



**MBERENGWA RURAL DISTRICT COUNCIL
(RDC) MASTER PLAN**



Written Statement

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9.0 MBERENGWA RURAL DISTRICT LAND USE AND DEVELOPMENT PROPOSALS

9.1 VISIONING THE ECONOMIC DEVELOPMENT

The Vision of Mberengwa Rural District Development Plan is shared from the national development plan that was called by the President of the Second Republic of Zimbabwe, which is based on the Vision 2030 that aims to transform the whole of Zimbabwean economy into an upper middle class economy by 2030, which is characterised by an income per capita and a quality-of-service provision that is in line with Upper Middle income economy. An integrated approach and program was put in place to ensure that all Local Authorities deliver a service in sync with an Upper Middle income economy. The master plan is therefore the first step towards Vision 2030, which should spell out the development trajectory of the district towards achieving an upper middle class economy

The Vision 2030 intensifies the country's ambitions and drive towards improving the quality of life for the majority of people in Zimbabwe. The planning horizon of this master plan is 2030 and beyond. Implementation will look into the district potentials and try to drive the district economy by utilising the opportunities inherent in the district. The major aim of the master plan is therefore to:

- a) Improving service delivery
- b) Stimulate Agro-processing activities
- c) Improve Agricultural production through modernization and climate proofing
- d) Introduce Strong and vibrant Public and Private Partnership
- e) Adopt Sustainable rural and urbanization settlements
- f) Access to improved quality health care
- g) Enabling hard and soft infrastructures (Roads, energy, water, etc);

- h) Conserving local natural resource without compromising the environment
- i) Introduce Sport and Eco-tourism development

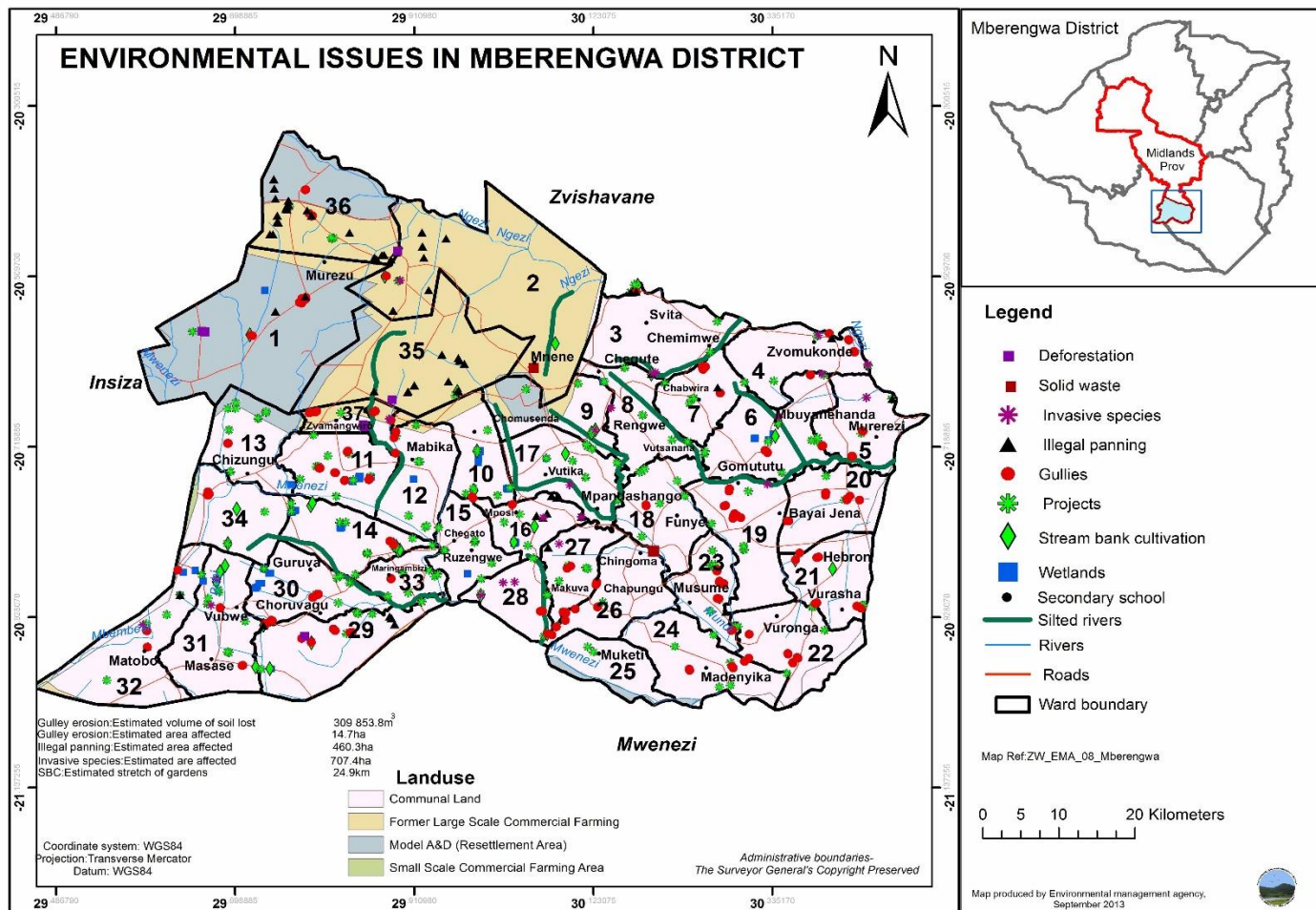
9.2 Land Uses and Land Use Planning in Mberengwa District

9.2.1 Land Utilization Issues in Mberengwa District

Mberengwa district land uses can largely be categorised into communal, resettles growth points and rural service centres. The major land tenure systems in the district are the communal and resettlement systems. Approximately 75% of the district is communal whilst the remainder is resettlement areas. The total land under resettlement is 114538ha and these are in A1, A2 and the villagised. In the resettlement areas, the major economic activity is artisanal mining and this is degrading arable and grazing lands. Illegal land allocation by traditional leaders is putting pressure on land especially in the resettlement areas. Proper land allocation is needed to avoid land degradation through overgrazing and illegal extension of farm lands. The major activities affecting the environment in Mberengwa district are stream bank cultivation, gullies erosion, illegal mining and evasive species. Over 704 ha in Mberengwa district are affected by evasive species.

There are three major business centres in the district and these are Mataga growth point, Mberengwa Centre and Mberengwa Turnoff business centres. In the communal areas the major source of livelihoods is subsistence agriculture through the growing of crops and rearing of livestock. There is pressure on the natural resources in the communal areas due to the high population density compared to the resettlement areas. The district falls under Agro-ecological regions IV and V and as such it is prone to droughts and high temperatures. As a result of the droughts farmers fail to realize meaningful crop harvests. Irrigation in the district enhances the production of the staple food crop (maize) and other cash crops such as sugar beans and wheat. Irrigation is thus an imperative practice in such districts in order to boost production as well as supplementing summer rainfall. Cattle ranching is a major farming activity in the district. The map1 below shows the major land uses in Mberengwa District.

Map 1: Major Land uses in Mberengwa District



Source: Environmental Management Agency (Mberengwa)

Mberengwa is characterised by a mountainous landscape with undulating slopes although there are pockets of flat land especially on the western part of the district. Mount Mberengwa is one of the highest mountains in Zimbabwe. These natural resources can be used for recreational activities such as mountain hiking and scenic views. The other mountain ranges found in the district are the Dolo ranges which forms an extension of the Great Dyke in the west, the Buchwa and Mwezha ranges which are on the eastern and southern boundaries of the district. The district is characterised by sub-tropical deciduous woodlands and sub-tropical thorn woodlands. Siallitic soils are common to the south of the district while the northern part is dominated by the fersiallitic soil types. There also are

smaller and insignificant portions of lithosols. These soils are fairly stable but if subject to mismanagement they get exposed to agents of degradation.

9.2.2 Planning Perspective for Land uses in Mberengwa District

9.3,3 Aim of the master plan in Land use management

- *Reduce social inequalities by developing rural areas in line with SDG 11*
- *Developing sustainable communities in line with SDG number 11*
- *Establish proper planning in rural areas where land uses are properly planned*
- *Eradicate chaotic land uses in rural areas where uses are conflicting each other*
- *Establish villagised communities where there is order in land uses*
- *Develop digital connection in rural activities for employment creation and trade linkages*

9.2.4 Policy Proposals for Land Use Plans in Mberengwa District

In order to achieve the above aims the master plan is proposing the following in land use development in Mberengwa District:

- Development of villagised schemes in rural areas
- Provide standard model housing in rural areas
- Planning for land uses (grazing, arable, forests, wetlands)
- Development of smart villages (with improved digital content, agriculture, water supply, climate and climate change, environment, health system)
- Develop smart tourism, smart environment and smart business
- Develop agriculture big data systems (composed of Internet of Things, cloud computing, central control systems for effective agriculture and improved yields).

- All development interventions should be sensitive to the ecological and geological features in the district.

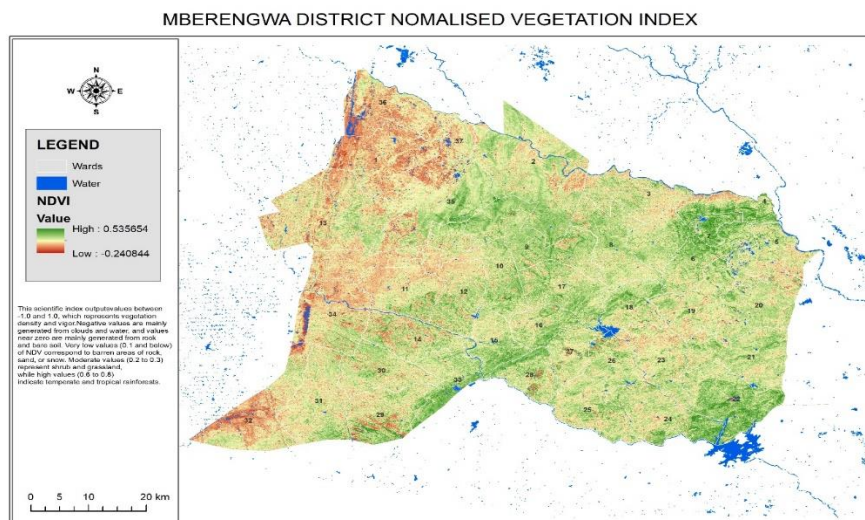
10.0 Environmental Planning in Mberengwa District

The existing Environmental Situation

10.1 Physical features and Land cover

Mberengwa district is experiencing massive cutting down of trees for fire wood and agricultural expansion. Firewood is the main source of energy for the majority of the population in the district. Trees are also being cut as communities look for fencing material for their individual and consolidated gardens. Most of the gardens in the district are fenced using brushwood. Mberengwa Rural District is endowed with a lot of natural resources, which call for widespread environmental awareness among the general public. There are several mining activities in the district, which have a massive impact on the environment as they cause siltation and land degradation. Development plans should therefore try and harmonise human activities and the environment for sustainable land use management. The map 2 below shows the vegetation cover for Mberengwa District, which is mainly shrubs with little forests.

Map 2 : Mberengwa Rural District Normalised Vegetation Index



Normalised Vegetation Index

The picture below shows some poles that were used as fencing material for a garden.



Some of the Causes of Deforestation in Mberengwa

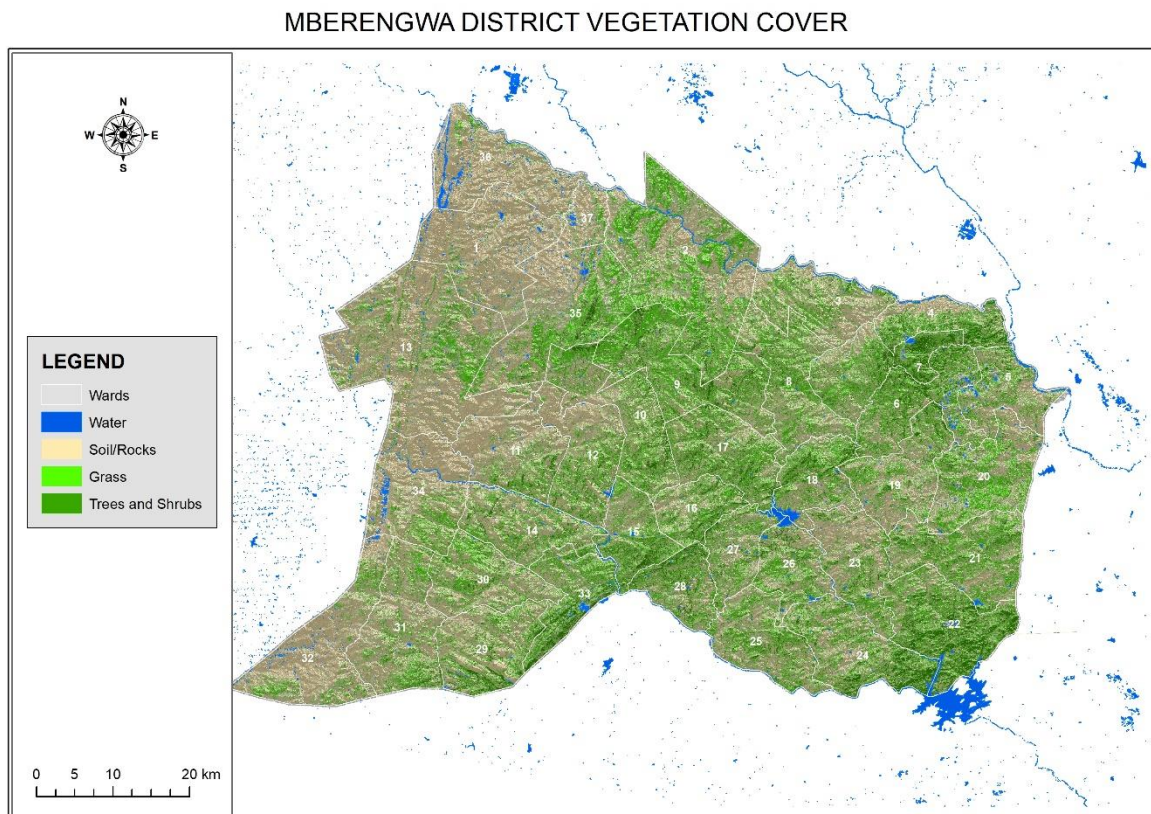
The district is also fighting evasive species that are threatening grazing areas and other vegetation cover. The common evasive species in the district are *lantana camara* and *opuntia*. *Lantana Camara* is the major evasive species that is becoming a threat in the district. Most people are ignorantly using it to fence their homesteads, gardens and fields thereby helping to spread the alien species. The wards that are invaded most are 3, 9, 17, 27, and 28 and the total area invaded is 707.4ha. (GOZ 2013). In Tichagwa village, the alien species is found along streams and around gardens where it used as hedge and is stretching for of 2km. In Tagwirei village the species is found along Sibange River and stretching for a distance of 10km covering approximately 100 hectares. In Dlarambi village, ward 6 a total area of 2.5ha has been affected by the evasive species and people are using it to demarcate field boundaries. The Mazumbani Mountain is also invaded by the species replacing traditional zumbani that is commonly found there.

Isolated cases of *Opuntia* species are also identified at Matibhini village of ward 12 stretching for a distance of about 100m within a grazing area. Two sites in Muchiso village of ward 31 are also fast being invaded by *lantana camara*. Projects should therefore be instituted to control the evasive species to protect livelihoods that are being threatened by these evasive species.

