matter may be sourced to private or municipal farms and game parks. Less volume of waste will be confined to the cells. Treatment facilities such as biogas plants or compositing centres which can source compost can be provided at solid waste management facilities.

Table 4.14: Waste Generation

Area	Population Number	Design Population Number	Weight of Solid Waste Generated	Weight of Solid Waste Generated	Compacted Volume of Solid Waste	Compacted Annual Volume	Daily Surface Area	Total Landfill Size	Proposed land size
	No	No	Kg/Day	Ton/Day	m3/Day	m3	m2	m2	m2
Crowwborough Catchment 01	359180	269385	107754	108	165.8	60508.0	41	15127	16000
Crowborough Catchment 02	253710	190283	76113	76	117.1	42740.4	29	10685	11000
Crowborough Catchment 03	195812	146859	58744	59	90.4	32986.8	23	8247	9000
Crowborough Catchment 04	40349	30262	12105	12	18.6	6797.3	5	1699	2000
Crowborough Catchment 05	104787	78591	31436	31	48.4	17652.6	12	4413	5000
Crowborough Catchment 06	415983	311988	124795	125	192.0	70077.1	48	17519	18000
Crowborough Catchment 07	33769	25327	10131	10	15.6	5688.8	4	1422	2000
Crowborough Catchment 08	80502	60377	24151	24	37.2	13561.5	9	3390	4000
Firle Catchment 01	153857	115393	46157	46	71.0	25919.0	18	6480	7000
Firle Catchment 02	836951	627714	251085	251	386.3	140994.1	97	35249	36000
Firle Catchment 03	264708	198531	79412	79	122.2	44593.1	31	11148	12000
Firle Catchment 04	114220	85665	34266	34	52.7	19241.7	13	4810	5000
Firle Catchment 05	245592	184194	73678	74	113.4	41372.8	28	10343	11000
Firle Catchment 06	20031	15024	6009	6	9.2	3374.5	2	844	1000
Firle Catchment 07	96987	72741	29096	29	44.8	16338.6	11	4085	5000
Hatcliff Catchment 01	151743	113808	45523	46	70.0	25562.9	18	6391	7000
Hatcliff Catchment 02	183	138	55	0.05	0.1	30.8	0	8	1000
Hatcliff Catchment 03	14545	10909	4364	4	6.7	2450.3	2	613	1000
Hatcliff Catchment 04	29803	22353	8941	9	13.8	5020.7	3	1255	2000
Marlborough Catchment 1	276065	207049	82820	83	127.4	46506.3	32	11627	12000
Marlborough Catchment 2	118765	89074	35630	36	54.8	20007.3	14	5002	6000
Manyame Catchment 01	271189	203392	81357	81	125.2	45684.9	31	11421	12000
Manyame Catchment 02	208718	156539	62615	63	96.3	35161.0	24	8790	9000
Manyame Catchment 03	54841	41131	16452	16	25.3	9238.6	6	2310	3000
Manyame Catchment 04	58458	43844	17537	18	27.0	9847.9	7	2462	3000
Manyame Catchment 05	170666	128000	51200	51	78.8	28750.7	20	7188	8000
Manyame Catchment 06	80873	60655	24262	24	37.3	13624.0	9	3406	4000
Manyame Catchment 07	103301	77476	30990	31	47.7	17402.2	12	4351	5000
Manyame Catchment 08	10522	7892	3157	3	4.9	1772.6	1	443	1000
Manyame Catchment 09	4100	3075	1230	1	1.9	690.7	0	173	1000
Manyame Catchment 10	73877	55408	22163	22	34.1	12445.4	9	3111	4000
Manyame Catchment 11	85801	64351	25740	26	39.6	14454.2	10	3614	4000
Manyame Catchment 12	17547	13161	5264	5	8.1	2956.0	2	739	1000
Umwindzidale Catchment 01	3310	2483	993	1	1.5	557.6	0	139	1000
Umwindzidale Catchment 02	45291	33969	13587	14	20.9	7629.8	5	1907	2000
Umwindzidale Catchment 03	71574	53681	21472	21	33.0	12057.5	8	3014	4000
Umwindzidale Catchment 04	114666	86000	34400	34	52.9	19316.8	13	4829	5000
Umwindzidale Catchment 05	1019	765	306	0	0.5	171.7	0	43	1000
Umwindzidale Catchment 06	10212	7659	3064	3	4.7	1720.3	1	430	1000

Total	5193507	3895146.0	1558052	1558.0521	2397.0	874906.2	599.3	218726.5	242000
				1560				ha	242

4.3.3. Investment costs

4.3.3.1. Bulk Water Infrastructure

Preliminary investment costs are US$530,200,000 including pump upgrades, new water treatment plants as well as proposed new candidate reservoir sites. This investment cost excludes dam construction such as Kunyere and Musami Dams

Table below shows the proposed works have been grouped into fo cur ategories which are

1. *Raw Water Security & Storage*

Investments on raw water security and storage focuses on major interventions at abstraction points, existing dams, and proposed new sources like Kunyere and Musami. These works are intended to ensure stable water inflows even during dry seasons, reducing pressure on Chivero and Manyame.

2. *Water Treatment Capacity Expansion*

The second category targets water treatment capacity, where both Morton Jaffray and Prince Edward plants are scheduled for upgrades alongside a new plant in the Musami corridor. This will improve both water quality and daily throughput, addressing Harare's growing demand and frequent service interruptions.

3. *Strategic Reservoirs, Storage and Bulk water reticulation*

The third group addresses urban transmission and pumping, focusing on replacing aging bulk mains and restoring critical pump stations. These works will reduce physical losses and allow for consistent movement of treated water across zones, especially into high-demand suburbs.

Proposals also include new reservoirs and elevated tanks in areas like Budiriro and Hatcliffe. Enhancing storage capacity will help balance supply and demand while improving emergency preparedness.

4. *Catchment Management & Climate Resilience*

The final category focuses on catchment management and resilience, with interventions such as silt traps, afforestation, and slope protection to protect source water quality and reduce sediment loads. These investments ensure that both infrastructure and natural systems work together to deliver reliable water to Harare residents.

Table 4.15: Landfill requirements

Area	Population Number, No	Design Population Number, No	Weight of Solid Waste Generated, Kg/day	Weight of Solid Waste Generated, Ton/day	Compacted Volume of Solid Waste, m3/day	Compacted Annual Volume, m3	Daily Surface Area, m2	Total Landfill Size,m2	Proposed land size, m2
Crowborough Catchment 01	359180	269385	107754	108	165.8	60508.0	41	15127	16000
Crowborough Catchment 02	253710	190283	76113	76	117.1	42740.4	29	10685	11000
Crowborough Catchment 03	195812	146859	58744	59	90.4	32986.8	23	8247	9000
Crowborough Catchment 04	40349	30262	12105	12	18.6	6797.3	5	1699	2000
Crowborough Catchment 05	104787	78591	31436	31	48.4	17652.6	12	4413	5000
Crowborough Catchment 06	415983	311988	124795	125	192.0	70077.1	48	17519	18000
Crowborough Catchment 07	33769	25327	10131	10	15.6	5688.8	4	1422	2000
Crowborough Catchment 08	80502	60377	24151	24	37.2	13561.5	9	3390	4000
Firle Catchment 01	153857	115393	46157	46	71.0	25919.0	18	6480	7000
Firle Catchment 02	836951	627714	251085	251	386.3	140994.1	97	35249	36000
Firle Catchment 03	264708	198531	79412	79	122.2	44593.1	31	11148	12000
Firle Catchment 04	114220	85665	34266	34	52.7	19241.7	13	4810	5000
Firle Catchment 05	245592	184194	73678	74	113.4	41372.8	28	10343	11000
Firle Catchment 06	20031	15024	6009	6	9.2	3374.5	2	844	1000
Firle Catchment 07	96987	72741	29096	29	44.8	16338.6	11	4085	5000
Hatcliff Catchment 01	151743	113808	45523	46	70.0	25562.9	18	6391	7000
Hatcliff Catchment 02	183	138	55	0.05	0.1	30.8	0	8	1000
Hatcliff Catchment 03	14545	10909	4364	4	6.7	2450.3	2	613	1000
Hatcliff Catchment 04	29803	22353	8941	9	13.8	5020.7	3	1255	2000
Marlborough Catchment 1	276065	207049	82820	83	127.4	46506.3	32	11627	12000
Marlborough Catchment 2	118765	89074	35630	36	54.8	20007.3	14	5002	6000
Manyame Catchment 01	271189	203392	81357	81	125.2	45684.9	31	11421	12000
Manyame Catchment 02	208718	156539	62615	63	96.3	35161.0	24	8790	9000