10.2 Vegetation

Mberengwa District vegetation is categorised into Woodlands: 27.55% and Bushlands (20.39%), with ward variance (GOZ 2024). Stream bank cultivation is the major causes of deforestation in the district as communities use brushwood fencing for their gardens (see photo above). Other activities contributing to deforestation are mineral panning, wood carving and opening up of new fields. A site was inspected in Cobert village of ward 36 along C Mine road and the extent of deforestation is very severe, the main reason being opening up land for agriculture. Other sites where deforestation is rampant is village 4 of ward 36, Mberengwa. Deforestation in this area is worsened by the fact that there is a land dispute between Mberengwa and Insiza. The map 3 below shows the vegetation cover of Mberengwa District.

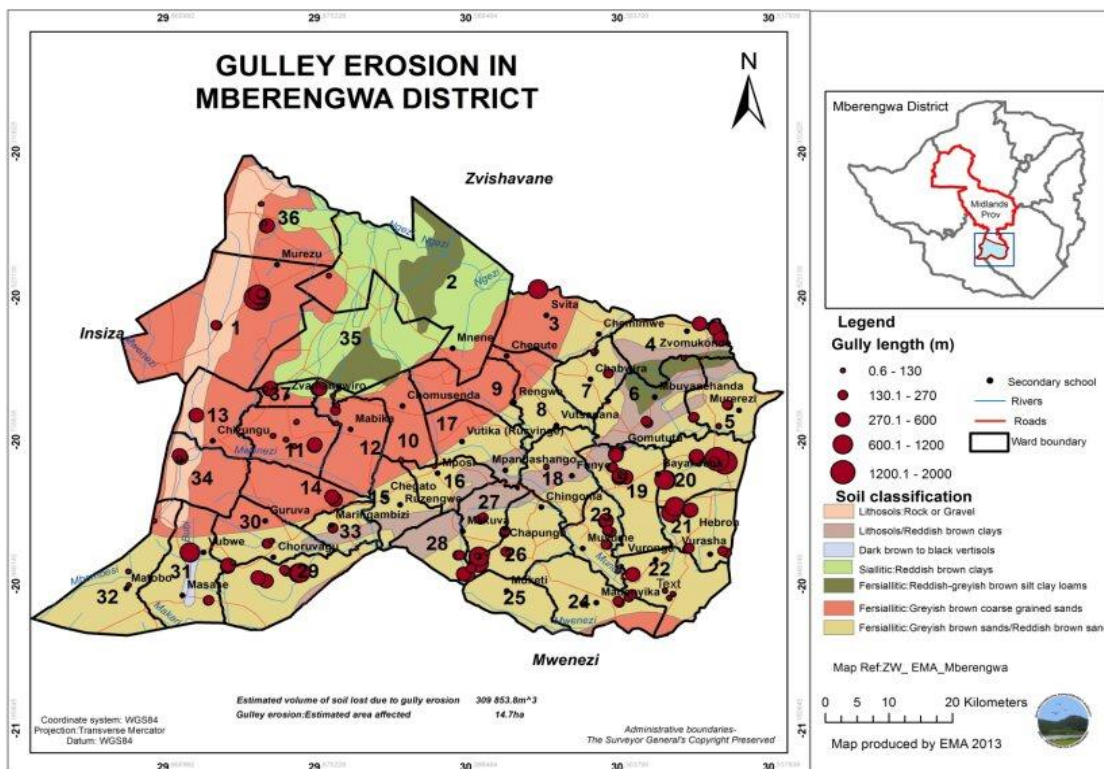
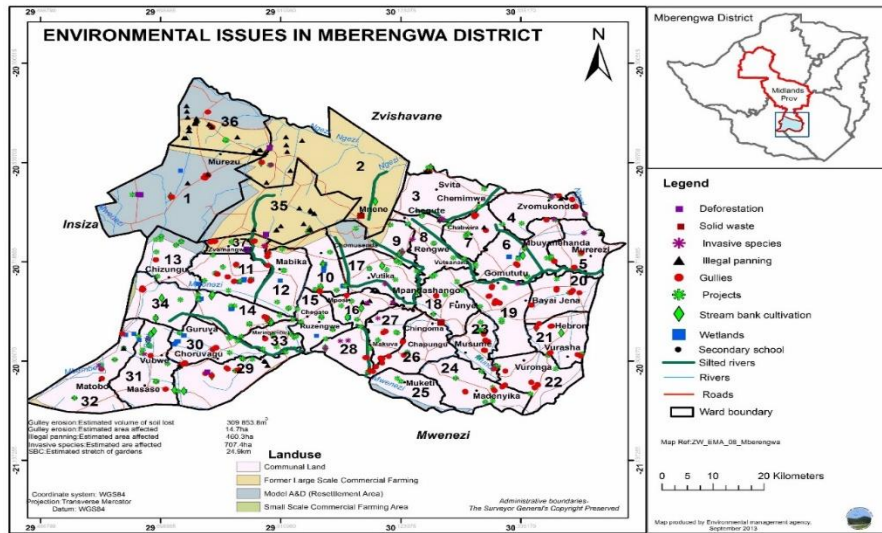
Map 3 Mberengwa District Vegetation Cover



The main reason for clearing is the unplanned agricultural plots as people try to claim disputed lands. The wards that are affected most are 4, 34, 17, 14 and 36.

The map 5 below shows the existing environmental situation in Mberengwa district and the activities that are done to correct the environmental degradation. Most of the communal areas are suffering from deforestation and are heavily dissected into gullies. The estimated areas affected by gully erosion amounts to 14.7 ha and evasive species have affected over 707.4ha.

Map 4&5 Environmental Issues in Mberengwa District



10.4 Planning Issues on Environment in Mberengwa District

Aim of the master plan on Environment

- *Protect the forest and woodland resources for economic productivity*
- *Maintain forest integrity through conservation and sustainable use of forest resources*
- *Ensure gender equality by availing chances for economic production for all regardless of gender*
- *Promote climate resiliency through forest conservation*
- *Restore degraded land and combat desertification*
- *Restore degraded forests*

10.5 Policy Proposals for Environment in Mberengwa District

Environmental protection, climate resilience and natural resources management are key enablers for the attainment of vision 2030 and the Sustainable Development Goals (SDGs), (11, 12, 13, 14, and 15), which speak to environmental protection and target climate resilience, sustainable production and consumption, sustainable use of both terrestrial and aquatic ecosystems, reversing land degradation, and addressing bio-diversity loss. Forest resources in Zimbabwe are responsible for more than 62% of energy balance (GOZ 2024), which makes forest resources a critical player in the energy supply. The rate of natural resources depletion and environmental degradation in Mberengwa district is affecting environmental sustainability which further impoverishes the vulnerable groups. In light of the changing climatic conditions, traditional systems of agriculture are becoming increasingly unreliable and unsustainable therefore, environmental protection should be prioritised for the achievement of prosperous and empowered upper middle-class economy by 2030 (GOZ 2019).

The master plan is therefore proposing the following environmental issues to be integrated into the development of Mberengwa District.

10.6 General environmental Recommendations

To ensure sustainable environmental management in the district there are a number of issues that need to be taken into consideration and these include:

- Establishment and strengthening of environmental committees (Local Environmental Action Plans, District Environmental Plans)
- An inventory of biodiversity in the district is required, where the stocks of natural resources are going to be established for preservation and use for economic activities (e.g. bush bucks, impala and water bucks that are in the district)
- Raising public awareness on environmental conservation such that communities are included in environmental management structures and processes.
- Enforcing Environmental Impact Assessment on all new projects to ensure proper environmental management during and after the economic activity.

10.7 Wetland Management

Proper wetland management is required to help in rehabilitation of silted water bodies. Wetlands are some of the most productive natural ecosystems in Zimbabwe as they provide a wide range of goods and services (Musasa and Maravanyika 2020). There is increasing number of wetlands in Mberengwa District that are being turned into agricultural use thereby degrading these important water resources. There is therefore need for protection of wetlands through:

- Preservation of wetlands for recreational, tourism and research purposes
- Creating buffer zones for all wetlands where human activities are restricted for conservation purposes. eg. No human settlement within 50m of lakeshores and 20m from wetlands
- Buffer zones to be used for forest plantation and recreational facilities

- Rehabilitation of degraded wetlands through removal of activities that degrades wetlands, promotion of agroforests, permaculture, and employment of sustainable agriculture.
- Develop ecotourism activities around and along wetlands (e.g. along Manyuchi and Mundi-Mataga dam)
- Allow conditional used of wetlands under strict Environmental Impact Assessment.
- Promote replanting of native trees to restore degraded wetlands
- Engage local communities in wet land conservation through establishment of local wetland management committees that should work with Environmental Management Agency in preservation and management of wetlands
- Educational campaigns to educate communities on the need to protect the environment and the benefits derived from such conservation measures.

10.8 Mining Activities and the Environment

Mining is a very important pillar in the drive towards achievement of Vision 2030, hence the need to carry out this economic activity in a way that drives the economy and also preserves the environment (GOZ 2021). Gold panning activities have led to massive land degradation threatening infrastructure, woodlands and riverine ecosystems. An estimated area of 460.26 ha being affected by panning activities in the district (unpublished Mberengwa District EMA Report 2018; Dale 1999). The master plan is therefore proposing the following:

- Control illegal mining that is causing siltation of water bodies and rivers
- All mining activities to be carried out after submission of Environmental Impact Assessments

- Enforcing the orderly decommissioning, rehabilitation, restoration, and utilization of mining sites after an operation,
- Develop proper mine drainage and leaching of contaminants plan associated with mining metals to avoid impacts on rivers, streams and water other water bodies
- Control illegal mining along river banks to prevent chemical from contaminating water
- Enforcement of laws regarding rehabilitation of mined areas after mining activities

10.9 Forest Resources

Forests resources have a significant role to play in national development as it is the primary energy source for domestic cooking energy. Forests also hold the base for the country's tourism opportunities and protect watersheds and downstream wetlands, supporting agriculture and generate products of the country's export revenues (GOZ 2024). Under the forest resources, the vision is to achieve and sustain forest in fast depleting Mberengwa forests. The master plan is therefore proposing the following interventions to restore forest resources:

- Reforestation activities especially in the communal areas where there is serious depletion of forest resources through planting of trees
- Planting of indigenous tree in forests to maintain the indigenous forests
- Controlling evasive trees that competes with native species
- Creating ecological corridors through connecting fragmented forests e.g. the Ngungumbane forests and the Manyuchi preserved areas.
- Community empowerment to forest resource management and monitoring through establishment of community based natural resource management schemes
- Managing woodlots like what is happening in the Ngungumbane area, where communities are managing indigenous forest resources.

- Arresting illegal land uses especially illegal mining that are degrading forests

10.10 Evasive Species

There is need to control the spread of evasive species such as Lantana Camara, which is destroying forests and grazing areas. This can be done through:

- Physical control (uprooting, cutting, mowing) to destroy the species
- Chemical Controls (application of herbicides on cut stumps to destroy the plants)
- Biological Control (through the use of natural enemies in the range of Lantana Camara)
- Cultural Control (by preventing the spread of the specie.) People in Mberengwa are using the plant as hedges so people should be prevented from spreading the plant
- Encouraging the public to fight against the spread of the specie

10.11 Gully Reclamation

A total area of 14.7 ha is eroded in Mberengwa district, with a total volume of soil lost through gully erosion exceeding 309853.8 m³. The cause of gully erosion is that the soils are susceptible to erosion. In other areas the major cause of erosion is overgrazing and lack of conservation measures in the district. Other primitive methods of pulling sleighs are still in use, which is also exacerbating soil erosion. The master plan is therefore proposing the following in order to reclaim gullies in Mberengwa District:

- Restoration of vegetation through planting of native plants such as grass, shrubs and trees
- Introducing soil conservation measures such as terracing, constructing contours and mulching
- Gully plugging through filling of gullies with rocks, soil and other material
- Stream bank stabilisation with vegetation, rocks to stop head ward erosion

- Building gabion walls to stabilise slopes to prevent erosion
- Promote vegetation growth through hydro seeding (application of a mixture of seeds and mulch and soil management)
- Continuously monitor rehabilitated lands to ensure long term success.

11. Provision of Social Services in Mberengwa District

11.1 Housing

11.1.2 Existing Housing Situation in Mberengwa District.

An assessment of the current and future Housing stock was conducted at the main growth poles of Mberengwa district, which are Mataga growth point and Mberengwa Centre Business Centre. These are the main growth poles in the district. The demand for housing at these centres has been fast growing especially at Mberengwa Centre, which has now out grown the district growth point. There is therefore need to provide housing at these centres in order to cater for the rising demand. The table 1 below shows the houses provided at Mataga growth point and Mberengwa centre.

Table 1: Housing Situation at Mataga and Mberengwa Centre

Area	Houses provided (by 2024)	Housing waiting list
Mberengwa Centre	2809	274
Mataga Growth Point	2100	19
Mberengwa Turn off	15	36
Total	4924	329

Mberengwa Centre is now housing more than 2809 houses and a waiting list of more than 274. Mberengwa Centres seems to be the focus of development at the present moment as it is growing very fast. Judging from the rate of development, it is estimated that by 2030 Mberengwa Centre will be holding more than 5618 houses. The development of Mberengwa Centre has been driven by active mining activities that is happening around the centre and greater accessibility as it is close to Bulawayo- Mutare road. The figure 1 below shows the projected number of houses at Mberengwa centre up to the year 2039.

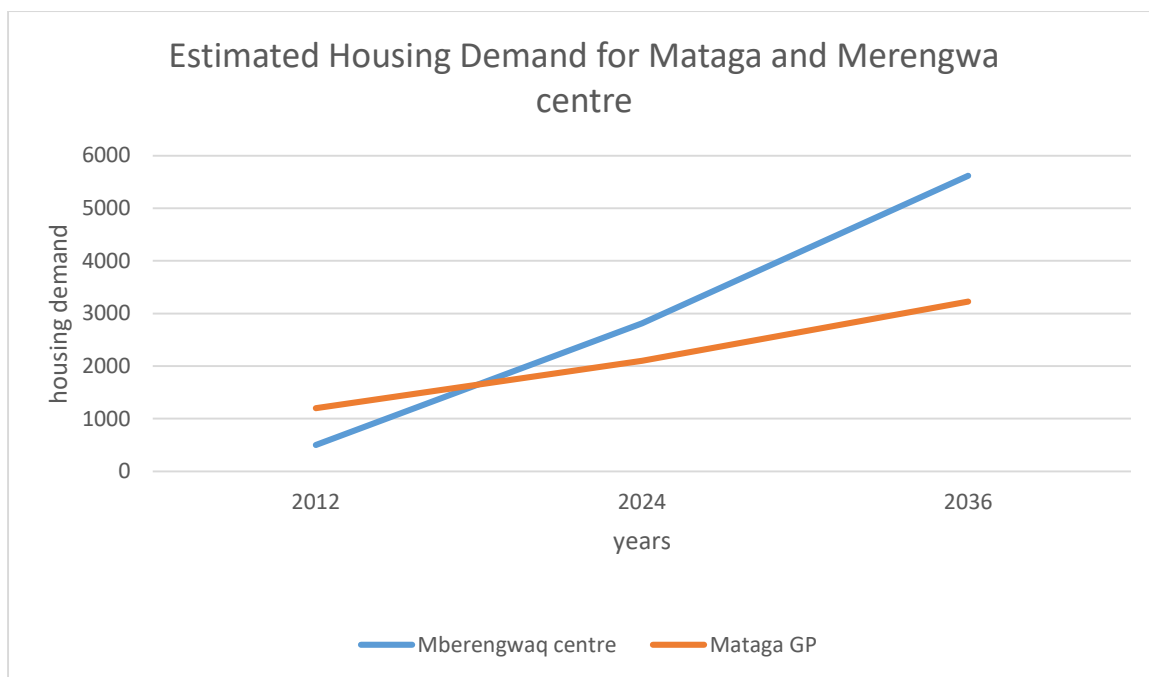


Fig. 1 Projected Housing Demand for Mataga and Mberengwa Centre

The right to decent housing has its roots in the Universal Declaration of Human rights (UDHR), International Covenant on Economic, Social and Cultural Rights (ICESCR) and the African Charter on Human and People’s Rights (ACHPR). Availability and affordability of housing facilities remain a key fundamental right for every citizen. In addition, decent accommodation gives dignity to citizen.