Manyame Catchment 03	54841	41131	16452	16	25.3	9238.6	6	2310	3000
Manyame Catchment 04	58458	43844	17537	18	27.0	9847.9	7	2462	3000
Manyame Catchment 05	170666	128000	51200	51	78.8	28750.7	20	7188	8000
Manyame Catchment 06	80873	60655	24262	24	37.3	13624.0	9	3406	4000
Manyame Catchment 07	103301	77476	30990	31	47.7	17402.2	12	4351	5000
Manyame Catchment 08	10522	7892	3157	3	4.9	1772.6	1	443	1000
Manyame Catchment 09	4100	3075	1230	1	1.9	690.7	0	173	1000
Manyame Catchment 10	73877	55408	22163	22	34.1	12445.4	9	3111	4000
Manyame Catchment 11	85801	64351	25740	26	39.6	14454.2	10	3614	4000
Manyame Catchment 12	17547	13161	5264	5	8.1	2956.0	2	739	1000
Umwindzidale Catchment 01	3310	2483	993	1	1.5	557.6	0	139	1000
Umwindzidale Catchment 02	45291	33969	13587	14	20.9	7629.8	5	1907	2000
Umwindzidale Catchment 03	71574	53681	21472	21	33.0	12057.5	8	3014	4000
Umwindzidale Catchment 04	114666	86000	34400	34	52.9	19316.8	13	4829	5000
Umwindzidale Catchment 05	1019	765	306	0	0.5	171.7	0	43	1000
Umwindzidale Catchment 06	10212	7659	3064	3	4.7	1720.3	1	430	1000
Total	5193507	3895146.0	1558052	1558.0521	2397.0	874906.2	599.3	218726.5	242000
				1560				**ha**	**242**

Table 4.16: Preliminary Bulk water Investment Costs

Description	Units	Parameter	Rate	USD Cost	Status
Raw Water Security & Storage					
Securing sustainable raw water supply by investing in new sources, abstraction works, and raw water storage systems					
Construction of Kunyere Dam	P.sum	1	US$ 100,000,000	US$ 100,000,000	Proposed
Construction of Musami Dam and abstraction infrastructure	P.sum	1	US$ 887,000,000	US$ 887,000,000	Proposed
Refurbishment of existing raw water pipelines (Morton–Prince Edward)	Km	40	US$ 800	US$ 32,000,000	Proposed
Water Treatment Capacity Expansion					
Expand and modernize treatment capacity to meet current and future potable water demand with improved water quality standards.					
Upgrade existing Abstraction Works - Raw Water Pump Station for Potable at :					
Old intake pumps in Lake Chivero	ML/day	200	US$ 500	US$ 100,000	Upgrade
Lake Manyame intake pumps down	No	4	US$ 5,000	US$ 20,000	Upgrade
Letombo Pump Station and pumps 4 to 10 at Morton Jaffray	No	6	US$ 500	US$ 3,000	Upgrade
Rehabilitation works and upgrading at :					
Mortan Jaffray - short-term works include rehabilitation of the mixing chambers, clarifiers and filters	P.sum	1	US$ 100,000	US$ 100,000	Upgrade
Prince Edward	P.sum	1	US$ 50,000	US$ 50,000	Upgrade
Construct new water treatment works at Lake Manyame	ML/day	200	US$ 110,000	US$ 22,000,000	Proposed
Construct 2. No X 300 ML/day WTW	ML/day	300	US$ 110,000	US$ 33,000,000	Proposed
Construct 1. No X 200 ML/day WTW	ML/day	200	US$ 110,000	US$ 22,000,000	Proposed

Construct 1. No X 100 ML/day WTW	ML/day	100	US$ 110,000	US$ 11,000,000	Proposed
Strategic Reservoirs, Storage and Bulk water reticulation					
Increasing treated water storage capacity through new reservoirs and upgrades to existing storage infrastructure.					
Rehabilitate Reservoirs currently not in:					
Adylinn	ML/day	1	US$ 60,000	US$ 68,400	Upgrade
Arundel	ML/day	8	US$ 60,000	US$ 460,800	Upgrade
Cold Comfort	ML/day	5	US$ 60,000	US$ 312,000	Upgrade
Dzivaresekwa High Level	ML/day	11	US$ 60,000	US$ 684,000	Upgrade
Kambanji	ML/day	6	US$ 60,000	US$ 340,800	Upgrade
Mt Pleasant Heights	ML/day	5	US$ 60,000	US$ 300,000	Upgrade
Construct new Reservoirs in us in:					
Adylin	ML/day	27	US$ 2,100,000	US$ 8,400,000	Proposed
Arundel	ML/day	4	US$ 300,000	US$ 300,000	Proposed
Bluffhill	ML/day	52	US$ 2,100,000	US$ 16,800,000	Proposed
Budiriro	ML/day	117	US$ 2,100,000	US$ 23,100,000	Proposed
Donnybrook	ML/day	159	US$ 2,100,000	US$ 23,100,000	Proposed
Dzivarasekwa	ML/day	35	US$ 2,100,000	US$ 10,500,000	Proposed
Hatcliff	ML/day	142	US$ 2,100,000	US$ 25,200,000	Proposed
Glaudina	ML/da	39	US$	US$	

	y		2,100,000	12,600,000	Proposed
Greendale	ML/day	24	US$ 2,100,000	US$ 8,400,000	Proposed
Hatcliff	ML/day	148	US$ 2,100,000	US$ 27,300,000	Proposed
Hatfield	ML/day	4	US$ 300,000	US$ 300,000	Proposed
Highlands	ML/day	95	US$ 2,100,000	US$ 14,700,000	Proposed
Kopje	ML/day	21	US$ 2,100,000	US$ 8,400,000	Proposed
Kuwadzana	ML/day	210	US$ 2,100,000	US$ 31,500,000	Proposed
Letombo	ML/day	275	US$ 2,100,000	US$ 31,500,000	Proposed
Lochinvah	ML/day	316	US$ 2,100,000	US$ 37,800,000	Proposed
Marimba Park	ML/day	94	US$ 2,100,000	US$ 18,900,000	Proposed
Mutiny	ML/day	29	US$ 2,100,000	US$ 14,700,000	Proposed
Philadelphia	ML/day	9	US$ 1,500,000	US$ 2,250,000	Proposed
Harare South	ML/day	906	US$ 2,100,000	US$ 63,000,000	Proposed
Bulk water pipe network					
Rehabiitating and upgrading Bluff Pump station	No	2	US$ 10,000	US$ 20,000	Upgrade
Rehabiitating and upgradingPockets Hill	no	2	US$ 10,000	US$ 20,000	Upgrade
New booster pumps for Mabvuku	no	2	US$ 5,000	US$ 10,000	Upgrade
COH pipe replacements AC, Steel, PVC	P.sum	1	US$ 5,157,010	US$ 5,157,010	Upgrade

800 mm dia Rising Main (Potable Water) Mortan Jaffray Water Treatment Plant	m	40000	US$ 550.00	US$ 22,000,000	Upgrade
Catchment Management & Climate Resilience					
Protect source water quality and system reliability through catchment conservation, flood control, and infrastructure hardening.					
Construct silt traps along tributaries entering Lake Chivero	P.sum	4	US$ 25,000	US$ 100,000	Proposed
Implement afforestation around Musami and Kunyere reservoirs	P.sum	1	US$ 100,000	US$ 100,000	Proposed
Upgrade drainage and slope protection around raw water pipelines	P.sum	1	US$ 100,000	US$ 100,000	Proposed
Introduce real-time monitoring for sediment and flow rates	P.sum	1	US$ 1,000,000	US$ 1,000,000	Proposed
Create buffer zones around critical raw water infrastructure	P.sum	1	US$ 500,000	US$ 500,000	Proposed
Total				**US$ 530,200,000**	

4.3.3.2. Wastewater and Solid Waste

Preliminary investment costs are estimated at US$ 623,490,000 as shown in the table below and include upgrades to existing wastewater treatment plants, construction of new sewer outfalls, pumping stations, and expansion of trunk sewer infrastructure. The investment also covers solid waste management infrastructure including engineered landfills, transfer stations, material recovery facilities, buy-back centres, and waste collection vehicles. The program proposes interventions across both central Harare and high-growth peri-urban zones such as Budiriro, Hatcliffe, Caledonia, and Hopley. This integrated package aims to modernize core sanitation systems and support a cleaner, more resilient urban environment grouped as follows:

1. *Wastewater Treatment and Reuse.*

This group of proposals focuses on upgrading Harare's wastewater treatment capacity. Many of the existing plants are overloaded or dysfunctional, resulting in raw sewage entering rivers and communities. By improving existing works and building new ones in growth areas, the city can reduce pollution and move toward effluent reuse for agriculture or industry. These upgrades will also support public health and improve compliance with environmental regulations.

2. *Sewer Network Expansion and Rehabilitation*

These projects aim to restore and extend the city's sewer infrastructure. Harare faces frequent pipe bursts, overflows, and service gaps due to old or collapsed trunk mains. This group addresses those failures by replacing aged pipes, expanding outfall sewers, and improving key pumping stations. A better-connected and more reliable network will reduce health risks, prevent environmental damage, and support future housing development.

3. *Solid Waste Collection and Transfer*

This set of proposals focuses on improving the daily operations of waste collection and transfer in the city. Harare currently struggles with delayed pickups, scattered illegal dumps, and under-serviced suburbs. New collection vehicles, skip bins, and neighbourhood transfer points will increase coverage and allow for more frequent and reliable service. These upgrades form the foundation for a cleaner and more responsive waste system.

4. *Disposal, Recycling, and Recovery*

This group tackles long-term solid waste solutions through sustainable disposal and resource recovery. With Pomona landfill nearing capacity and little recycling infrastructure in place, the city needs to shift toward engineered landfills and material recovery facilities. These proposals also promote recycling partnerships and household waste separation to reduce what ends up in landfills. Over time, this group can help reduce environmental harm while creating green jobs and value from waste.

Table 4.25: Preliminary Wastewater and Solid waste Investment Costs.

Description	Units	Parameter	Rate	USD Cost	Status
Wastewater Treatment and Reuse					
Improving wastewater treatment capacity and effluent quality by upgrading existing plants and building new decentralized systems to support public health, environmental compliance, and water reuse.					
Proposed new WWTPs:					
Crowborough	ML/d	720.54	US$300,000	US$216,161,848	Proposed
Firle	ML/d	757.29	US$300,000	US$227,186,608	Proposed
Hatcliff	ML/d	105.22	US$300,000	US$31,564,760	Proposed
Malborough	ML/d	169.08	US$300,000	US$50,722,756	Proposed
Southern Incorporated Areas (SIA)-	ML/d	120.00	US$300,000	US$36,000,000	Proposed
Lyndhurst	ML/d	60	US$300,000	US$18,000,000	Proposed
Sewer Network Expansion and Rehabilitation					
Restoring and expanding the sewer network to eliminate overflows, improve service coverage, and support future urban growth through the replacement of aged pipes and construction of new outfall systems.					
Sewer Pumping Station - Rehabilitate	Sum	3.00	US$ 5,000	US$ 15,000	Upgrade
Sewer Reticulation					
Proposed Outfall Sewer for catchment:					
Crowwborough Catchment 01- 2 X ND900	m	1,000.00	US$ 650	US$650,000	Proposed
Crowborough Catchment 02- 2 X ND750	m	1,000.00	US$ 400	US$400,000	Proposed
Crowborough Catchment 03- 2 X ND750	m	1,000.00	US$ 400	US$400,000	Proposed

Crowborough Catchment 04- 2 X ND750	m	1,000.00	US$ 400	US$400,000	Proposed
Crowborough Catchment 05- 2 X ND600	m	1,000.00	US$ 650	US$650,000	Proposed
Crowborough Catchment 07- 2 X ND750	m	1,000.00	US$ 350	US$350,000	Proposed
Crowborough Catchment 08- 2 X ND900	m	1,000.00	US$ 400	US$400,000	Proposed
Firle Catchment 01- 2 X ND600	m	1,000.00	US$ 150	US$ 150,000	Proposed
Firle Catchment 02- 2 X ND1200	m	1,000.00	US$ 350	US$ 350,000	Proposed
Firle Catchment 03- 2 X ND600	m	1,000.00	US$ 800	US$ 800,000	Proposed
Firle Catchment 04- 2 X ND600	m	1,000.00	US$ 350	US$ 350,000	Proposed
Firle Catchment 05- 2 X ND600	m	1,000.00	US$ 350	US$ 350,000	Proposed
Firle Catchment 06- 2 X ND750	m	1,000.00	US$ 350	US$ 350,000	Proposed
Hatcliff Catchment 01- 2 X ND600	m	1,000.00	US$ 400	US$ 400,000	Proposed
Hatcliff Catchment 02- 2 X ND300	m	1,000.00	US$ 350	US$ 350,000	Proposed
Hatcliff Catchment 02- 2 X ND300	m	1,000.00	US$ 350	US$ 350,000	Proposed
Hatcliff Catchment 03- 2 X ND300	m	1,000.00	US$ 150	US$ 150,000	Proposed
Hatcliff Catchment 04- 2 X ND750	m	1,000.00	US$ 150	US$ 150,000	Proposed
Marlborough Catchment 1- 2 X ND750	m	1,000.00	US$ 400	US$ 400,000	Proposed
Marlborough Catchment 2- 2 X ND900	m	1,000.00	US$ 400	US$ 400,000	Proposed
Manyame Catchment 01- 2 X ND750	m	1,000.00	US$ 600	US$ 600,000	Proposed
Manyame Catchment 02- 2 X ND750	m	1,000.00	US$ 400	US$ 400,000	Proposed
Manyame Catchment 03- 2 X ND750	m	1,000.00	US$ 400	US$ 400,000	Proposed
Manyame Catchment 04- 2 X ND600	m	1,000.00	US$ 400	US$ 400,000	Proposed

Manyame Catchment 05- 2 X ND600	m	1,000.00	US$ 350	US$ 350,000	Proposed
Manyame Catchment 06- 2 X ND600	m	1,000.00	US$ 350	US$ 350,000	Proposed
Manyame Catchment 07- 2 X ND600	m	1,000.00	US$ 350	US$ 350,000	Proposed
Manyame Catchment 08- 2 X ND600	m	1,000.00	US$ 350	US$ 350,000	Proposed
Manyame Catchment 09- 2 X ND450	m	1,000.00	US$ 350	US$ 350,000	Proposed
Manyame Catchment 10- 2 X ND900	m	1,000.00	US$ 200	US$ 200,000	Proposed
Manyame Catchment 11- 2 X ND900	m	1,000.00	US$ 650	US$ 650,000	Proposed
Manyame Catchment 12- 2 X ND750	m	1,000.00	US$ 650	US$ 650,000	Proposed
Umwindzidale Catchment 01- 2 X ND450	m	1,000.00	US$ 400	US$ 400,000	Proposed
Umwindzidale Catchment 02- 2 X ND900	m	1,000.00	US$ 200	US$ 200,000	Proposed
Umwindzidale Catchment 03- 2 X ND900	m	1,000.00	US$ 650	US$ 650,000	Proposed
Rehabilitate Major Sewer Pumping Stations (e.g., Glen View, Kuwadzana)	No	6	US$ 10,000	US$ 60,000	Upgrade
Solid Waste Collection and Transfer					
Strengthen daily waste handling capacity by improving collection coverage, vehicle availability, and transfer logistics to reduce illegal dumping and improve service reliability.					
Construct New Engineered Landfill in Southern Harare	m^2	242,000	US$30	US$ 7,260,000	Proposed
Construct 2 New Transfer Stations (Westlea and Epworth)	m^2	40,333	US$30	US$ 1,210,000	Upgrade
Install Street Bins and Community Skip Bins in High-Density Areas	P.Sum	1	US$2,000,000	US$ 2,000,000	Upgrade
Procure Waste Collection equipment	P.Sum	1	US$ 10,000,000	US$ 10,000,000	Upgrade
Establish Mobile Collection Units for Informal Settlements	P.Sum	1	US$2,000,000	US$ 2,000,000	Upgrade

Disposal, Recycling, and Recovery					
Establishing long-term, environmentally sound solid waste solutions through engineered landfills, material recovery facilities, and increased recycling to reduce landfill pressure and promote circular waste practices.					
Build 3 Material Recovery Facilities (sorting + baling)	No	3	US$1,000,000	US$ 3,000,000	Proposed
Establish Buy-Back Centres Linked to Informal Recyclers	No	4	US$1,000,000	US$ 4,000,000	Proposed
Pilot Household Separation-at-Source Program	P.Sum	1	US$200,000	US$ 200,000	Proposed
				US$ -	Upgrade
Total				**US$ 623,490,000**	

4.3.3.3. Traffic Infrastructure

Preliminary investment costs are **$693,600,000.00** this includes Dualization of major roads, road widening, interchange proposals and introduction of a light rail transit network.
The road network to be upgraded is approximately 440km. This includes regional truck network routs, primary and secondary roads. It also includes the proposed outer Harare ring road Table 7 below. The proposals are grouped into 5 themes which are:

1. *CBD Decongestion*

This group of proposals focuses on reducing traffic pressure in Harare's inner city. It does so by improving vehicle flow through major junctions, expanding public transport options, and limiting the number of cars entering the CBD. Projects like Park-and-Ride, interchanges, and bus lanes are central to this approach. The goal is to create a more open, accessible, and less congested city core.