11.1.3 Zimbabwe Housing Policy

The government of Zimbabwe is prioritising both housing and access to portable, safe running water in the provision of housing, as provision of houses without these essential services will exposes people and society to water borne diseases such as cholera, diarrhoea, dysentery, typhoid and other similar diseases (GOZ 2020). The Ministry of National Housing and Social Amenities is leading in provision of human settlements in a coordinated and sustainable manner. The Zimbabwe National Human Settlements Policy (ZNHSP) seeks to contribute to the country’s Vision 2030 (GOZ 2020). The policy seeks to address all concerns in human settlement in order to achieve vision 2030. Settlements are areas where people live, work and play, which should be connected and served by road,

transport, water, sanitation, Information Communication Technology (ICT), natural and energy infrastructure. The policy envisions well-planned and well-governed Zimbabwean settlements with the follow:

1). Land access and tenure- All state-land earmarked for human settlements will be channelled through the Ministry responsible for human settlements development and the respective local authorities, having regard to objects of the devolution thrust in the local governance domain. Title will only be issued for fully serviced or developed stands and on agro-plots.

2). Spatial Planning- All Planners shall be statutorily registered to ensure uniformity in planning standards applicable in local authorities throughout the country. In respect of mining settlements and other private settlement types; it is imperative that such plans are lodged with the respective local authorities for inclusion in their development planning processes.

3). Off-site and on-site infrastructure- Off-site infrastructure provision is the responsibility of Government and/or local authorities whilst the latter provides on-site infrastructure taking into consideration Information and Communication Technology (ICT) infrastructure and public safety.

4). Towards well-planned and well-governed sustainable human settlements
In the current circumstances with the benefit of hindsight, the subsisting moratorium on parcelling out of land to housing developers and cooperatives, ought to be upheld until such time that the dividend from sanitisation/regularisation programme has been realised. No beneficiary shall be permitted to occupy land before services are in place.

5). Densification- All productive agricultural land shall be preserved as such. At least 40% of land for human settlements development shall be reserved for development of high-rise apartments. Subdivision of low density stands shall be permissible and encouraged. There shall be a cap on the maximum residential stand sizes, the principle being that land is a finite resource and as such it has to be preserved for posterity.

6). Settlement financing- The funding of settlements development shall be predicated on the following;

- ✓ Appropriation from Treasury (General Development Loan Fund, Public Sector Investment Programme and Devolution Funds);
- ✓ Estates accounts of local authorities;
- ✓ Public Private Partnerships;
- ✓ Lines of credit;
- ✓ Foreign Direct Investments;
- ✓ Non-Governmental Organisations;
- ✓ Private sector initiatives
- ✓ Pension and provident funds
- ✓ Employer-assisted housing schemes
- ✓ Diaspora remittances

7). Rental housing- The rental housing market should be resuscitated and prioritized.

8). Social housing – Social housing will be provided by Government and local authorities to cater for the marginalized social stratum in the polity. In this scenario, it is envisaged that social housing and institutions for the orphans and the aged ought to be incorporated whenever human settlements are planned.

9). Regularisation- All informal settlements will be regularised and sanitised by Central Government in conjunction with respective local authorities. A regularisation protocol will be developed to standardize the process. In particular instances, where applicable, high-rise apartments will be used to address double and multiple allocations.

The demand for housing in Mberengwa district is steadily increasing annually and Mberengwa Centre is recording high demand of houses. There is therefore need to keep pace with demand of housing at Mberengwa Centre and Mataga growth point. The development of houses should make sure that houses are affordable and accessible to the majority of population. This can be done by carefully choosing the building materials that are affordable to majority of people. There is therefore need to develop new housing typologies that will make effective use of space as well as affording the majority access to housing. These targets will be the backbone for the roll-out of affordable and decent housing in the district.

To maximise on the future demographic trends of the district characterised by high housing needs, it is therefore strongly recommended to develop both horizontal and vertical housing infrastructures at Mataga and Mberengwa Centre. This is also in line with the densification policy of the National Housing policy (GOZ 2019). The master plan therefore recommends the construction of multi-family apartments and socio-economic infrastructure (industries, schools, health facilities, public administration, religious buildings, etc.). It also proposes the incremental development of houses so as to allow people in the low income brackets to develop their houses while they stay at finished parts of their

properties. This is more sustainable and inclusive. At each stage of construction, the building must be considered strictly as a finished product.

At the commercial centre of Mberengwa centre we also propose mixed-use housing developments in which a real estate in the suburb is blended with different functions such as residential, commercial, cultural, institutional, etc. into one block so as to develop sustainable housing. These functions should be well integrated physically and functionally. Flexibility regarding type of housing shall be recognized (for example single units, semi-detached (for low income), low houses and even apartment blocks). Such development will create compact development that avoids sprawling urban centres. Flexibility regarding type of housing shall be recognized (for example single units, semi-detached, low houses and apartment blocks).

Fig.2. typology of Mixed use development



11.1.4 Planning issues for Housing at Mberengwa Centre

10.1.5 Aim of Master Plan on Housing in Mberengwa District

- *The major aim of this master plan is to provide sustainable housing, which is housing that satisfy the needs of local people and integrate the local culture in the housing provision.*
- *Provide climate proofed houses i.e. energy efficiency and rain water harvesting technologies and use of renewable sources of energy.*
- *In semi-urban areas of Mberengwa there is need to provide housing that does not promote urban sprawl so there is need for compact developments and mixed use development and flats*
- *Promote institutional Housing (provide houses for workers in both private and government institutions*

11.1.6 Policy Proposals for Housing in Mberengwa District

Portion of existing low-density housing at Mberengwa centre will extent toward the Southern direction, while high density will be extending towards the Northern direction along Mberengwa Turn-Off road. We also propose another low density housing scheme to start Mberengwa turn-Off coming towards Mberengwa Centre. This centre will develop with all services provided from Mberengwa Centre. A total of 5618 dwelling units are required at Mberengwa Centre by 2039.

11.1.6 Regularisation of Vanguard Informal Settlements

It is a government policy that all informal settlements will be regularised and sanitised by Central Government in conjunction with respective local authorities (GOZ 2019). Most of informal settlements lack basic services such as water, sewer, roads, electricity and security of tenure amongst others, exposing the inhabitants to disease outbreaks. Regularisation of such settlements will unlock value in the properties through provision of essential services and improving the housing structures. This will restore human dignity because a more dignified human settlement that is free from diseases will improve their living conditions.

as well as increase the national housing stock. The national Housing Policy strives to:

- i). Regularise informal settlements and sanitise housing development projects countrywide through leveraging resources for emplacement of both off-site and on-site infrastructure and services.
- ii). Provide security of tenure to individual inhabitants during the regularisation process.
- iii). Provide a regularisation protocol or legal framework that will standardise the regularisation process.
- iv). Discourage incremental and parallel development to stop illegal parcelling out of land without essential services.
- v). Any new housing construction must produce approved plans from respective councils. Development control regulations must be enforced indiscriminately.
- vi). Discourages displacements without negotiated alternatives in line with the e Constitution and relevant laws of the country.
- vii). Discourage settlements in undesignated areas such as wetlands, institutional stands such as schools, health, recreational facilities and roads servitudes.
- viii). Promote construction of flats to decant those settled on undesignated land.
- ix) provide social amenities at Vanguard informal settlement (water, health, education, community hall, well planned shopping centre, children play centre)
- x) improve security by providing public lights, establishing police post and a sense community at Vanguard for security of the informal settlement.

11.1.8 Planning Consideration for Regularisation in Mberengwa

Development Aim for Vanguard Settlement

- *Upgrade informal, settlements (at Mataga growth point and Vanguard)*
- *Provide smooth and fluid housing services (water sewer and electricity at centres of growth)*
- *Provide security of tenure to informal settlements*

In Mberengwa district, Vanguard settlement is one such case, which is a settlement mainly for informal mining activities around the area. The settlement was formerly a mining settlement, but now the mining activities have been abandoned and area has been invaded by informal miners. There is no water and sewer reticulation in the settlement and people are using shallow water and rudimentary toilet system, which makes the area a health time bomb. Most of the people in this area are living in shacks, which are built with no planning order. There is need to provide houses for them in line with the dictates of the National Human Settlement policy of Zimbabwe, which calls for local authorities and government to provide housing for the less privileged sectors of our society. The uncontrolled mining activities around this area has led to mushrooming of informal settlements. These settlements lack basic services such as water, sewer, roads, electricity and security of tenure amongst others, exposing the inhabitants to disease outbreaks. Government calls for regularisation of such informal settlements and sanitization of stressed housing development projects countrywide. This will entail provision of both off-site and on-site infrastructure and services to improve the housing condition of these inhabitants. Security of tenure should also be ensured to individual inhabitants during the regularisation process. The Vanguard area therefore needs to be upgraded and regularised so that residents could get clean water, power and sewer reticulation. The area is a hot spot for disease outbreaks hence the need for upgrading and regularisation. It is good to improve these settlements in situ so that they don't disturb the livelihood environments, provide communal toilets, public lighting systems to improve on security of the area. activities that are around this place. NDS1 supports regularisation of settlements through provision of appropriate services. There is need to provide communal water points so that they can access clean water, improve the building materials used so as to create more habitable. Further development of informal settlements should be curtailed by strict adherence to operating master and local plans.

Planning Perspective for Vanguard Settlement

- Provide services to the settlement (water, sewer, shops, community halls, churches, lights, police post)
- Regularise the mining activities to avoid environmental degradation (Register mining claims that will carry out mining activities formally)
- Houses to be laid out in some order in order to provide services to the settlement
- Roads to be upgraded to make it easy to provide services
- Proper planning to be introduced to the settlement, where there is defined residential area, shopping areas, refuse disposal system and community activities.
- Plan for titled to the land owned by the settlers (this will create a sense of place which lead to development of the settlement.
- Informal activities should be integrated into the settlement where small-medium enterprises will be introduced to support lives and economic activities in the area

11.1.8 Institutional Housing in Mberengwa District

According to National Housing Policy, institutional houses are meant to accommodate employees of a particular institution during the currency of their employment. These are not for sale to the sitting tenant. This will allow national government to retain an adequate stock of well-maintained housing to accommodate public sector officials. The policy seeks to develop adequate stock of well-maintained housing to accommodate public sector officials during their time of employment. The private institutions are also encouraged to create their own institutional housing stock within a local authority jurisdiction to cater for their employees and must be maintained as such. This therefore means that both the private and public sector should provide houses for their employee.

Mberengwa district has been burdened by provision of institutional houses. Ministry of education and Health are the major custodians of institutional houses in Mberengwa district, because schools, hospitals and clinics are making efforts to provide houses for staff. Housing shortages in Mberengwa district is direr in primary schools where several schools are experiencing serious shortages of staff housing. These primary schools include Dambashoko, Jeka, Mponjane, Mupandashango, Rwehanga, Sihanda. In secondary schools, Murerezi, and Hwikwi are also experiencing shortages of staff housing. There is also need to provide institutional houses at various clinics in the district. In the health sector houses are still needed at the following clinics; Bayayi, Chebvute, Madekwana and Gwavamutangi. At Mberengwa district hospital there is still need for more staff houses as the resident doctors are still staying in Zvishavane.

11.1.9 Planning Perspective for Institutional Housing

There is need to provide adequate housing for public sector employees in the district. All schools both primary and secondary should have adequate housing for their staff. This will create better working environments for the district and also help to attract competent staff especially in schools that are failing to attract qualified STEM teachers. There are several clinics without adequate staff houses and efforts should be scaled up to provide such houses. Construction of rented accommodation in form of flats will provide housing for new professionals, who are driving to Zvishavane for better accommodation. At Buchwa mine there are several houses that need water supply augmentation as the current supply system can no longer cope with the demand.

11.1.11 Rural Housing in Mberengwa District

In the communal and resettlement areas, the housing challenge is not really of homelessness, but the quality of housing and social amenities facilities. Some of the building materials are prone to the inclement natural disasters. The district is proposing housing models which reflect the cultural and religious beliefs of

communities and also take consideration of the effects of climate change and allow for adoption of smart energy. Many communities (32%) in the district are using smart energy for lighting as they have installed solar powered lighting systems. This can also be complimented by designing houses that can harvest rain water for use in times of water stress. This will go a long way in mitigating effects of climate change. Provision of water is also a critical issue in rural housing. There is need to increase access to water facilities in the rural areas, and according to the research there is need for a water point in every village so that people can easily access water in the rural areas. Each and every homestead should also have toilet to improve the sanitation issues in the rural areas. Currently such sanitary facilities are conspicuous by their absence at most homesteads.

There is also need for planned settlements, where housing, arable and grazing areas are properly planned in order to create sanity in the rural areas which is haphazardly developed and therefore creating land use conflicts. For example, the ever dwindling of grazing areas is causing villagers to graze their livestock along contour ridges and livestock are damaging crops. Stray animals, destroying crops is one of the major causes of crop failures in the district and communities were calling for creation of paddocks in order to protect crops from marauding livestock.

11.1.11 Planning Perspective for Rural Housing

- Properly plan the villages to demarcate areas for housing, farming and grazing. There should be no more settling of people in grazing areas as this is depleting the grazing areas. This will preserve land for productive purposes and also protect fragile ecosystems.
- Buildings should be designed in a more ecological, sustainable and energy saving way.
- Use of off-grid renewable energy solutions will be prioritised in support of use of clean energy initiatives.

- Houses to reflect traditional, cultural and religious character of the district through use of locally-available resources and harnessing of indigenous knowledge systems should be pursued
- Houses to also take into account the effects of climate change and environmental factors of the district.
- Settlements should avoid disaster prone areas i.e. flood and steep slopes that are dangerous in the after effects of climate change induced disasters
- Rain water harvesting to be introduced at household level through water conservation and recycling

11.2 Education

Existing situation

11.2.1 The institutional Framework Guiding Education in Zimbabwe

The pursuit of higher quality of life and an upper middle class economy in particular cannot be achieved without good quality education. Education and training is instrumental in creating societies that are able to develop tangible goods and services. A good education system that will drive towards an upper middle class economy is that which has the following qualities:

- i). It should be of high quality, equitable and inclusive
- ii). There should be increased uptake of and application of STEM subjects
- iii) It should be relevant as defined by demand driven skills of industry, commerce and the public sector.

To ensure equitable and inclusive education the government of Zimbabwe want to leverage on the high quality of education that the country has achieved and extent the education system to the disenfranchised groups of the Zimbabwean societies. In this endeavour the government of Zimbabwe is trying to reach all the remote places of the country and also increase education facilities in overcrowded places.

Some of the strategies employed by the government to improve the education system include:

- Capacitating schools for inclusive education (i.e. schools, colleges, training institutes and universities);
- Internationalising the country's education and training;
- Strengthen examination boards (HEXCO and ZIMSEC)'s capacity for efficient management of public examinations;
- Adopt innovative technologies that support effective instruction and blended learning as well as alternative learning approaches from ECD upward;
- Upscale and strengthen provision of loan facilities for underprivileged

students;

- Operationalise education policies to assist in equalising learning opportunities and improve the quality of learning (Early Learning Policy, the Inclusive Education Policy, School Financing Policy, Zimbabwe School Health Policy);
- Enhance digitalisation of primary and secondary schools, colleges, universities and training institutions;
- Strengthen and expand PPPs for infrastructure development in the Education and training sector to complement public investment in both basic and tertiary education;
- Strengthen water reticulation and electrification of schools.

The country is therefore driving towards an education system pinned on innovation, industrialisation and employment creation (GOZ 2015). This drive cannot be achieved without a good foundation on STEM subjects. Hence the education system is promoting the uptake of STEM subjects. This can be achieved through:

- i). Incentivising training in STEM disciplines;
- ii). Promoting the uptake of STEM/STEAM Subjects at all levels of learning;
- iii). Construct, equip and re-tool laboratories, workshops and education facilities; and increase number of STEM teachers.
- iv). Teacher capacitation and Institutions capacitation.

The need for an education system that produce skills that are specialised for industry, commerce and the public sector will be achieved through:

- Designing appropriate Staff Development Programmes for capacity building;
- Mainstream green skills, ethics and values in the education curriculum;
- Incentivise specialist education and training skills;

- Implement the recommendations from National Critical Skills Audit of 2018;
- Strengthen the National Apprenticeship programme;
- Re-align Curricula on Skills Training and Development to meet needs of industry, commerce and the public sector;
- Re-configure Technical Vocational Education and Training (TVET) to Education 5.0;
- Capacitate members of the Public Service to ensure quality service delivery;
- Strengthen monitoring and evaluation frameworks for skills assessment by ZIMCHE, HEXCO and ZIMSEC;
- Expand health, engineering technology and agriculture specialists and introduce critical para-professional training programmes locally;
- Re-tooling and re-equipping of laboratories, workshops and training facilities;
- Facilitate international specialists training exchange programmes; and
- Transform Higher Education Examination Council (HEXCO) to an independent entity of the MHTEISTD.

The ministry of Primary and secondary education has crafted a strategic plan to improve access to quality, equitable and inclusive education system in Zimbabwe. The strategic plan is pinned by the following pillars;

Pillar 1. Improved Schools' Infrastructure to Contribute to Improved Access to Quality, Equitable and Inclusive Education

Pillar 2. Enhanced Curriculum and Assessment to Contribute to Improved Access to Quality, Equitable and Inclusive Education

Pillar 3. Adequate Safeguarding and Learners' Support to Contribute to Improved Access to Quality, Equitable and Inclusive Education • Strategic

Pillar 4. Enhanced Teachers' Capacity to Contribute to Improved Access to Quality, Equitable and Inclusive Education

Pillar 5. Enhanced Capacity of the Ministry's Leadership for Governance and Planning in the Sector and in Implementing Education Sector Strategic Plan's Core Programmes to Contribute to Improved Access to Quality, Equitable and Inclusive Education

11.2. 2 The Structure of Education system in Zimbabwe

The education system in Zimbabwe according to Zimbabwe education policy is structured in the following way:

- Early Childhood Education and Care (ECEC) system, 3-6 years
- Primary School Education is a 7-year cycle comprising 6 – 12 year olds;
- Secondary education up to 'O' level is a 6 year course comprising forms 1-6, form 1-4 is Ordinary level while 5-6 is advanced level after O level one can either go to teachers of technical college and after A level one can go to university to specialise in different fields.

Life long and continuing education. This is a parallel programme running along formal education system, is aimed at improving access to and participation in education to the previously denied and disadvantaged members of the society. This can be done through adult literacy and distance education. The government of Zimbabwe is also trying to fulfil the Dakar Framework of action, which calls for all people are to be given "an opportunity to gain knowledge and develop values, attitudes and skills" that will enable them to survive, take full control of their lives and fully participate in the development of their society. This call strives to incorporate other life skills like drug abuse, HIV/AIDS; conflict and violence, lack of employment and school-age pregnancies, hunger and the rapidly changing technologies.

11.2.3 Schools in Mberengwa District

Mberengwa has a total of 157 schools, of which 111 are primary schools and 46 are secondary schools. There are 9 satellite primary schools and another 9 satellite

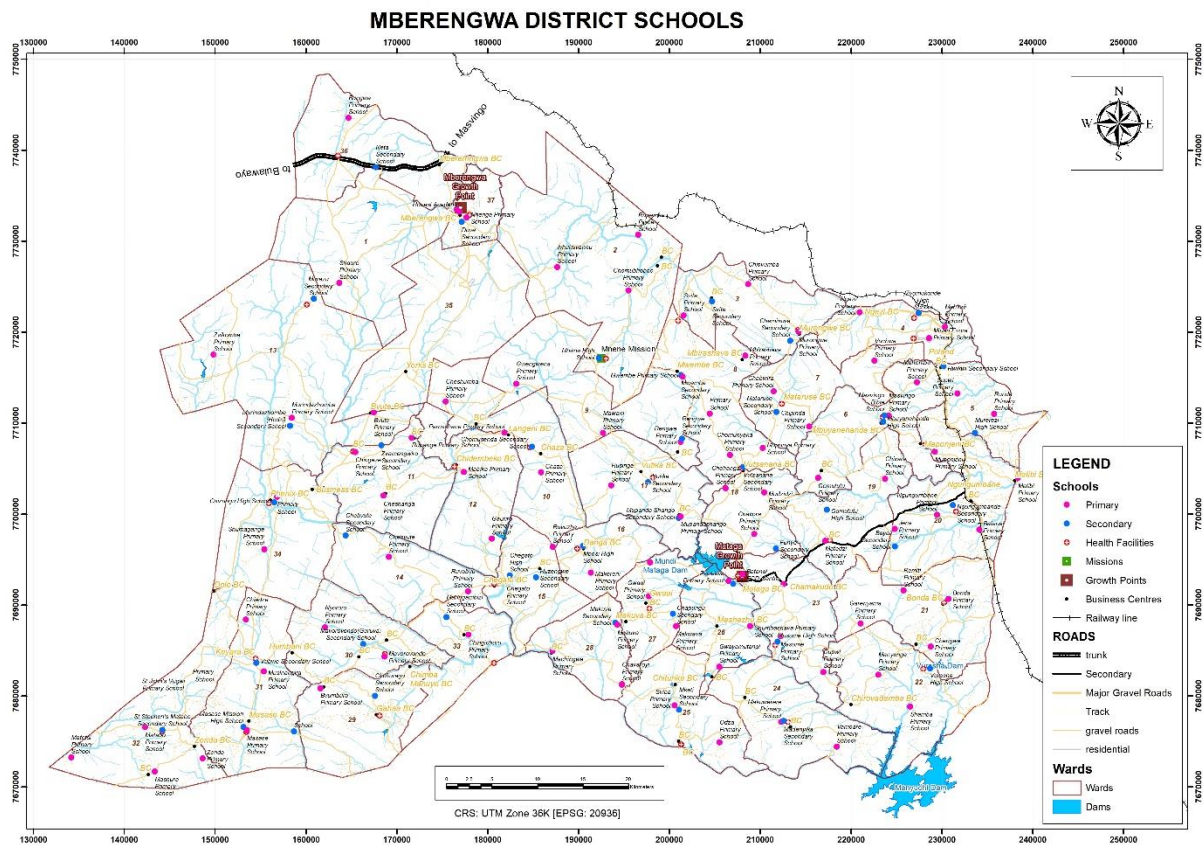
secondary schools. While there is no mismatch between the supply and demand of qualified specialist and technical staff especially in the Natural Science and Applied Sciences, Engineering and Technology, Health Science and Agriculture across the country, there is however a short supply of specialist and technicians especially in the rural areas. Table 2 below shows schools in Mberengwa District

Table 2. Schools in Mberengwa District

Schools	Registered	Satellite	Total
Primary	102	9	111
Secondary	37	9	46
Early Childhood development			
Vocational Training centres	0	0	0
Adult Education centres	0	0	0
Higher education centres	0	0	0
Total	139	18	157

The total enrolment in primary schools in the district is reaching 50 333 and in secondary schools it 13740. Most primary schools such as Mberengwa Primary are heavily congested as some of them are holding over 2000 pupils in one sitting. The primary school with lowest enrolment in the district is Manyanga with an enrolment of 246 pupils, while in secondary schools Murerezi high has the highest enrolment of 685 and Zvavashe has the lowest enrolment of 102 pupils. The map 6 below shows the schools in Mberengwa district

Map 6 Schools in Mberengwa District



The existing schools in the district are showing lack of essential facilities that are very important in running schools and enhancing better quality of life. A lot of schools are lacking sanitary facilities such as ablution facilities and these facilities are very important in controlling out breaks of diseases. Some facilities need renovations such they are able to offer quality services that will control outbreaks of diseases. Schools like Bvumbura Primary, Chaza Primari, Cheshumba, Chiwara, Gaha, Mgavakava, Mahindi, Mawani, Mponjani, Vumukwana, Gomututu High, Murerezi high, Mketi high and Mposi High all need ablution facilities as the available once are not adequate to provide quality services to the learners.

Other schools such as Matambo secondary, Bayayi secondary, Vuhwa Primary, Supwi Primary, Odza Primari, Rusvinge Primary, Mpandashoko Primary, Mwembe Primary, Manyanga Primary, Damabashoko and Dananombe Primary

need renovated ablution facilities as the available ones have out lived their life useful life span.

11.2.4 Problems in Education Sector in Mberengwa District

The education sector has a great potential to drive the development in the district. The sector has been performing comparatively well because some of its results are comparing very well with national standards. Figure 3 below compares the Ordinary and Advanced level pass rates at district and national level. The rate compares very well with what is obtaining at the national level. In some cases, especially at advanced level the district has been performing exceptionally better than the nation. (see Figure 3 below)

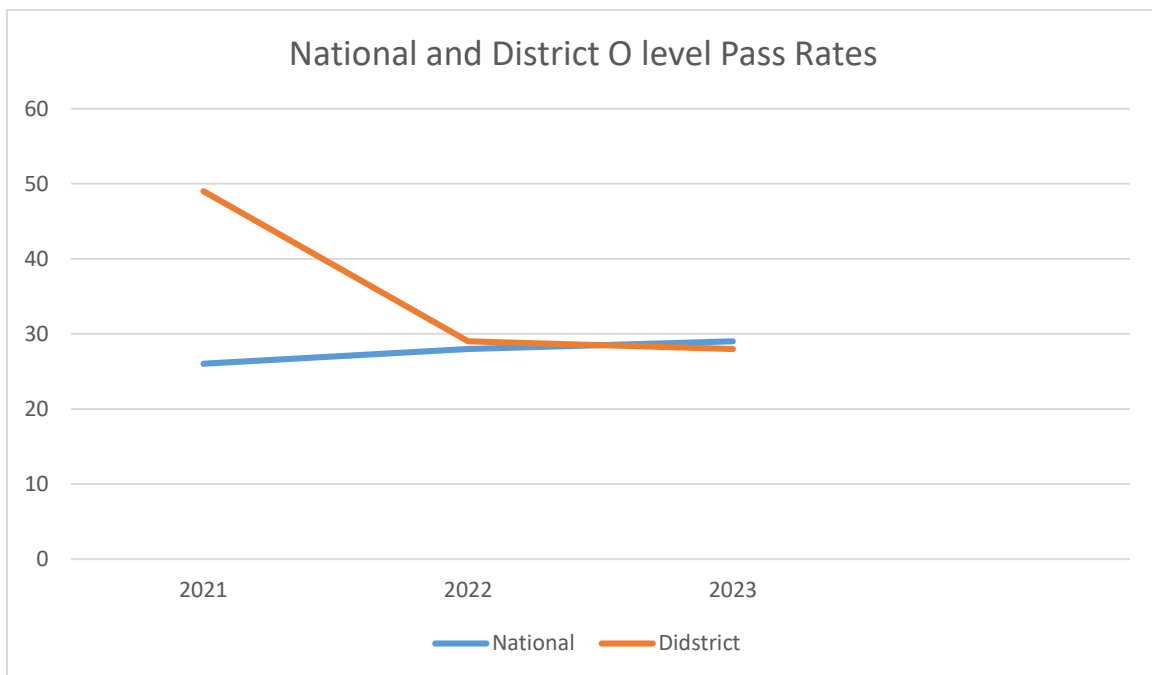


Fig. 3 Ordinary level Pass rates at National and District level (2021-2023)

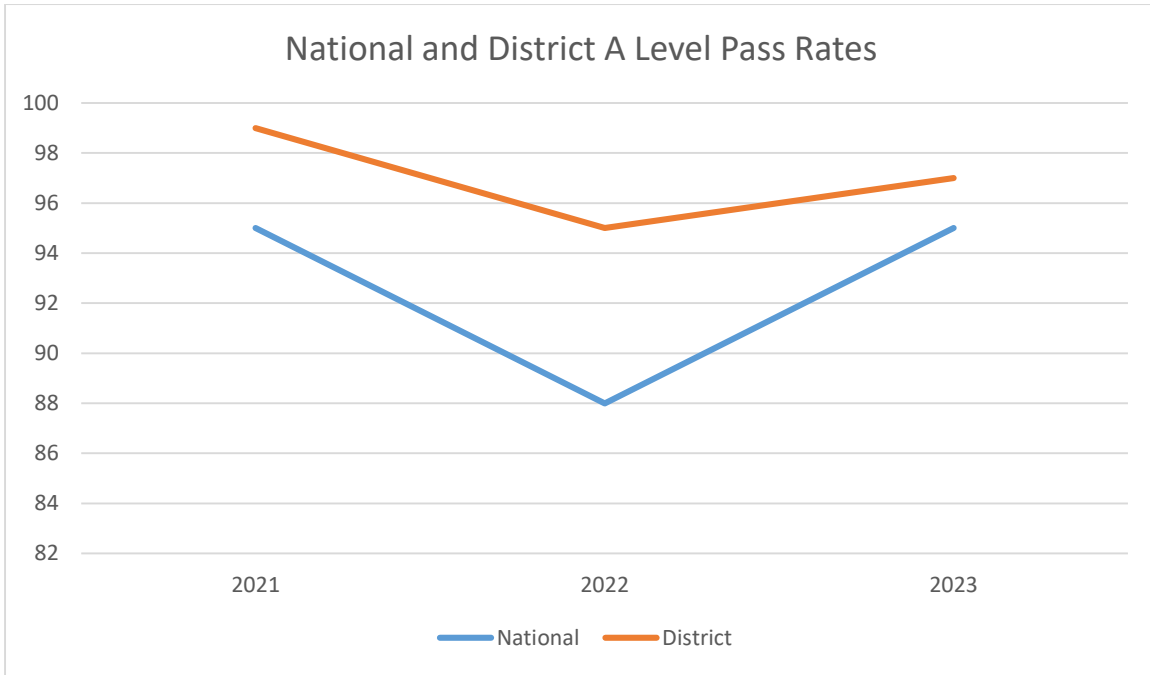


Fig. 3 National and District Advanced Level pass rates (2021-2023)