2. *Smart & Tech-Driven Systems*

These infrastructure proposals bring in modern technology to improve how the transport system functions. They include intelligent traffic signals, automated enforcement, and a light rail corridor—all designed to manage flow, improve safety, and offer reliable transit. These tools make the system faster, smarter, and more responsive to real-world conditions. It's about replacing manual guesswork with connected infrastructure.

3. *Equity & Feeder Accessibility*

This set of proposals ensures that all areas of the city especially high-density suburbs are connected to the wider transport network. It includes better feeder roads, formalized bus stops, sidewalks, and small interchange upgrades. The aim is to make transport safer and easier for people who walk, cycle, or use buses every day. It focuses on reaching those usually left out.

4. *Green Infrastructure & Resilience*

These transport upgrades address environmental challenges and long-term infrastructure durability. They include stormwater drainage, truck routes, and the ring road which are all designed to protect roads and reduce emissions. They also introduce more trees, solar lighting, and green features along roads. The goal is a cleaner, safer, and climate-ready city.

5. *Institutional & Climate Adaptation*

This group of proposals builds the systems behind the infrastructure with the main goal on data, planning, and climate risk management. It includes a transport data unit, and ways to help people reach buses or trains more easily. These projects support better decision-making and protect Harare from future shocks. They make the whole transport network stronger over time.

Table 4.26: Preliminary Traffic Investment Cost

Description	Units	Parameter	Rate	USD Cost	Status
CBD Decongestion					
Park-and-Ride Facilities on Urban Fringes -					
Three hubs at key city entry points (Borrowdale, Seke, Samora Machel) to intercept private vehicle trips and transfer users to buses/light rail	No	4.00	US$ 500,000	US$2,000,000.00	Proposed
Public Transport Integration Terminals					
At least multi-modal terminals (Mbudzi, 4th Road port, High glen Road, New one) linking buses, kombis, light rail, walking, and cycling infrastructure in safe, formalized environments and Modernization of small bus interchange stations to include waiting bays and lighting	No	4.00	US$ 600,000	US$2,400,000.00	Upgrade
Public Bus Priority Lanes on Congested Corridors					
Dedicated 50 km of bus lanes on key radial roads to speed up mass transit and reduce private vehicle reliance. Targeting areas like Mt Hampden City	km	50.00	US$ 800,000	US$ 40,000,000.00	Proposed
Proposed Interchanges (Kuwadzana, Willowvale, Msasa, Mutare Rd)					
Grade-separated interchanges at high-traffic nodes to reduce bottlenecks and create smoother flow for transit and freight.	No	4.00	US$ 2,500,000	US$ 10,000,000.00	Proposed
Reducing CBD Parking Supply (Policy Reform Proposal)					
Introduce a phased parking cap, eliminate curb side parking on priority roads, and convert excess parking into green or commercial space.	P.sum	1.00	US$ 1,000,000	US$ 1,000,000.00	Proposed
Smart & Tech-Driven Systems					
Intelligent Transport Systems (ITS) and Urban Control Centre					
Adaptive traffic signals, CCTV, real-time congestion data, and emergency response links at 80 intersections	No	80.00	US$20,000	US$1,600,000.00	Upgrade
Urban Traffic Enforcement Systems					
Speed cameras, red-light violations, and bus lane enforcement at 40 junctions across the city	No	0.00	US$ 15,000	US$ 600,000.00	Upgrade
Light Transit Rail System					
50 km of surface light rail corridor to reduce vehicle trips and form a backbone of high-capacity transit and to connect to new city	km	50.00	$1,100,000.00	US$ 55,000,000.00	Proposed
Traffic Signal Retrofitting and Solar Backups					
Upgrade and solarize all traffic lights to reduce downtime during load-shedding and improve network resilience.	No	120.00	US$ 1,100	US$ 132,000.00	Upgrade
Road Network Accessibility					
Road work in and around Suburbs					
Dualizing and Road widening major and minor arterial routes	km	193.55	$ 800,000.00	$222,055,928.31	Upgrade
Rehabilitation and Maintenance of existing roads including major collectors	km	8.42	$60,000.00	$252,531.66	Upgrade
Asphalt Overlaying of major collectors	km	152.90	$800,000.00	$137,608,785.00	Upgrade
Outer Harare Ring Road	km	120.00	$900,000.00	$108,000,000.00	Proposed
Non-Motorized Transport Infrastructure					
Sidewalks, bike lanes, and crossings along 120 km of priority corridors to serve pedestrians and cyclists.	km	130.00	$ 5,000.00	$ 650,000.00	Upgrade
Green Infrastructure & Resilience					

Outer Harare Ring Road					
120 km bypass around the city to deflect long-distance traffic and reduce inner-city emissions.	km	120.00	$800,000.00	$ 96,000,000.00	Proposed
Freight Corridors and Logistics Hubs					
Establish Truck-only logistics depots in areas like Southerton and Msasa to separate heavy freight from residential roads.	P.sum	4.00	$1,000,000.00	$ 4,000,000.00	Proposed
Stormwater Integration with Road Infrastructure					
Rehabilitate approx. 40 km of culverts, open drains, and underground channels along major roads to prevent flooding and pavement failure	km	40.00	$ 5,000.00	$ 200,000.00	Upgrade
Harnessing green energy for New Corridors					
Install solar-powered LED lights on roads, pedestrian paths, and signalling to reduce grid demand and improve safety.	P.sum	1.00	$ 10,000,000.00	$10,000,000.00	Upgrade
Institutional & Climate Adaptation					
Mobility Observatory & Transport Data Platform					
Establish a Centralized unit to collect, analyse, and publish transport data for informed planning, enforcement, and investment.	No	1.00	$2,000,000.00	$2,000,000.00	Proposed
First-Mile/Last-Mile Micro Mobility Access Program					
Adopt new technologies like Electric shuttles such as the use of Byd and CMED Electric shuttles, and safe walkways to connect to bus and rail stations.	P.sum	1.00	$100,000.00	$100,000.00	Upgrade
Total				**$693,600,000.00**	