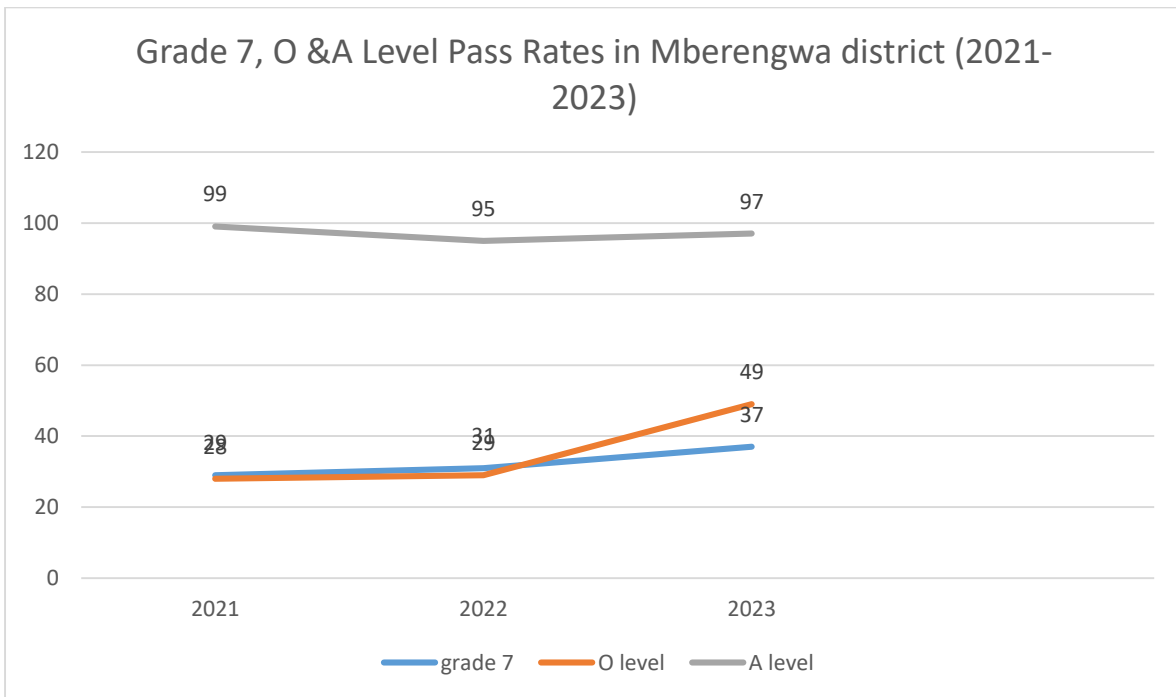


Fig:4 Grade 7, O & A level pass rates (2021-2023)

i). *Funding.*

Schools are facing dire financial constrains because they are mainly depending of users fees that are paid in terms of tuition fees. These fees are very low because the district is predominantly rural and this hindering development. Most students are depending of safety nets for their fees and

this source is unreliable as they pay at their own time and this has constrained schools to do capital projects. The district is therefore advocating for school to come up with school development plans that will help them to raise funds for priority development projects. Mberengwa district, which is the major owner of schools in the district is also persuaded to prioritise development of its schools in their budgets. As a result of poor financial resources most schools are not able to provide enough infrastructure for effective learning. Some schools are not able to maintain the existing infrastructure, which is exposing learners to harsh environmental conditions. Schools like Bayayi, Gomututu, Muchingwe, Matobo, Mposi and Hwikwi needs classroom blocks as the available ones are not adequate. Hwikwi Svita, Murerezi, Mposi and Gomututu need staff accommodation, while several other schools need new ablution facilities for proper sanitation of learners. The situation is even worse in primary schools, where schools such as Makuva, Mashura, Ruvabvu and Rwehanga learners are using substandard structures as class rooms and these structures expose learners to all vagaries of weather. Other primary schools need staff accommodation, ablution facilities and several others are aged and need renovations.

ii). *STEM Subjects*

Schools in the district are failing to teach STEM subjects mainly because they have no infrastructure that could allow them to do so. Schools do not have fully functional laboratories and Information Communication Technology infrastructure. Only 8 schools in the whole district have fully functional laboratories, which makes it difficult to teach stem subjects. It is also difficult to include the majority of schools in the district in ICTs as only 21 schools (out of a total of 157 schools) have functioning ICT infrastructure. Technology is the new edge for development in the contemporary world, hence educating learners without information

communication technology will result in disenfranchisement of these learners as they will not be competent to function in the digital era. The district also has not been able to attract teachers in science and mathematics. This is mainly because the district is predominantly rural and there are no incentives to attract teachers into these areas. Poor road network is also another hindering factor for teachers to come to the district as teachers prefer accessible schools. The poor road network is also making other schools inaccessible for supervision, hence it has been very difficult to manage them. The road network is predominantly gravel, which is heavily damaged and poorly serviced.

iii) Accessibility

The poor state of road network is making supervision of schools in the district very poor. Some of the schools such as Chimbapire, Shamba and Manyanga are very difficult to access. Such road conditions are making these schools unattractive to teachers who always shun them and they are always in high staff turnover.

11.2.5 The Planning Perspective for the Education Sector

11.2.6 Aim of the Master Plan in Education sector

- *To provide an effective schooling system characterised by a physical environment that is comfortable, adequate, inclusive, safe, secure and accessible.*
- *The school system should consist of physical structures with a variety of building systems, such as mechanical, sewerage, electrical and power, information communications technologies and security.*
- *Provide quality, equitable and inclusive Education*
- *Increased uptake and application of STEM/STEAM Subjects;*
- *Improved relevant demand driven skills for industry, commerce and public sector.*

11.2.7 Policy Proposals for Education Sector

The master plan is therefore proposing the following in the education sector:

i). The education system in Mberengwa district does not have higher and Tertiary education facilities as students have to go to other districts for such services. There is need for vocational training centre in the district.

A college in mining will also become handy so that people can take effective advantage of mineral resources in the district.

The college can be established at Mberengwa Centre

ii). There is also serious lack of STEM teachers as most of the schools does not offer STEM subjects because of lack of teaching staff. There is need to create incentives to attract STEM teacher in the district. This can be done through provision of houses, water and electricity for teachers. The district can also improve on the road network so as to improve the accessibility of schools.

ii) There is also lack of infrastructure to teach STEM subjects as only 8 schools have functional laboratories in the whole district. The district and its development partners can assist in building and equipping school laboratories so that schools can take STEM subjects.

Some schools are facing serious problems of overcrowding as some schools are holding over 2000 pupils in very limited classroom infrastructure e.g. Mberengwa Primary school. More primary schools are needed especially at Mberengwa centre where only one primary school is servicing the whole centre and its surrounding areas.

iii). Most primary schools in Mberengwa are not electrified and this is hampering efforts to attract qualified Staff. The district, its development partners and REA needs to promote rural electrification of these schools. Let's solar power our schools so that they can install ICT infrastructure.

iv). ICT infrastructure is a big problem in the district as only 21 schools out of 157 have functional ICT infrastructure. Electrification of schools and expansion of network coverage will assist in promoting ict usage in schools.

v). There is poor funding in schools especially those in rural areas. Parents are not able to raise enough resources for the development of schools. This has resulted in learners using dilapidated classroom and in some cases using makeshift classrooms.

There is need to introduce rural industries in order to create livelihoods to the rural communities. This will generate incomes that will help people to fund the education of their children. Introduction of irrigation schemes, which are run on economic basis should be introduced so that parents can have income generation projects.

vi). Build enough houses and ancillary facilities at all schools.

There is need to introduce vocational training centres in the district so that school leavers will be trained in various skills that can take advantage of local resources such as mining, agriculture, crafts etc.

vii). Due to poor road network, some schools especially those in the borders of the district are having accessibility problems as there are no roads to such schools. Such problems are making it difficult for the schools to attract competent staff. The district and the government need to improve roads in the district and create other access roads such that all schools are accessible in the district. The following table 3 show primary schools that need infrastructural development

11.2.8 Infrastructural Needs in Primary schools

Table 3. Infrastructural Needs in Mberengwa District

Infrastructure	Schools.
Classroom Blocks	Batanai, Bvumbura, Chavengwa, Chiwara, Damabshoko, Dananombe, Gomututu, Ingezi, Jena, Magavakava, Mahombe, Makuva, Makwava, Marian Evota, Mashura, Matedzi, Matatsi, Mponjani, Msume, Marongwe, Mwembe, Ruvabvu, Shamagange, Svita, Vumukwana
Staff Houses	Batanai, Bvute, Cheshumba, Mavorovondo, Mawani, Mpandashango, Mwembe, Rwehanga, Sihande
Ablution Block	Odza, Mwembe, Manyanga, Gomututu, Chiwara, Cheshumba
Renovations	Chibvumba, Chingezi, Chomunyaka, Garenyama, Gaha, Mangonde, Rupangwe, Rusvinge, Ruuraugwi, Supwi, Vuhwa

The improving of school infrastructure will enhance teaching and affordable accommodation in all institutions, can be done through engaging the Community, Private Sector and Development Partners.

The following secondary schools also need some infrastructural development in form of:

Infrastructural Need	Schools
Classrooms	Bayayi, Gomututu, Muchingwe, Mposi, Hwikwi
Staff houses	Gomututu, Mposi, Svitu, Vutika
Ablution Blocks	Gomututu, Gumva, Mposi, Vutika

All schools in the district need to be modernised in line with vision 2030, which is characterised by an upper middle class economy. To modernise our schools the following should be done.

- Engage Development Partners in electrification of schools so that our schools can participate icts;
- Strengthening resource mobilisation for purchasing of computers to provide the infrastructure for adoption of icts;
- Rehabilitation of school infrastructure so that they are fully equipped for STEM subjects and teaching and participation in ict. All schools to teach STEM subject so that we create generation of STEM students that are able to drive in science and innovation
- Community buy-in in acquiring computers and connecting internet in schools so that they support initiative towards adoption and implementation of ICTs in schools.
- All schools should be electrified preferably with renewable energy
- All schools to be connect to safe and portable water preferably powered by renewable energy.
- Promote the use of renewable energy in schools e.g biogas and solar energy
- All schools to have adequate infrastructure in terms of classroom blocks, staff houses, sanitation and hygiene facilities
- Schools to have functional laboratories such that they can participate in STEM subjects
- Early childhood education need to be integrated into the education system. So communities should provide Early Childhood Education at village level

11.3 Health

11.3.1 Existing situation in National Health facilities

Health is considered as a key essential component in the improvement of overall social and economic development. In terms of the government drive towards an upper middle class economy, health is a key driver towards that goal. A good quality of life depends on the state of health care which, is hinged on availability of safe water, waste disposal, transportation, housing, sanitation, provision of adequate health facilities and access to good quality food. The development of any community is therefore hinged on a healthy workforce that is able to plan productively for the development of itself.

The Zimbabwean Health System has some underlying strengths such as a skilled and knowledgeable health workforce and firm Primary Health and Hospital Care foundations. This has contributed to significant strides in reducing the Maternal Mortality Ratio (MMR) from 960 per 100,000 live births in 2010–11 to 462 /100,000 live births in 2019. HIV prevalence has decreased by 28 percent, while tuberculosis (TB) incidence has dropped by nearly 60 percent over the last decade. The overall incidence of malaria has fallen drastically, from 136 per 1,000 populations in 2000 to 19 per 1000 in 2018.

Mortality declined by 58.4 percent from 462 deaths recorded in 2015 to 192 deaths reported in 2018.

11.3.2 Existing Health capacity in Mberengwa District

Currently the district is offering the following service at different levels of the community:

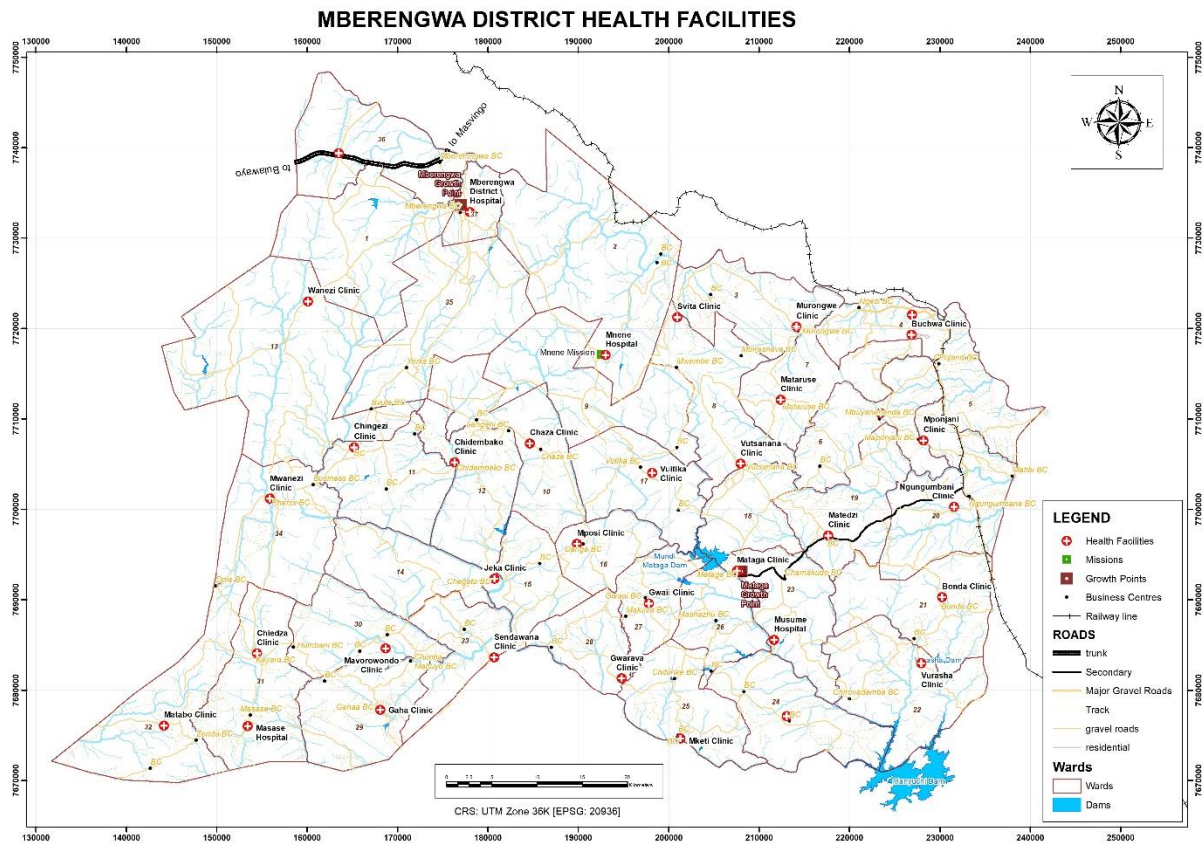
- i. OI/ART services
- ii. Ambulance services
- iii. Antenatal Care Services
- iv. Postnatal Care Services

- v. Voluntary Medical Male Circumcision
- vi. HIV testing services
- vii. Early Infant Diagnosis of HIV
- viii. Nutrition Services
- ix. Expanded Program on Immunization (EPI)
- x. Cervical Cancer Screening
- xi. Management of Injuries

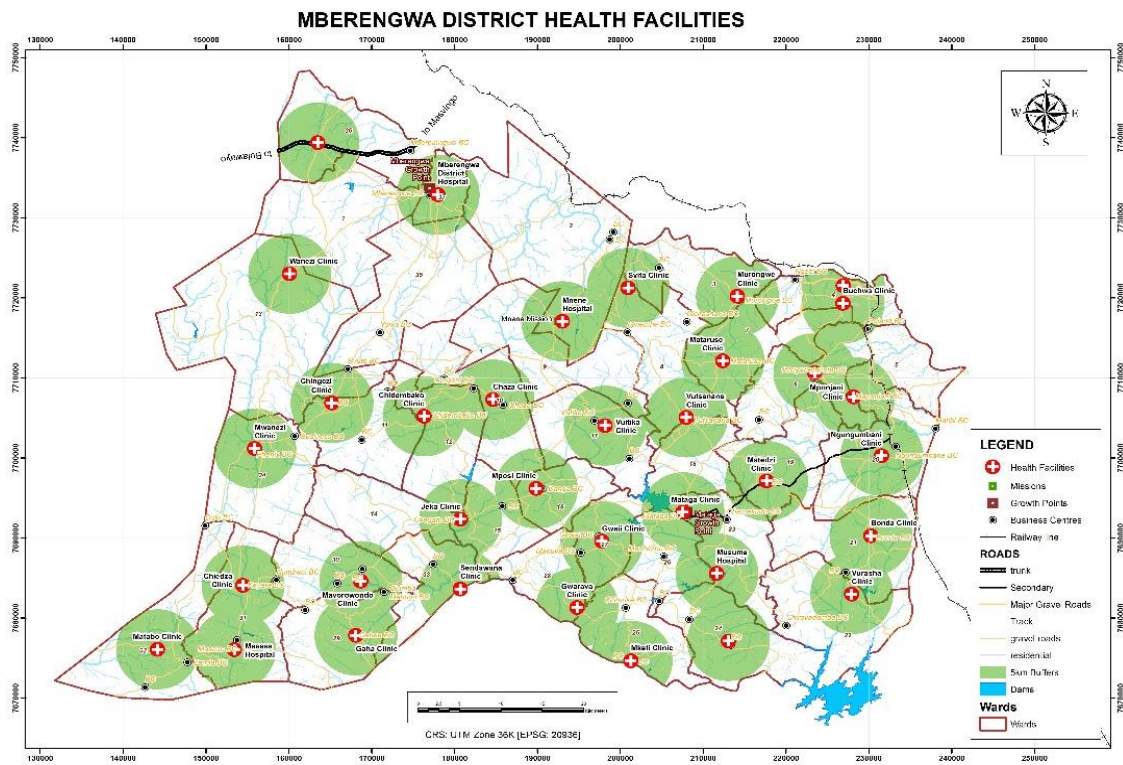
At present about 25% of the population in the district are still travelling more than 5km to reach the nearest health facility and some are travelling more than 20km, which results in poor health seeking behaviour by some of the community members. (see figure below). In Mberengwa East Constituent, ward 21, some people are travelling between 14km-20km to access a health facility. This is not sustainable and against the President's mantra of leaving nobody behind in the development process. The district heavily relies on development partners' support for major programs such as HIV/AIDS, Malaria, WASH, Nutrition among others. These development partners are mainly Non-Governmental Organisation. This reliance on non-governmental partners support threatens the sustainability of health programs as these partners are foot-loose and hence may threaten continuation of access to quality services. There are no health facilities at village level in Mberengwa district. It is also prudent for the ministry of health to offer health services at village level by establishing village health posts so the villagers can access treatment for chronic diseases such as Blood pressure, ARV, diabetes and carry out some oral treatments before they visit a local clinic. This will provide health facilities to everyone and thereby leave no one behind in line with the national development thrust, which strives to leave no one behind in the development process. The map below shows the distribution of health facilities

in Mberengwa District. The next map7 shows distribution of health facilities and their spheres of influence

Map 7 Health Facilities in Mberengwa District



Map 8: Public Health facilities in Mberengwa District and their Spheres of Influence



Coverage of Public Health facilities in Mberengwa (Govt. and Council Facilities)

11.3.3 Prevalence of Major diseases in Mberengwa District

The district is striving to reduce disease prevalence in order to match the sustainable development targets. In most cases the district is doing comparatively well in terms of reducing disease prevalence. The district has been doing well in HIV prevention and control and it has surpassed the sustainable development target by a significant margin. However, in some diseases, such as Maternity mortality and under 5 years mortality the figures are still very high and fall far below the expected sustainable development goal target. For example, in maternity mortality the sustainable development goal target is 70 of the 100 000, but the district prevalence rate is still as high as 460 and even their 2025 target of 420 is still higher than the sustainable development goal target. Other diseases such as TB, Malaria and cervical cancer show that by 2030 the district will still be fighting to eliminate them but the sustainable development goal is targeting total elimination of such diseases. The district prevalence rate and the 2025

targets shows that these diseases will still be with us in 2030. The table 4 below shows some of the major disease prevalence in the district and the target they are striving to get by 2025 in order to fall with the sustainable goal target.

Table 4: Disease Prevalence, Targeted reduced rate and SGD Comparison in Mberengwa District

Disease	Current Prevalence rate	Sustainable Development Goal (2030)	Target reduced Rate (2025)
HIV (per 1000)	2.81	3.3	0.57
Malaria mortality (per 100 000)	42	Eliminate	20
Tuberculosis Mortality (per 100 000)	1.9	Eradicate TB Infection	0.5
Cervical Cancer (per 100 000)	15	Eliminate	5
Maternity mortality (per 100 000)	460	70	420
Under 5 years mortality (100 000)	65	12	41

The aim to achieve an upper middle class economy cannot be achieved if the district is still fighting mediaeval diseases such as TB and malaria. The district is doing well in HIV prevention as it has managed to reduce infection to below Sustainable Development Goal target of 3.3 per 1000. The district has achieved 2.8, which shows good stride towards HIV prevention. However other health indicators such maternity mortality and under 5 years mortality are way above

SDG targets showing lagging capacity to fight such health condition. The SDG target for maternity mortality is 70 per 100 000 but the district is still experiencing more than 420 deaths per 1000 000. The SDG is also targeting elimination of mortality in diseases such as tuberculosis and malaria but the district is still experiencing mortality rates of 1.9/100 000 and 42/100 000 in respective diseases. There is need to upscale interventions that will eradicate diseases in the district. This can be achieved by having enough health facilities, which are fully funded to operate all the activities that will eradicate diseases. At present the district has a composite health facility as shown in the table below.

Table 5: Health facilities in Mberengwa District.

Health Facility	Number
Government hospitals	1
Mission hospitals	3
Government rural health centres	9
Local Authority clinics	21
Private clinic	2
Total	36

There are also clinics that are still under construction and these include; Zvikombe, Madosvo, Runde, Whikwi, Mbirashava, Madhekwana, Benga, Bvute, Chebvute, Rengwe, Vumukwana, Maziofa, Chaora, Garaenyama. Bayayi, Chirovando, Rwavamutangi, Nyororo and Gwengwena.

Several other sites are also planned for establishment of clinics and these sites include; Batanai, Chomubhobho, Chibvumba, Cheshanga, Magavakava, Bvumbura, Mangonde, Garare, Dambashoko, Star Mine, Muchipisi and Nyengerere.

11.3.4 The Planning Perspective for Health Provision in Mberengwa District.

11.3.5 The aim of the master plan is to:

- *Provide quality health delivery system that will lead to social economic development of the district*
- *Provide a health system that will lead to eradication of medieval diseases*
- *Provide a health system that will lead to achievement of Sustainable development goals*
- *Improve access to primary and secondary health care to everyone.*
- *Reduce mortality and morbidity due to communicable diseases*
- *Promote healthy communities*

The diverse portfolio of health activities can be achieved through the following interventions:

11.3.6 Proposed Policies for Health Sector in Mberengwa District

1). Provision of health post at village level where villagers can access critical medication such as those that treat Blood pressure, TB, and also access regular supplies for ARVs. This will provide health services to communities and lessen the burden to walk to the nearest clinic. Currently there are no health posts in the health delivery system and this provision will make health facilities more accessible to people in the district. The diagrammatical representation of health facilities will be as follows:

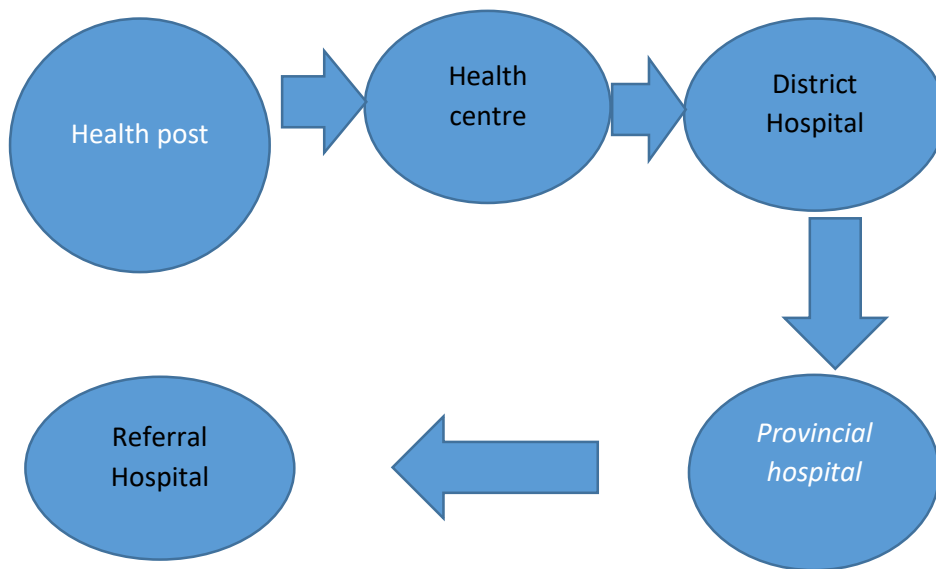


Fig 5. Schematic representation of Health Provision system

Although the general outlook of health sector looks good, an in depth examination shows a lot of gaps that are noticeable in the district health sector, which is hampering effective delivery of health services in the district. Some of these gaps include;

ii) Most of the hospitals in the district do not have functional theatres. Of the 4 hospitals in the district only one (Masase hospital) has a functional theatre, while all others refer their critical operations to either Bulawayo, Gweru or Gwanda, where such services are found. Those hospitals with theatres are lacking essential equipment that will allow them to be fully functional. There is need for a functional theatre at the district hospitals, which is fully equipped for theatre procedures. Equipment such as theatre tables, anaesthetic machines and personnel should be provided.

iii). All the hospitals in the district do not have specialist doctors hence all such services are referred to Bulawayo, which is the nearest referral hospital. There is need to provide specialist such as neurologist, anaesthetist, laboratory specialist, dentists, opticians and mid-wives

iv). The district hospital is also suffering from high staff turnover, where there are more than 35 open vacancies that have been difficult to fill. These include posts like doctors, midwifery, anaesthetist and even general registered nurses. There is need to add two more doctors at Mberengwa District hospital to make them 4.

v). The Mberengwa district hospital is working both as a primary and secondary health facility because Mberengwa Centre does not have an operating clinic. The site is there but not yet constructed. This is over burdening the hospital as even minor cases are treated at this hospital hence there is need for a clinic at Mberengwa Centre to ease congestion at the district hospital.

vi). There are no ambulances that service rural clinics. Ambulances are only found at hospitals. There is need to provide ambulances that will service rural clinics at least one ambulance for every 5 clinics.

vii). Some disease hot spots like the Van guard and Yorks mining areas need health facilities like a health post so that people can access health services in the areas.

viii). There are no visiting Doctors in all rural clinics. There is need for doctor to visit a clinic once or twice a month just to offer general services.

ix) Promote sporting activities for healthy communities

x). Provide walkways, cycling tracks in urban areas to promote healthy living

xi). Provide for health hubs in both rural and urban areas where people can be gathers for information on good health habits

xii) Provide mini hospital at centres such as Jeka, Danga, and Mataga, which will offer services that are above clinic level but slightly less than a district Hospital.

11.3.7 Health Infrastructural Needs in Mberengwa District

There is need to finish construction works at several health facilities such that they start to offer services to the people. The table 6 below shows the clinics that are still under construction.

Table 6: Clinics are Still under Construction

Clinic	Ward
Zvikombe	1
Chirovandove	22
Rwavamutangi	26
Nyororo	30
Gwengwena	35
Bayayi	20
Madosvo	6
Runde	5
Whikwi	5
Mbirashava	3
Madekwana	8
Rengwe	9
Bvute	11
Chebvute	14
Rwenge	9
Vumukwana	16
Maziofa	17
Chaora	18
Garanyama	22

There are other sites that were identified for construction of clinics but construction works have not yet started. following table shows clinics which have been sited for construction but construction works have not yet started.

Table 7: Sites to add more health facilities in Mberengwa District

Clinic site	Ward
Batanai	7
Chomubhobho	2
Chibvumba	3
Cheshanga	9
Magavakava	15
Bvumbura	29
Mangonde	21
Garare	34
Dambashoko	36
Star Mine	37
Muchipisi	7
Nyengerere	37

Improvement of health infrastructure in order to attract specialist's services and maintain the available staff (e.g. provision of houses, water, electricity, and road network)

In order to achieve reduced morbidity and mortality due to communicable and non- Communicable diseases, the following strategies should be implemented by The district: -

Strengthen implementation of Malaria Elimination Strategy to upscale the fight against malaria;

Strengthen implementation of the 90 90 90 HIV Strategy to further reduce HIV infections; and

Strengthen implementation of End TB strategy, so that TB is eliminated in the district.

11.3.8 An all Inclusive Health delivery system for Mberengwa District

This system proposes health delivery system that starts at village level up to national level and this is as follows:

- 1) Provision of community health as part of the health delivery system
- 2) The proposed health delivery system is as follows:
 - Establish a health post at village level to make communities access health facilities closer to their areas of residence this should be the lowest level of health delivery system.
 - Cases from health post can be escalated to Clinics which should be in a 5km radius. The cases from clinics can be further referred to District hospital, which can then refer to provincial and then Referral hospitals.
 - Upscale interventions to eradicate Malaria in the district
 - Upscale interventions to eradicate Tuberculosis
 - Reduce under the age of 5 mortality
 - However, because of the size of Mberengwa district and the site of our district hospital (Mberengwa Centre), It is ideal to establish two mini-hospitals at Mataga and Jeka and these will serve as health facilities that are slightly above clinics and slightly below district hospitals in terms of delivery of health services.

Other proposals include:

- a). Provision of ambulance services to be introduced, one to service at least three clinics
- b). Introduce specialist services at out district hospitals (dentist, gynaecologist, neurologist, anaesthetist, pharmacists, radiographers).
- c). Pharmacies to be establishes at other centres in areas such as Mberengwa Centre, Jeka and Mataga so as to reduce distance travelled for pharmacy services.

11.4 Sanitation and Hygiene

11.4.1 Existing Situation

Water and Sanitation coverage remains low in the district leading to a number of diarrhoea outbreaks especially during the dry periods of the year. The district is currently battling to control cholera due to sporadic outbreaks throughout the district. The risk of cholera remains high due to poor Water Sanitation and Hygiene coverages. The district has a total of 18 084 households without toilets who are using bush or field system (GOZ 2019). There are also a significant other who are using some unorthodox systems of waste disposal such as use of open pits, bucket system and composting. Such waste disposal systems expose households to disease such as cholera and typhoid, which have been increasing in the periods 2022-20223. These cases have been exacerbated by dwindling WASH programmes in the district, which were stopped in 2016 due to financial constraints. Sanitation interventions were also affected by perennial droughts, which saw funds being prioritised to avert food insecurity. The district has tried to increase the establishment of Environmental Health Technicians by establishing one in each Ward to help diseases surveillance and supervision of construction of sanitation infrastructure, however poor funding stifle intervention yields very little. In many villages in the outlying villages, toilets are a rare infrastructure at a homestead and this exposes the whole village to diseases outbreaks. Some strategies put in place to improve Sanitation in the district include:

- Engagement of community leadership and influential personnel on improving sanitation issues
- Community triggering training of builders to help establishment of building brigades in the construction of toilets
- Supervision of latrine construction
- Sanitary inspections
- Trainings of Community Health Workers at village level.

- Participatory health and hygiene sessions by community member to create sanitation awareness
- Formation and activation of community health clubs
- Formation and activation of school health clubs to teach children on the necessity of community health

There are also some interventions to improve the water quality in the district in order to provide access to clean water, which will help in fighting diseases in the district. These strategies include:

- Water point sanitary inspections
- Water Quality monitoring
- Distribution of aqua tablets, which will help to clean water
- Health Education

11.4.2 Planning Perspective for Sanitation and Hygiene

11.4.3 Aim of the Master Plan on Sanitation and Hygiene

The major objective of the master plan in sanitation and hygiene is to:

- *Provide basic sanitation infrastructure to all district habitants*
- *Promote good hygienic practices*
- *People should have access to clean water*

Clean water, basic toilets and hygiene practices are essential for the survival of humankind. Lack of these things signals some degree of poverty. Water supply and sanitation in Mberengwa district are driven the donor community. As per 2022 census 43,6% of the population in Mberengwa are using rudimentary sanitary facilities, which include open pits, compositing, bush and bucket system. The majority are using bush system or open fields.