Table 4.27: Roads proposals in detail

ID	Description	Type	Responsible Authority	Total Road Length (m)	Surfaced Road Length (Km)	Proposal	Finished Road Areas (m2)	Surfacing Cost	Roads Total Cost
Abdel Gamal Nasser Road	Existing Surfaced Road	Major Arterial Road	MOT	3	3.2	Min Rehab & Maintenance	38884.296	0	US$0
Bulawayo Road	Existing Surfaced Road	Major Arterial Road	MOT	25	24.9	Road widening	298.485	11193203	US$11,193,203
ED Mnangagwa Road	Existing Surfaced Road	Major Arterial Road	MOT	21	21.2	Road widening	247.851	28625727	US$28,625,727
Msasa	Existing Surfaced Road	Major Arterial Road	MOT	0	0.1	Road widening	1.585	178315	US$178,315
Mutare Road	Existing Surfaced Road	Major Arterial Road	MOT	1	0.9	Road widening	9.240	1247428	US$1,247,428
Nemakonde Way	Existing Surfaced Road	Major Arterial Road	MOT	8	7.8	Min Rehab & Maintenance	93.400	0	US$0
Sam Nujoma Street	Existing Surfaced Road	Major Arterial Road	MOT	5	5.1	Road widening	61.142	0	US$0
Samora Machel	Existing Surfaced Road	Major Arterial Road	MOT	16	18.7	Road widening	188.087	11774673	US$11,774,673
Simon Mazorodze Road	Existing Surfaced Road	Major Arterial Road	MOT	27	34.3	Min Rehab & Maintenance	318.008	0	US$0
Solomon Mutsvairo Road	Existing Surfaced Road	Major Arterial Road	MOT	5	4.9	Road widening	58.831	4412296	US$4,412,296
Abdel Gamal Nasser Road	Existing Surfaced Road	Minor Arterial Road	COH	2	1.6	Road widening	16	1449149	US$1,449,149
Chitungwiza Road	Existing Surfaced Road	Minor Arterial Road	COH	9	9.4	Road widening	94	12712255	US$12,712,255
Cripps Road	Existing Surfaced Road	Minor Arterial Road	COH	2	1.7	Road widening	17	1531760	US$1,531,760
Eastern Road	Existing Surfaced Road	Minor Arterial Road	COH	3	2.6	Road widening	26	2319583	US$2,319,583
Enterprise Road South	Existing Surfaced Road	Minor Arterial Road	COH	0	0.0	Road widening	0	33822	US$33,822
Glenara Avenue South	Existing Surfaced Road	Minor Arterial Road	COH	3	3.4	Road widening	34	6035701	US$6,035,701
Harare Drive	Existing Surfaced Road	Minor Arterial Road	COH	29	28.5	Road widening	285	53344986	US$53,344,986
High Glen Road	Existing Surfaced Road	Minor Arterial Road	COH	15	15.2	Road widening	152	27424251	US$37,424,251
Joshua Nkomo Road	Existing Surfaced Road	Minor Arterial Road	COH	16	16.4	Road widening	164	14743621	US$14,743,621
Julius Nyerere Way	Existing Surfaced Road	Minor Arterial Road	COH	3	2.8	Rehab & Maintenance	28	85074	US$85,074
Remembrance Drive	Existing Surfaced Road	Minor Arterial Road	COH	1	1.4	Road widening	14	1292783	US$1,292,783
Robert Mugabe Road	Existing Surfaced Road	Minor Arterial Road	COH	6	5.6	Rehab & Maintenance	56	167458	US$167,458
Robson Manyika Avenue	Existing Surfaced Road	Minor Arterial Road	COH	0	0.0	Road widening	0	32242	US$32,242
Seke Road	Existing Surfaced Road	Minor Arterial Road	COH	31	31.2	Road widening	312	28102670	US$28,102,670
Solomon Mujuru Drive	Existing Surfaced Road	Minor Arterial Road	COH	1	1.5	Road widening	15	1330317	US$1,330,317
Tynwald Road	Existing Surfaced Road	Minor Arterial Road	COH	2	2.3	Road widening	23	2050371	US$2,050,371
Vitalis Zvinavashe Road	Existing Surfaced Road	Minor Arterial Road	COH	2	2.5	Road widening	25	2220779	US$2,220,779
Anston Road	Existing Surfaced Road	Major Collector	COH	2	0.4	Asphalt Overlaying	25	316381	US$316,381
Arcturus Road	Existing Surfaced Road	Major Collector	COH	2	12.8	Asphalt Overlaying	25	11524436	US$11,524,436
Ardbennie Road	Existing Surfaced Road	Major Collector	COH	2	3.4	Asphalt Overlaying	25	3063778	US$3,063,778
Bank Street	Existing Surfaced Road	Major Collector	COH	2	0.6	Asphalt Overlaying	25	557101	US$557,101
Bishop Gaul Avenue	Existing Surfaced Road	Major Collector	COH	2	5.9	Asphalt Overlaying	25	5334828	US$5,334,828
Boshoff Drive	Existing Surfaced Road	Major Collector	COH	2	2.6	Asphalt Overlaying	25	2298956	US$2,298,956
Cassino Avenue	Existing Surfaced Road	Major Collector	COH	2	0.4	Asphalt Overlaying	25	341790	US$341,790
Charter Road	Existing Surfaced Road	Major Collector	COH	2	0.0	Asphalt Overlaying	25	31882	US$31,882
Chiremba Road	Existing Surfaced Road	Major Collector	COH	2	8.7	Asphalt Overlaying	25	7810574	US$7,810,574

Churchil Avenue East	Existing Surfaced Road	Major Collector	COH	2	1.7	Asphalt Overlaying	25	1492267	US$1,492,267
Churchill Avenue	Existing Surfaced Road	Major Collector	COH	2	2.7	Asphalt Overlaying	25	2403723	US$2,403,723
Delport Road	Existing Surfaced Road	Major Collector	COH	2	7.0	Asphalt Overlaying	25	6278727	US$6,278,727
Fidel Castro Road	Existing Surfaced Road	Major Collector	COH	2	2.0	Asphalt Overlaying	25	1833818	US$1,833,818
Forbes Road	Existing Surfaced Road	Major Collector	COH	2	0.8	Asphalt Overlaying	25	758474	US$758,474
Fourth Street	Existing Surfaced Road	Major Collector	COH	2	2.0	Asphalt Overlaying	25	1796676	US$1,796,676
Fourth Street/ S.V Muzenda	Existing Surfaced Road	Major Collector	COH	2	2.0	Asphalt Overlaying	25	1765305	US$1,765,305
Glenara Avenue North	Existing Surfaced Road	Major Collector	COH	2	2.9	Asphalt Overlaying	25	2628399	US$2,628,399
Harare Street	Existing Surfaced Road	Major Collector	COH	2	0.5	Asphalt Overlaying	25	423726	US$423,726
Herbert Chitepo Avenue	Existing Surfaced Road	Major Collector	COH	2	3.4	Asphalt Overlaying	25	3083778	US$3,083,778
Josiah Tongogara Avenue	Existing Surfaced Road	Major Collector	COH	2	2.0	Asphalt Overlaying	25	1827743	US$1,827,743
Josiah Tungamirai Drive	Existing Surfaced Road	Major Collector	COH	2	4.4	Asphalt Overlaying	25	3990409	US$3,990,409
Kambuzuma Road	Existing Surfaced Road	Major Collector	COH	2	6.3	Asphalt Overlaying	25	5687236	US$5,687,236
Keneth Kaunda Avenue	Existing Surfaced Road	Major Collector	COH	2	0.1	Asphalt Overlaying	25	47879	US$47,879
Kenneth Kaunda Avenue	Existing Surfaced Road	Major Collector	COH	2	1.0	Asphalt Overlaying	25	876981	US$876,981
King George Road	Existing Surfaced Road	Major Collector	COH	2	2.9	Asphalt Overlaying	25	2629293	US$2,629,293
Leopold Takawira Avenue	Existing Surfaced Road	Major Collector	COH	2	1.9	Asphalt Overlaying	25	1713800	US$1,713,800
Leopold Takawira Street	Existing Surfaced Road	Major Collector	COH	2	1.6	Asphalt Overlaying	25	1482950	US$1,482,950
Liberation Legacy Way	Existing Surfaced Road	Major Collector	COH	2	24.5	Asphalt Overlaying	25	22025128	US$22,025,128
Lytton Road	Existing Surfaced Road	Major Collector	COH	2	4.7	Asphalt Overlaying	25	4257249	US$4,257,249
Malvern Road	Existing Surfaced Road	Major Collector	COH	2	2.5	Asphalt Overlaying	25	2268981	US$2,268,981
Nelson Mandela Avenue	Existing Surfaced Road	Major Collector	COH	2	0.9	Asphalt Overlaying	25	850411	US$850,411
Paisley Road	Existing Surfaced Road	Major Collector	COH	2	3.2	Asphalt Overlaying	25	2857785	US$2,857,785
Princ Edward Street	Existing Surfaced Road	Major Collector	COH	2	0.0	Asphalt Overlaying	25	24532	US$24,532
Prince Edward Street	Existing Surfaced Road	Major Collector	COH	2	3.7	Asphalt Overlaying	25	3368605	US$3,368,605
Princes Road	Existing Surfaced Road	Major Collector	COH	2	5.6	Asphalt Overlaying	25	5079887	US$5,079,887
Rekai Tangwena Avenue	Existing Surfaced Road	Major Collector	COH	2	1.4	Asphalt Overlaying	25	1288562	US$1,288,562
Robert Mugabe Road	Existing Surfaced Road	Major Collector	COH	2	3.4	Asphalt Overlaying	25	3089944	US$3,089,944
Robson Manyika Avenue	Existing Surfaced Road	Major Collector	COH	2	1.6	Asphalt Overlaying	25	1444517	US$1,444,517
Saint George's Street	Existing Surfaced Road	Major Collector	COH	2	1.2	Asphalt Overlaying	25	1089196	US$1,089,196
Saint Patrick's Road	Existing Surfaced Road	Major Collector	COH	2	4.6	Asphalt Overlaying	25	4183485	US$4,183,485
Simon Mazorodze Road	Existing Surfaced Road	Major Collector	COH	2	0.5	Asphalt Overlaying	25	449228	US$449,228
Sipolilo Battle Street	Existing Surfaced Road	Major Collector	COH	2	1.3	Asphalt Overlaying	25	1128006	US$1,128,006
Sunny Takawira Road	Existing Surfaced Road	Major Collector	COH	2	2.5	Asphalt Overlaying	25	2213650	US$2,213,650
Waterfalls Avenue	Existing Surfaced Road	Major Collector	COH	2	2.6	Asphalt Overlaying	25	2347834	US$2,347,834
Willowvale Road	Existing Surfaced Road	Major Collector	COH	2	8.5	Asphalt Overlaying	25	7640875	US$7,640,875
				347	400		42533	349917245	**US$359,917,244.97**

4.4. GOVERNANCE AND RESILIENCE

4.4.1. National to local governance framework for Harare

4.4.1.1. National and provincial government

Harare City does not operate in a vacuum. Roles of sector ministries as development partners overseeing development of local authorities is critical. Its affairs are influenced (and influences) the functions of various sectors1 at national level. The Ministry of Local Government and Public Works coordinate the activities of the local government system in Zimbabwe, Harare is included. Further, there are other government ministries and agencies that impact on Harare's affairs (See Policy and Legislative Context section). The statutory functions performed by government agencies are sometimes not coordinated, resulting in delays in decision making.