11.4.4 Policy Proposals for Sanitation and Hygiene in Mberengwa District

The master plan therefore proposes the following in sanitation and hygiene:

- eliminate Open Defecation and diarrheal diseases by building toilets; (41.7% households still use bush system)

- Each and every household should have Blair toilet (49% of households need proper sanitary facilities)
- The growth poles and semi urban areas (Mataga and Mberengwa Centre) to be connected to sewer reticulation system for safer health
- Rehabilitate the existing urban and rural network of sanitation facilities because most of the sanitation infrastructure were destroyed by cyclones were not reconstructed.
- Expansion of on-going hygiene education programmes for urban and rural communities will be prioritised to bring community awareness on sanitation and hygiene issues
- Strengthening institutional capacities and coordination to enhance provision of sanitation in rural and urban areas to ensure clean and healthy environments.

11.5 Cultural and Heritage

11.5.1 Existing Situation

Mberengwa district has a lot of sites that are of cultural and heritage importance. These sites include mountains, pools, caves and sites for rain making. There are two main mountains that are known for their traditional importance and these are Buchwa and Mberengwa mountains. The Mberengwa mountain is regarded as the mountain for the Valemba community and they used to make annual pilgrimage there, where this community was counted each year and they used to carry out their traditional and initiation ceremonies at this mountain. Other Sites used for Valemba initiation ceremonies include Dumbwi and Benzi, which are in wards 9 and 10. There are other sites that are used for rain making ceremonies and these are Dunda and Shauro. Buchwa mountain is said to belong to the Mataruse people. The table 8 below shows some of the mountains with cultural and traditional values.

Table 8: Mountains with Cultural and traditional Values in Mberengwa District

Mountain	Location (ward)
Manjenge	29
Chomutangara	31
Kumwe	34
Buchwa	4
Maphiri	14
Mberengwa	35
Gaha	29
Chimbapire	29
Chivuwa	14
Romporehoto	14

There are also pools that have significant cultural values and these pools and caves that are said to be residence of mermaids and spiritual fathers of communities. Some of the important pools include; Tembo in ward 11, Chifuganya in ward 30, Radzuke in ward 30 and Rutandadziva in wards 30. There are also some ruins that are dotted within the district and some of the notable ruins include; Manjiribwe, Shinganeburi and Ruvabvu. There is one big cave, Manjiribwe in ward 30 that can accommodate the whole village and there are artefacts and paintings in that cave. This cave is said to be visited by even prophets of christian background, who often visit it for strengthening of spiritual powers. The table 9 below shows name and location of some of the caves that are believed to have strong cultural value in the district.

Table 9: Some Caves of cultural values in Mberengwa district.

Cave	Location (Ward)
Vutende	11
Manjiribwe	30
Matabo	32
Chomukoto	10
Mhokonye	27
Magwaza	26
Chenharira	17
Rushavane	26
Makepesi	9
Chevuwa	33
Rivarezhou	14
Manjenge	2

There are also arts and cultural centres activities at Gomonenga in ward 5 and Takabikira in ward 4. These art centres provide entertainment groups that can perform at state occasions and other invited occasions. These arts and cultural centres also coordinate cultural activities in the district and also help to promote arts and cultural activities in schools. These arts and cultural activities are also complemented by traditional groups in provision of entertainment at various occasions. Some of the established traditional dance groups include; Maparanyanga in ward 17, Mutevaidze in ward 31, Danangombe in ward 31, Bangwe in ward 32 and Mudumwezve in ward 11. These traditional dances are culturally based as each specific community has its unique dance associated with it. For example, Isitshikitsha, Muchongoyo, Amabiza and Ingquzu is associated with communities of Ndebele background, while Shangara is associated with Shangane group and Mbakumba is associated with Shona or Karanga communities.

While there are so many cultural sites and cultural activities, they lack support from both the local authority and central government. There are no structures to support cultural activities, neither is there financial support to promote these activities. The local authority does not have space for cultural activities, as these space users are not prioritised during land use planning. These arts and cultural activities perform in open as they have no designated spaces for their activities. Up and coming groups have no financial support for their activities hence their performances will never see the light of the day. These activities can be a source of livelihood for many but if they are not supported they will never benefit the owner of such talent. Zimbabwe is endowed with cultural diversity and therefore it is imperative to develop these cultural activities in communities as these skills will help in national and self-identity, entertainment critical thinking, self-discipline and problem solving (GOZ 2020). In a country that is reeling from lack of employment, arts and culture skills can provide such employment and people can have a source of livelihood to support their families.

11.5.2 Planning perspectives of Culture and heritage in Mberengwa District

11.5.3 Aim of the Master Plan on Culture and Heritage

The major aim of the master plan in the tourism sector is to;

- *Enhance the tourist experience*
- *Increase efficiency and productivity*
- *Promote sustainability and environmental protection*
- *Support local communities and economies*
- *Encourage innovation and entrepreneurship*

11.5.4 Policy Proposals for Culture and Heritage in Mberengwa District

Culture plays a very important role in the development of communities. It can be a very important source of livelihoods and help to alleviate poverty in communities, Cultural activities and cultural sites therefore can be utilised as community tourist enterprises,

The following sites can be used as community tourist centres: Buchwa mountains, Belingwe mountain. The Buchwa mountains have scenic sites that can be used for leisure such as mountain hikes.



Fig. 6. Buchwa Mountain views



Fig 7: Another Scenic view from Buchwa Mountains



Fig. 8: Buchwa Mountain Pool

This pool if well maintained can be used for various water sports and also be turned into just a resting place on the water front. If the site is well developed as a tourist centre, it will generate other downstream activities such local crafts that can be marketed to tourist. Local traditional artefacts can also be marketed at such sites thereby creating livelihoods to the local communities.

Introduce the following in the tourism sector for sustainable and smart tourism:

- Mobile apps
- Big data analytics
- Internet of Things (IoT)
- Virtual and augmented reality
- Artificial intelligence
- Social media
- Cloud computing

This will make tourist centres in the district visible all over the world.

The district can establish cultural centres at village level, which will culminate in development of cultural hub at the district level. This hub will host all cultural activities in the district, which will act as an exhibition centre. This will help to market local traditional and cultural activities in the district.

There are several dance groups in the district but the district does not have infrastructure for performing arts. There is need to establish community halls for performing arts, where musicians and other performing arts can perform their arts. There should be theatres for performing arts at both Mberengwa Centre and Mataga Growth Point.

There is also need to establish recording companies in the district where local musicians can record their music for marketing in the district and beyond. Currently local musicians are going out of the district like Zvishavane, Gweru

and even Harare to record their music, this is expensive. The spread of the digital technology should enable establishment of these recording companies everywhere.

Sporting activities are good for a health community, hence the establishment sporting facilities will go a long way in planning for a health community. Mberengwa district is lacking sporting facilities and those that are in existence are run down to the extent that they need renovations. Therefore, the planning perspective for sports in Mberengwa district should see the establishment of sport stadiums at Mberengwa centre, Mataga Growth Point and rehabilitation of Buchwa mine sports stadium. There re soccer teams that are playing for division two but there is no stadium built in the district.

12. Economic Development in Mberengwa District

Existing Situation

12.1 Livelihood Activities

There are a lot of livelihoods that are being promoted in Mberengwa district and these are helping people to survive. These livelihood options help people to create sustainable livelihoods as agriculture alone is very unreliable. The diversification of livelihoods helps to create sustainable rural livelihoods. The table 10 below shows livelihood options in the district.

Table 10: Livelihoods in Mberengwa District

Livelihood	Number
Agro-based	42
Carpentry	3
Sewing	42
Welding	16
Freezit Making	6
Bakery	5
Bushmeal	2

12.1.2 Agriculture

Mberengwa district is in agro-ecological region 4 and 5, which naturally received an annual rainfall of 450mm or below. In some years the district received an annual average of 231mm. Figure 10 below shows the annual rainfall received in the past 10 years in the district.

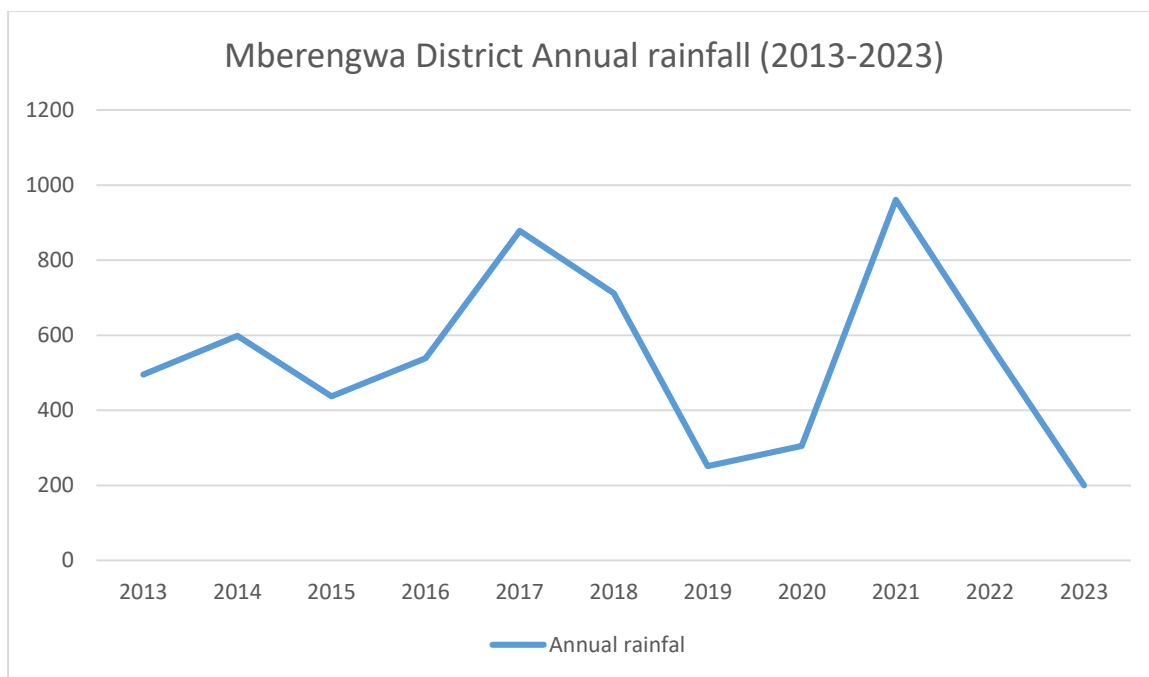


Fig. 9: Mberengwa District Annual Rainfall (2013-2023)

This therefore makes rain-fed agriculture extremely difficult. The low rainfall regime makes the district a drought prone region, which makes water scarcity a district problem. It therefore calls for water harvesting techniques and drilling of boreholes so as to provide water to the district. Irrigation schemes are therefore the major lifeline of agricultural activities in the district. The poor rainfall pattern has resulted in perennial droughts in the district making the majority of population food insecure. The production of rain-fed agricultural crops has been very poor, ranging from as low as 0.16 tonnes/ha to only as high as 0.8 tonnes/ha. Other crops grown in the district which include finger millet and pearl millet, are also experiencing low yields averaging a yield of 0.5 and 0,23 tonnes/ha respectively, although these crops are regarded as drought tolerant. The figure 11 below shows the productivity of maize and sorghum from 2019- 2023.

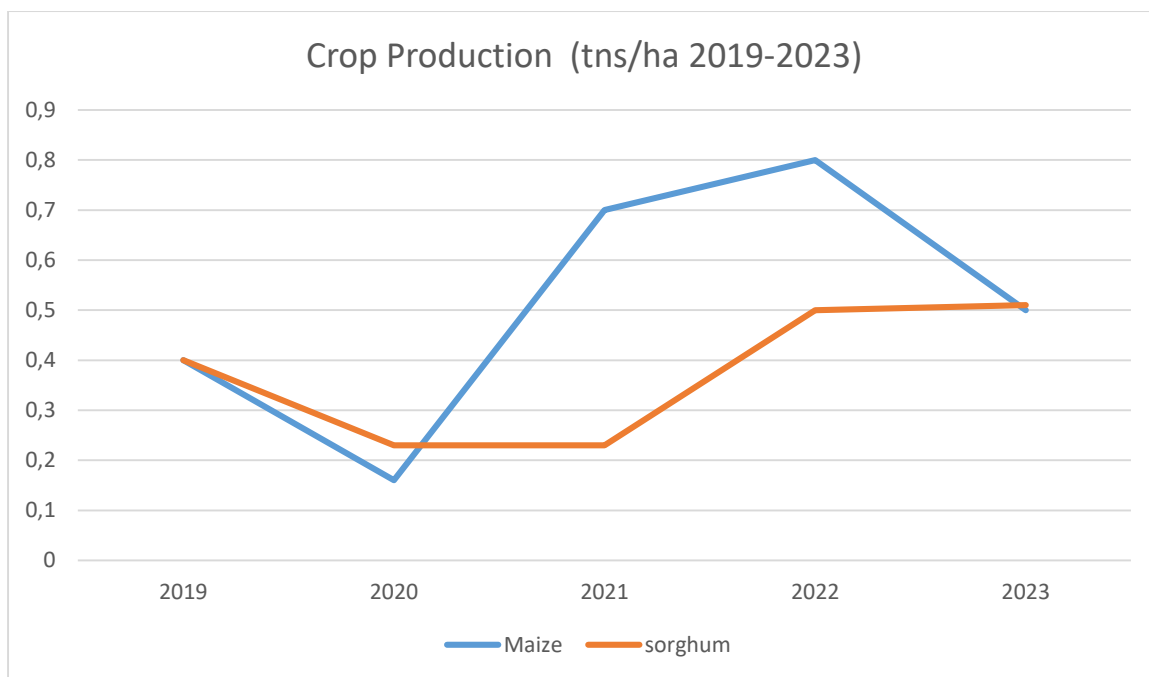


Fig. 10 Maize and Sorghum Production in Mberengwa District.

To mitigate the perennial food shortages, the district with other partners have initiated irrigation schemes and conservation farming techniques throughout the district. There are more than 54 000 farmers who were trained in conservation farming and of this 41000 are already practicing conservation farming (Pfvuhudza/ intwasa farming) and there are 11 irrigation schemes serving 1961 households and irrigating 987 hectares. Table 11 below shows the irrigation schemes in Mberengwa district, their status and the households they are serving.

Table 11: Irrigation schemes in Mberengwa district and the households

Irrigation Scheme	Number of households	Status
Biri	273	Operational using earth furrows
Muchipisi	220	Operational using earth furrows
Old Biri	78	Operational using surface irrigation
Chimwe	125	Operational using overheads
Vurasha	55	Operational using surface
Neta	42	Vandalised not working
Zvavachari	49	Operational using surface
Makuva	54	Operational using surface
Chamakudo	400	Operational using surface irrigation
Inyala	360	Under construction
Chaora	360	Under construction
Total	2016	

So far out of the 11 irrigation schemes 3 are not operational as 2 of them are still under construction and the other one had its infrastructure vandalised. The number of households involved in irrigation projects is very small as they only constitute 2.02%. The rest of households are relying on rain fed agriculture. This therefore calls for an active mobilisation of funds to build infrastructure to start

more irrigation projects and develop more water infrastructure to support this initiative. There are several rivers that have reliable water throughout the year but they do not have dams that can harvest water for irrigation. Rivers such as Mwanezi, Mwere, Ingezi, Muchindwe are good sources of water but they do not have dams that can store water for irrigation. In Mberengwa east there is a reliable pool of water that has been collecting at the disused Buchwa mine and this water is just lying idle as people are experiencing crop failure nearly every year. The water can be drawn using gravitational force from the top of the mountain to the low lying areas, which cut on the costs to pump the water to irrigation areas. Manyuchi dam is another infrastructure that is lying idle in the district. The infrastructure is shared with Masvingo district, and has already an approved plan for development but nothing has been put in place. There is therefore need to activate the plans that are on Manyuchi dam and environs and activate economic activities around the dam. The figure below shows some of the scenery from Buchwa Mountains.