Institutional reforms in key sectors, notably roads and water have had a bearing on Council's performance (Chatiza, et al, 2023[2]). Respectively, management of vehicle licenses and responsibility for water services went through significant changes in the last 20 years (Muchadenyika, 2015[3]). The consistently destabilizing brawls that have gone on for more than two decades have rendered the government of Harare practically unrecognizable. Provincial tier of government has influence on overall development management within the city. The provincial level programs impact Harare city e.g. the regularization program coordinated by the provincial DSPD.

The presence of sector institutions and their mandates impacting on Harare is critical for integrated national development. Additionally, the sector agencies strengthen accountability systems (checks and balances) for the city. For instance, town planning applications within the city are circulated to different government agencies for technical input for purposes of coordinating and integrating development. However, it is the bureaucracy and administrative delays in the process of circulations that need to be attended to.

4.4.1.2. The Harare's policy structures

The City has experienced an increase in the number of committees since 2013 as a way of trying to address topical issues the city faced (See Table below). The committees have undergone significant changes, with some being removed and others added. The core committees, such as Finance and Development, Business, Environmental Management, Education, Health, Housing, Community Services and Licensing, Audit, Information and Publicity, and Human Resources and General Purposes, have remained relatively consistent since 2013 and are outlined as prerequisites by the Urban Council's Act. However, in 2018, the Informal Sector committee was added, acknowledging the importance of informal trade in the city's economy. In 2023, new committees emerged, focusing on Small, Medium Enterprises, Works and Town Planning, Disaster Risk Management and Public Safety, and Sports and Arts. These additions reflect the city's growing emphasis on entrepreneurship, infrastructure development, disaster preparedness, and community engagement.

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[1] Ministries responsible for land, local government, housing, justice, water, finance, and environment, National Departments of Surveyor General, Spatial Planning, Deeds, & Authorities for environment (EMA), water (ZINWA), taxes (ZIMRA), ICT (POTRAZ)

[2] Chatiza et al. 2023. Land and Connectivity Domain Research Report. African Cities Research Consortium.

[3] Muchadenyika, D. (2015). Land for Housing: A Political Resource – Reflections from Zimbabwe's Urban Areas. *Journal of Southern African Studies, 41*(6), 1219-1238.

2 Table 10.1: Council committees, 2013 - 2023

2013 (7 committees)	2018 (8 committees)	2023 (11 committees)
1. Finance and Development	1. Finance and Development	1. Finance and Development
2. Business	2. Business	2. Business
3. Environmental Management	3. Environmental Management	3. Environmental Management
4. Education, Health, Housing and Community Services and Licensing	4. Education, Health, Housing and Community Services and Licensing	4. Education, Health, Housing and Community Services and Licensing
5. Audit	5. Audit	5. Audit
6. Information and Publicity	6. Information and Publicity	6. Information and Publicity
7. Human Resources and General Purposes	7. Human Resources and General Purposes	7. Human Resources and General Purposes
	8. Informal sector	8. Small, Medium Enterprises
		9. Works and Town Planning
		10. Disaster Risk Management and Public Safety
		11. Sports and Arts

Harare's Councillors, standing Committees and staff, undergo capacity building exercises. These sessions are often organized by the Council, national Government and other external development partners. The capacity building exercises are designed to enhance the skills and knowledge of its councillors and staff. Thematic areas covered in these sessions include local governance familiarization, code of conduct and protocols. The induction on local governance session is concerned with in-house government specialists and consultants providing an overview of the council's operations, meetings procedures, and relevant laws and policies.

Familiarization tours are when Councillors visit various departments to gain a deeper understanding of their operations. Additionally, the City of Harare participates in stakeholder professional development summits, where councillors and staff can share experiences and learn from best practices. Exchange visits and sister-city relationships also provide opportunities for information sharing and peer reviews.

The standing council committees participate in specialized capacity-building exercises designed to equip them with the necessary skills to effectively execute their mandate. These programs, often hosted by the Council, feature expert stakeholders from key sectors such as engineering, health, education, and town planning. Furthermore, committee representatives engage with national forums relevant to their areas of operation, including the National Auditors Forum, Zimbabwe Institute of Engineers Forum, and the Employers' Confederation of Zimbabwe Workshops, to ensure they remain informed and up to date on best practices and industry developments. The Council faces significant challenges in policy development and by-law formulation, hindering effective governance. Key issues include limited in-house expertise, inadequate financial resources, and poor stakeholder engagement. The lack of cooperation from internal stakeholders and non-publication of by-laws further exacerbates the problem. These challenges are deeply rooted in institutional and systemic issues, such as limited financial autonomy, inadequate training, and governance instability as evidenced by Councillor recalls. Addressing these challenges will require a comprehensive approach that includes capacity building, stakeholder engagement, and institutional reforms.

4.4.1.3. Human capital structure

Regarding the technical staff, the city is disjointed as it lacks substantive heads of some departments. Harare's vacancy rate averages at 24% over the past 10 years. Critical to note is that the City's executive is the most affected by the vacancies. For instance, Chamber Secretary position has been vacant since 2020, Finance Director position has been vacant since 2022, Human Capital Director position has been vacant since 2023, and the new position of the Director of Planning Services has not been filled since August 2023. With senior council officials in acting capacities, this undermines decision-making performance.

The total vacancy rate has fluctuated over the years, with a lower rate between 2017 to 2019, followed by an increase from 2020 to 2021. The Works department appears to be the most affected, consistently having highest vacancies throughout the five-year period, with a peak of 1,032 in 2021. The City Health department also showed a significant increase in vacancies from 2017 to 2021. The Human Capital Development department had the lowest vacancy rate throughout the period, with an average of around 30 vacancies per year.

Regarding staff turnover, a review of the Harare city's Human Capital departments' annual reports (2017-2021) shows fluctuations in staff turnovers resulting from retirements, resignations, dismissals and deaths. Harare city experienced significant staff turnover between 2017 and 2021, with a shift from retirements to resignations as the primary reason for staff separation. Of importance to note is the increase is the number of staff resignations between 2017 and 2021.

5. LIST OF APPENDICES

5.1. Appendix 1: City of Harare Master Plan Use Groups

	Land and Building Use Group	Zone 1B(iii) Mixed Use	Zone 1F Suburban Commercial	Local Shopping Centre	Neighbourhood Shopping Centre	Markets	High Density Residential	Medium Density Residential	Low Density Residential	Flats	Zone 4 Public Establishments	Zone 5A and D: Light and Service Industry	Zone 5B Agro-industry
A	Detached Dwelling House	P	X	X	X	X	P	P	P	P	X	X	P
A1	Attached/Semi-Detached Dwelling House	P	X	X	X	X	P	P	P	P	X	X	P
A2	Flats	P	P1	P1	P1	X	SC	SC	SC	P	SC1	X	P
A3	Cluster House	P	X	X	X	X	SC	SC	SC	P	X	X	P
B	Residential Buildings	P	P1	P1	P1	X	SC	SC	SC	SC	SC1	X	SC
B1	Residential Buildings (Licensed)	P	P1	P1	P1	X	SC	SC	SC	SC	X	X	SC
B2	Residential Buildings (Institutional)	SC	SC	SC	SC	X	SC	SC	SC	SC	P	X	SC
C	Schools & Residential Colleges	SC	SC	SC	SC	X	SC	SC	SC	SC	P	X	SC
C1	Crèches	SC	X	X	X	X	SC	SC	SC	SC	P	X	P
D	Shops	X	P	P	P	P	X	X	X	X	X	SC	SC
D1	Equipment, Furniture & ICT Showrooms	P	P	P	P	P	X	X	X	X	X	P	SC
D2	Restaurants	SC	P	P	P	P	SC	SC	SC	SC	SC	SC	SC
E	Offices	P	P	P	P	SC	X	X	X	X	X	SC	SC
E1	Corporate Offices	P	P	P	P	SC	X	X	X	X	X	SC	SC
E2	Surgeries & Medical Chambers	SC	P	P	P	SC	SC	SC	SC	SC	SC	SC	SC
F	Wholesale Warehouse	X	SC	P	P	P	X	X	X	X	X	SC	SC
G	Storage Warehouse	X	X	X	X	X	X	X	X	X	X	P	SC
H	Public Buildings	SC	SC	SC	SC	SC	X	X	X	X	P	SC	SC

	Land and Building Use Group	Zone 1B(iii) Mixed Use	Zone 1F Suburban Commercial	Local Shopping Centre	Neighbourhood Shopping Centre	Markets	High Density Residential	Medium Density Residential	Low Density Residential	Flats	Zone 4 Public Establishments	Zone 5A and D: Light and Service Industry	Zone 5B Agro-industry
I	Places of Public Worship	SC	SC1	SC	SC	X	X	X	X	X	P	X	X
K	Places of Assembly	SC	SC	SC	SC	X	X	X	X	X	P	SC	SC
K1	Special Places of Assembly	SC	X	X	X	X	X	X	X	X	P	X	SC
L	Industrial	X	X	X	X	SC2	X	X	X	X	X	P	P
L1	Service Industrial Building	X	SC	X	X	SC	X	X	X	X	X	P	P
N	Agricultural Buildings	X	X	X	X	X	X*	X*	X	X	X	X	P
P	Petrol Filling Station	SC	SC	SC	SC	X	X	X	X	X	X	SC	SC
R	Newspaper Offices	P	P	X	X	X	X	X	X	X	P	P	P
S	Special Buildings & Uses	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC
T	Parking Garage	SC	X	X	X	X	X	X	X	X	X	P	SC
T1	Surface Car Park	SC	SC	SC	SC	SC	SC	X	X	X	X	P	SC
T2	Lorry Parking & Rest House	X	X	X	X	X	X	X	X	X	X	P	SC
U	Funeral Parlour	SC	SC	SC	SC	X	X	X	X	X	SC	P	SC

Where:
P- Permitted;
X- Prohibited;
SC- Special Consent of the Local Planning Authority.
SC1- Special Consent of the Local Planning Authority only on ground floor;

SC2- Special Consent of the Local Planning Authority only for SME manufacturing to spur local innovation.
P1- Permitted only on first and subsequent floors;
P2- Permitted on ground floor only, where flats have been developed to four or more floors above ground floor and shall not constitute more than 25% of the total floor area.
P3- Not more than 15% of the total habitable floor area of all buildings on the stand, employing not more than four persons and using not more than two class 4 light motor vehicles in line with the provisions of Statutory Instrument 216/94.
SC1- By special consent of the Local Planning Authority on the first and subsequent floors only.
X* - Permitted where indicated on the proposals map with respect to residential agricultural reservations.

5.2. Appendix II: City of Harare Master Plan: Summary of Development Control Provisions

Zones	Minimum Permitted Subdivisions	Maximum Coverage	Min-Maximum Permitted Height	Minimum Permitted Building Lines (m)		Floor Area Factor	Parking Space Provisions
				Roadside	Internal		
Zone 1B(iii) Mixed Use	2000m^2	30%	18m (6 storeys) and 6m (2 storeys)	10	5	-	4 bays / 100m^2 Floor space contained in the Building
Zone 1F Suburban Commercial Shops	*	75%	28m (7 storeys)	-	-	-	1 bay for every 40m^2 floor space contained in the building
Local Shopping Centre	*	75%	28m (7 storeys)	-	-	-	1 bay for every 40m^2 floor space contained in the building
Neighbourhood Shopping Centre	*	75%	28m (7 storeys)	-	-	-	1 bay for every 40m^2 floor space contained in the building
Markets	*	*	*	-	-	-	*
High Density Residential	350m^2	75%	2 storeys	-	-	-	2 bays per self-contained unit
Medium Density Residential	400m^2	55%	2 storeys	-	-	-	2 bays per self-contained unit
Low Density Residential	800m^2	35%	2 storeys	-	-	-	2 bays per self-contained unit
Flats	2000m^2	75%	12 storeys	-	-	-	2 bays per self-contained unit
Zone 4 Public Establishments	2000m^2	-	-	-	-	-	-
Zone 5A: Light/Service Industry	500m^2	-	-	-	-	-	-
Zone 5B Agro-industry	*	-	-	-	-	-	-

* To be determined by the Local Planning Authority

5.3. Appendix III: Building Use Groups

GROUP A DETACHED DWELLING HOUSES

A detached dwelling house is a principal building designed for use as a dwelling unit for and used exclusively by a single family and may include such outbuildings as are ordinarily used therewith. The outbuildings shall not exceed 40% of the area of the principal building with the workers' quarters not exceeding 80m^2.

GROUP A1: ATTACHED & SEMI-DETACHED DWELLING HOUSE /CLUSTER HOUSES

Semi-detached/Cluster houses are dwelling units designed for and used exclusively by a single family in a setting comprising two or more dwelling units in which the units are separated from one another vertically and may include such outbuildings as are ordinarily used therewith. The outbuildings shall not exceed 40% of the area of the principal building with the workers' quarters not exceeding 80m^2.

GROUP A2 FLATS

A flat is a dwelling unit in a building of two or more storeys in which each dwelling is separated from other dwelling units or other accommodation in the same building horizontally. This group includes: - A dwelling unit over a shop; A dwelling unit above ground floor level in multi-storey buildings designed for use by a single person or caretaker. Note: Flats normally share access to upper floors by means of common staircases, lift or balconies.

GROUP A3 CLUSTER HOUSE

Cluster houses are dwelling units designed for and used exclusively by a single family in a setting comprising two or more dwelling units in which the units are separated from one another vertically and may include such outbuildings as are ordinarily used therewith.

GROUP B RESIDENTIAL BUILDINGS

A residential building is a building other than a detached or attached dwelling house, flat, residential college or school providing residential accommodation and may include such outbuildings as are ordinarily therewith. This group includes: - Guest Houses; Private Hotels; Hostels; Residential Clubs

GROUP BI RESIDENTIAL BUILDINGS (LICENSED)

A residential building (licensed) is a building other than a detached or attached dwelling house, flat, residential school or college, designed for or containing provisions for human habitation, and for the retail sale of intoxicating liquors for consumption on the premises. This group includes: Club, Residential Licensed Hotel, Residential Licensed and may include on the ground floor a bookshop, a ladies hairdressing/beauty parlour, a curio/boutique/jewellery shop, a chemist's shop, a florist's shop and airline and travel agency.

GROUP B2 RESIDENTIAL BUILDINGS (INSTITUTIONAL)

A residential building (institutional) is a building other than a dwelling house, block of flats, residential school or college or residential Building (licensed), designed for or containing provision for human habitation, together with such outbuildings as are ordinarily used therewith. This group includes: - Clinic (residential), convalescent home, Convent, Hospital (other than mental), Maternity home, Monastery, Nursing home and sanatorium.

GROUP C SCHOOLS AND RESIDENTIAL COLLEGES

This group comprises residential and non-residential schools for children and residential colleges for adults. This group includes: -College, Adult Residential, College residential, Educational centre, Primary and Secondary schools, Technical institute, Training College and University Buildings.

Note: Non-residential colleges for adults are included in Use Group J - Places of Assembly.

GROUP C1 CRECHES

This group includes: - Crèche, Day Nursery and Nursery School.

GROUP D SHOPS

A shop is a building designed for the purpose of carrying on retail trade.

This group includes:

- Auction Room,

Bar (licensed for the sale of intoxicating liquors),
Milk Bar
Beauty Parlour, Hairdresser
Beer Hall
Bureau de Change
Café
Cleaner's and Dyer's Reception Depot
Club (non-residential)
Department Store
Launderette (a building or portion of a building, wherein, a) a domestic type electric washing machines with or without domestic type ironing appliances are provided by the occupier for the use by customers, whether such washing machines and/or ironing appliances are operated solely by the customer or not and b) fewer than five persons are employed by the occupier to operate such machines and/or appliances)
Library lending
Market retail
Public House
Restaurant (licensed for the sale of intoxicating liquor)
Shop, a workshop on the same premises as an incidental to the conduct of retail business
Supermarket
Ticket Office

GROUP D1 EQUIPMENT, FURNITURE AND ICT SHOWROOMS

This group shall include the following:
Corporate Sales/ Offices for high-tech equipment,
Showrooms for Furniture,
Agricultural Equipment,
Parks, Garden and School Grounds Maintenance Equipment,
Assembly Workshop/Fitment Centres,
Motor Vehicle Showrooms,
Sales Offices for High Value Merchandise such as capital equipment,
Computer and ICT Sales Shops.

GROUP D2 RESTAURANTS

A building designed for the purpose of preparing, selling and consuming of food on site or as a take away

GROUP E OFFICES

This group includes: -
Agency, Bank, Bureau, Enquiry or Travel, Exchange labour, produce or Stock, Institution; learned society's or professional, Office, Sample Rooms - commercial traveller's.

GROUP E1 CORPORATE OFFICES

A Corporate Office is a building designed for multinational corporations and company head offices or headquarters that provide managerial support functions of a business and operate outside of the primary business function. The corporate office also houses employees who support the company at a higher level, such as through management and technical assistance functions.

GROUP E2 SURGERIES & MEDICAL CHAMBERS

A surgery is a building, other than a shop, designed for use by members of the medical and allied professions for the purpose of ministering to the sick, aged and infirm. This group includes: -
Bacteriologist's Laboratory, Dentist's consulting rooms, Doctor's consulting rooms and Dispensaries, Physiotherapist's Rooms, Veterinary Surgeon's consulting rooms.

GROUP F WHOLESALE WAREHOUSE

A wholesale warehouse is a building designed for the purpose of carrying on a business of a wholesale nature and where no goods are displayed other than incidental to that business.

GROUP G STORAGE WAREHOUSE

This group includes:

Builder's or Contractor's Yard
Furniture Depository
Local Authority Depot
Storage Yard
Transit Warehouse

GROUP H PUBLIC BUILDINGS

This group includes: -
Art Gallery, Public Bath, Bath Public Swimming (open to the public on payment of a charge), Central Government Office, Clinic (Non-residential) Community Centre, Law Court, Police, Fire Station, Health Centre, Public Library, Local Government Office, Museum, Police Station, Post Office, Welfare Centre, Medical Complex etc.

GROUP I INSTITUTIONS

This group includes:
Institution
Mental defectives School
Mental Hospital
Reformatory
Special School

GROUP J PLACES OF PUBLIC WORSHIP

This group includes: -Cathedral, Chapel, Temple, Church, Citadel, Mosque, Oratory, Sunday School, Synagogue etc.

GROUP K PLACES OF ASSEMBLY

This group includes: -
Amusement arcade or Hall, Auditorium, Billiard Saloon, Church Hall, Cinema, College (Adult Non-Residential), College, Business, Commercial School, Concert Hall, Dance Hall, Exhibitions, Lecture Hall, Lottery Hall, Meeting House, Music Hall, Public Hall, Skating Rink, Special Centre, Squash Rackets Court, Public, Theatre.

GROUP K1 SPECIAL PLACES OF ASSEMBLY

This group includes:
Athletic ground
Fair booth
Fun fair
Race Course
Racing track
Sports ground
Stadium

GROUP L LIGHT INDUSTRIAL BUILDINGS

A light industrial Building is an Industrial building (not being a special industrial building) in which the processes carried on, the machinery used and the goods and commodities carried to and from the premises will not cause any injury to, or prejudicially affect the amenities of the locality by reason of emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit, oil or any other reason.

GROUP L1 SERVICE INDUSTRIAL

A service industry building is a light industrial building, the total area of which, whether in one or more separate building, does not exceed 233m^2, which is used or intended to be used for any trade or industry which serves or is intended to serve the day to day needs of the district.

GROUP M INDUSTRIAL

In general, for planning purposes an industrial building is a building other than a light industrial building, Service industry building or Special industrial building in which any of the following activities are carried on:

The making of any article or part of any article,
Altering or repairing, renovating, ornamenting, painting, spraying, polishing, finishing, cleaning, dyeing, washing or breaking up of any article,
The adaption for sale or use of any articles,
The sorting, assembly or packing of any articles,
The adaption for sale or use of any article,

The sorting Assembly or packing (including washing or filling bottles or other containers) of any articles,
The painting, spraying, construction, reconstruction, Assembling, repairing or breaking up of vehicles or parts thereof,
Printing by letter press, lithography, photogravure or other similar process, including any activity associated with the printing industry other than a newspaper office,
The production and storage of gas in a holder of more than 140m^3 storage capacity,
The freezing, chilling or storage in cold storage of any article,
The slaughtering of livestock,
The generation of electricity,
Photographic work,
Save where the activity carried on is only incidental to the permitted predominant use of a building.

GROUP N AGRICULTURAL BUILDINGS

The following types of buildings are Agricultural buildings:
Buildings incidental to the use of horticulture, fruit growing, seed growing, dairy farming, the breeding and keeping of livestock (including any creature kept for the production of food, wool, skins, or fur, or for the purpose of its use in the farming of land), the use of land as grazing land, meadow land, or osier land, market gardens, and nursery grounds, and the use of land for woodlands where the use is ancillary to the farming of land for other Agricultural purposes, and 'Agriculture' shall be construed accordingly.

The group includes:
Agricultural building,
Market Garden,
Mill, grain or flour,
Nursery, Horticultural

GROUP P: PETROL FILLING AND SERVICE STATION

A petrol filling and service station is a retail place of business designed primarily for the purpose of fuelling motor vehicles with petroleum or other motor fuel and includes:

a) Any pump or other apparatus on the property used in connection with the fuelling of motor vehicles,
b) Any building used for retail sale of other petroleum products, motor vehicle spare parts, accessories, tyres, tubes, and those items covered by a water dealer's licence,
c) Fast food outlet, on-the-run grocery shop,
d) Any building used for lubricating, washing or polishing of motor vehicles,
e) Any building used for servicing and repair of motor vehicles, but shall specifically exclude the following services and or repairs: -
    - Steam Cleaning
    - Panel Beating
    - Spray Painting
    - Engine Remove and dismantle
    - Engine tune-ups for racing and competition vehicles
    - Body building or modifications to body work
    - Tyre retreating or remoulding
    - Clutch and or gear box replacement and repairs when removal of engine is necessary

- Automatic transmission repairs

Note: The Items specifically excluding from this group are to be included in Use Groups L, L1 and M dependent on the nature and extent of such, buildings and machinery used or to be used in connection therewith.

GROUP R NEWSPAPER OFFICES

A newspaper office is a building in which newspaper printing presses are operated and in which such other activities are carried out as are normally and directly associated with the printing and publishing of newspapers printed and published by that office, and includes premises in the same building or in a building on a stand adjoining the stand on which such office is situated, wherein is carried on the trade of photo-process engraving wholly or substantially as an activity associated with the production of such newspapers as are printed and published by such newspaper office

GROUP S: SPECIAL BUILDINGS AND USES

This Group shall include all land and building uses that do not fall within one or other of any of the Use Groups outlined above. These Uses shall have a Special Consideration requirement although in many instances the Local Planning Authority may prohibit a use for reasons of incompatibility with the nature, character and use of the area, detrimental to the amenity of the area, safety and health or undesirable for any other reason

This Group shall include the following but not exhaustively:

- Boarding Kennel,
- Botanical Gardens,
- Base Receiver Stations,
- Bus garage,
- Bus Terminus
- Cemetery,
- Crematorium,
- Drive Inn restaurant,
- Electricity Substation,
- Green Houses
- Film studio,
- Monument,
- Night Club,
- Observatory,
- Open Market (retail or wholesale),
- Parking Lot (Private/Public),
- Plant Nursery,
- Prison,
- Public Toilet,
- Pumping Station,
- Railway station,
- Riding School,
- Sewerage Works,
- Surface car park,
- Taxi Operations,

- Telephone Exchange, Television Building,
- Transformer,
- Veterinary Clinic
- Waterworks,
- Zoological Garden.

GROUP T PARKING GARAGE

A parking garage is a building designed for the purpose of providing accommodation for the parking of motor vehicles other than for the purpose of exhibit, sale or repair and may include-

(a) Use of the ground floor or alternatively, but not additionally the first floor of such buildings for-
(i)shops
(ii)offices
(iii) purpose incidental to the operation of the garage; and

(b) facilities within such building, for the fuelling, lubricating and washing of motor vehicles parked within the building;

(c) public transport passenger moving facilities provided that in no case shall the floor area used for purposes indicated in (a) and (b) above exceed twenty per centum of the total floor area of such building.

GROUP T1 SURFACE CAR PARK

A surface car park is an area specifically set aside and surfaced with bituminous material or other such hard standing for the parking of vehicles.

GROUP T2 LORRY PARKING AND REST HOUSE

Lorry Parking and Rest House is an area set aside for the parking of lorries and building offering overnight resting and eating facilities for drivers

GROUP U FUNERAL PARLOURS

A Funeral Parlour means a building wherein arrangements for burial or cremation are conducted together with the preparation of bodies of deceased persons for burial or cremation and may include:

Facilities for the keeping of the bodies of deceased persons
A Chapel
A viewing room
A coffin showroom
An Administrative office for the arrangement of supply of floral tributes
Such Administrative offices and toilet facilities as are ordinarily necessary for the day-to-day operations of the Funeral Parlour.

A surface car park is an area specifically set aside and surfaced with bituminous material or other such hard standing for the parking of vehicles.