A lot of other dams have been accumulating sand, thereby reducing their irrigation capacities. These dams need scooping so as to rehabilitate them and reactivate their economic roles in the rural areas of Mberengwa that are facing drought every year because of their ecological environments that are characterised by low rainfall. The poor management of catchment areas for most of the dams is causing a lot of siltation in these dams. There is need for proper farming methods and control of illegal gold mining that is happening along most of the rivers feeding into these dams. Stream bank cultivation is happening along most of the rivers, which is also exacerbating the siltation of dams. Map 9 below shows some irrigation activities in Mberengwa district.

Map 8 Mberengwa District Irrigation Schemes

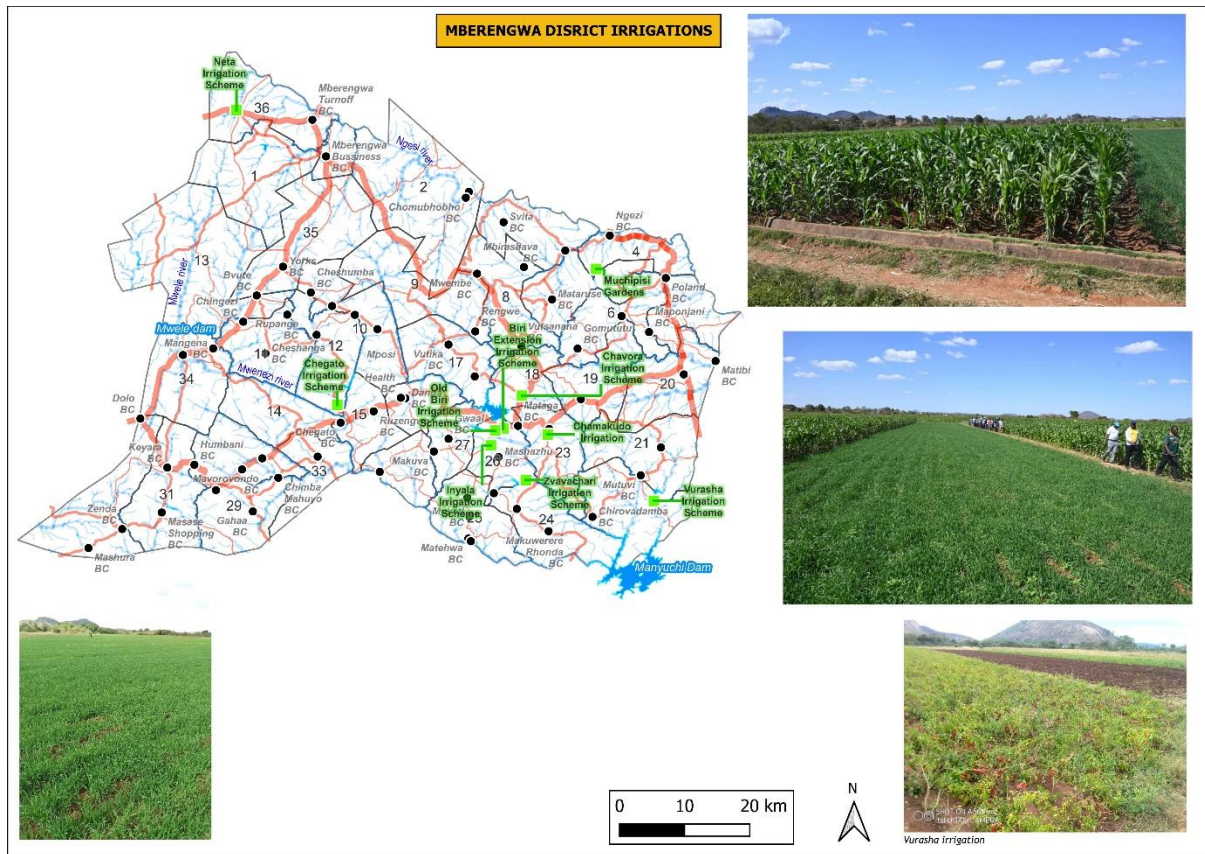


Fig.11: Stream bank Cultivation in Mberengwa (Adopted from EMA, 2020)

12.1. 3 Livestock rearing

The district is heavily affected by droughts and this has also affected livestock rearing because continued droughts have degraded grazing areas. The most

common livestock found in the district include cattle, chickens, goats, sheep, rabbits etc. Generally, there is decreasing livestock population in the district. Cattle has decreases from 165 000 just below 150 000. There major cause of decrease in cattle population is the devastating January disease, which has killed a lot of cattle. Some farmers are destocking in due to fear of the disease. Goats and sheep have also been showing decreasing trends. There are also some sections that are affected by troublesome animals such as hyenas and leopards which are also killing their livestock. In many villages throughout the district there is a severe shortage of grazing areas, which makes it difficult for farmers to increase their herds of cattle. Some farmers are grazing their cattle in contour ridges or in some spaces that are not cultivated. Some farmers especially in ward 15 have reduced their cultivated areas to reserve some space for cattle grazing. This practice shows the severity of shortage of grazing area in the district. Another critical cause of dwindling grazing area is the mining and illegal settlements. The owners of mining claims are fencing off their claims, thereby reducing the grazing areas. Some miners especially artisanal miners in ward 37 are degrading grazing areas through their mining activities. In many villages throughout the district, there is illegal settling of people in the grazing areas and people are converting grazing areas into fields and homesteads and this is eating on the available grazing areas. However, donkey population has been increasing steadily. There were very few donkeys in 2019, but according to 2023 census they are now over 25 000. This can be attributed to the fact that donkeys are a drought resistant livestock, so it can withstand harsh climatic condition. The other reason can be that farmers are opting for it due to their resistant to droughts, so people are stocking them for drought power. The figure 13 below shows the number of livestock in Mberengwa district in the past 5 years.

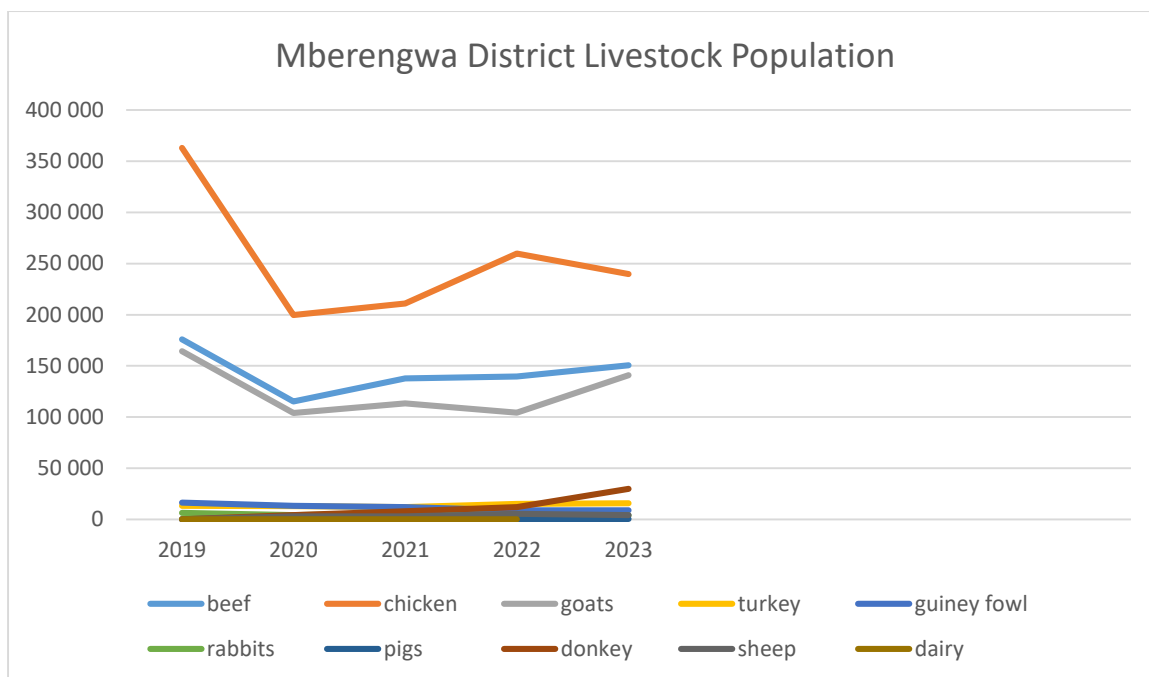
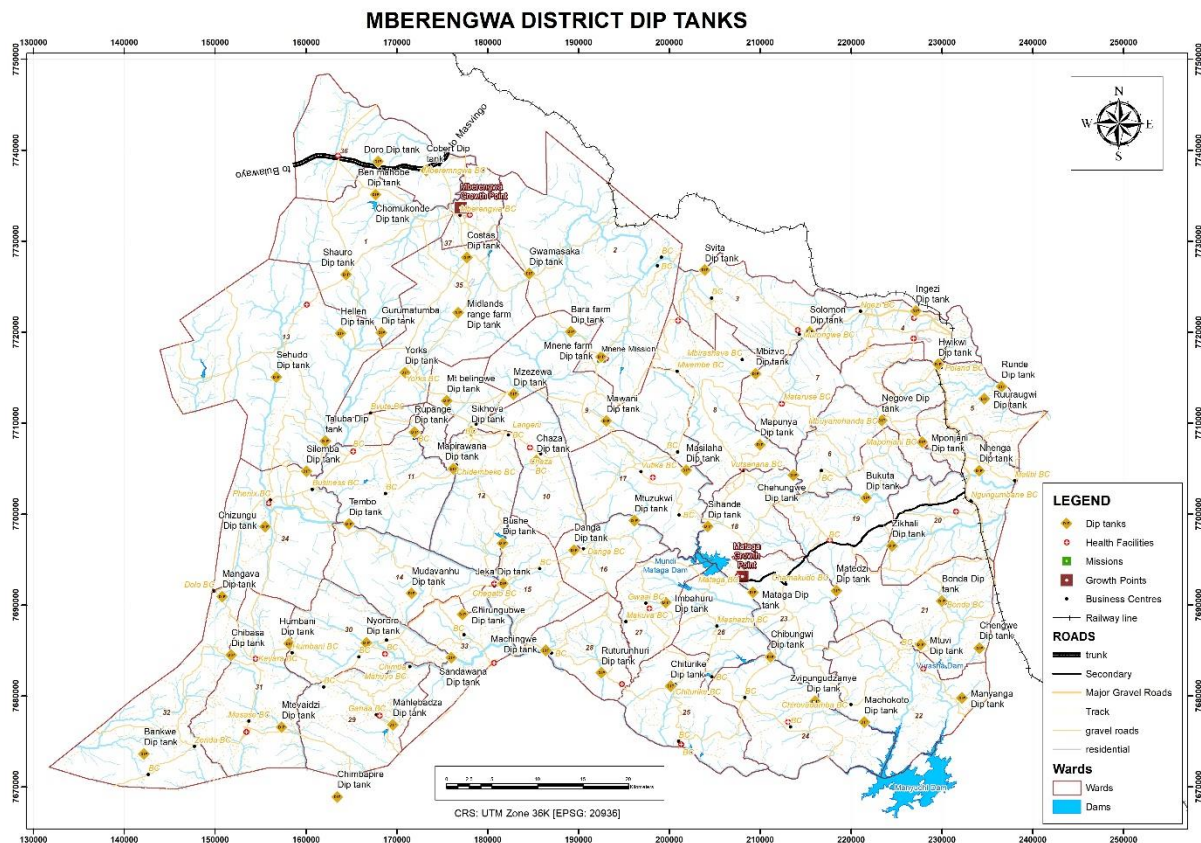


Fig. 12: Livestock population in Mberengwa District (2019- 2023)

Farmers are therefore advised to adopt all forms of supplementary feeding to supplement the poor grazing areas. So far there are 5 hay-making projects in the district, whose aim is to create supplementary feeding for livestock in the district. The grazing areas are further degraded by illegal mining activities and the invasion of evasive species. *Lantana camara* is invading most villages thereby reducing the grazing area. There is therefore need to control evasive species and introduce proper management of grazing areas. The presidential schemes can also include chemicals for dipping so that cattle have regular dipping schedule. If funds could permit, there is need to resuscitate paddocks in the resettlement areas as this will reintroduce managed grazing schemes in the resettlement areas. Through the presidential input programs, farmers are encouraged to grow fodder grasses that are high in nutritive value to supplement cattle feeding. Dipping infrastructure is adequate in several parts of the district but dipping chemicals are however in short supply. On average, cattle hoof about 3-4 km to the nearest water point. The map 10 below shows the distribution of dip tanks in the district.

Map 9: Dip Tanks in Mberengwa Rural District



According to animal census in the district some dip tanks are oversubscribed because they are servicing more than 6000 animals per dip tank. According to the veterinary department in the district, a dip tank should service a minimum of 600 cattle and a maximum of 2000 but some of the dip tanks are servicing more than double the maximum number. There are only seven fully functional animal health centres in the district and 18 satellite animal health centres. The satellite animal health centres are without an office and are serviced by mobile animal veterinary doctors. Some centres such as Sandawana, Bonda, Danga, Mataga, Negove, Utsanana, Mabika and Keyara, need to be upgraded into fully established animal health centres because they are holding high numbers of livestock population. Each of these satellite animal health centres is serving more than five dip tanks and a cattle population of more than 7000. The district is also facing shortage of dipping material hence farmers are encouraged to purchase

own dipping so as to augment government supply. This will make sure that tick borne diseases are effectively controlled in the district.

The other problem in cattle rearing is the quality of cattle breed. The majority of cattle are the indigenous type, which is short and does not produce much beef. This therefore means that this breed of cattle does not give farmers much in terms of return. They fetch very little because of their reduced weight. There is therefore need to improve the breed by either cross breeding with other better breeds so that they have better cattle breed, which can give them better returns on the market. This need to be supported by good grazing schemes that will allow these breeds to survive. It also calls for improved grazing areas by improving the pastures through growing of more nutritious type of grass. Other kinds of interventions that will help to improve cattle quality and production include; artificial insemination to improve the cattle breed, preventing and controlling the disease by increasing vaccination and animal production management to reduce cattle mortality due to diseases, improvement of quality of animal production through construction of mini slaughters construction and establishment of viable and upgraded animal markets.

Other ago-based activities include horticulture, nutritional gardens, Maputi making, apiculture, groundnuts and peanut butter making, and poultry.

12.1.5 Planning Perspective for Agriculture sector

11.1.6 AIM OF THE MASTER PLAN IN AGRICULTURE SECTOR

- *Improve the incomes generated from agricultural activities*
- *Attain food security in the district*
- *Introduce sustainable agriculture that is climate resilient*
- *Attain food self-sufficiency in the district there by reducing chronic food insecurity especially in rural areas*
- *Improve agriculture technology to increase climate resiliency*

12.1.7 Policy Proposals in Agriculture

The district is in ecological region 4 and 5, which receives lowest rainfall averaging 300mm-600mm. This rainfall regime is not adequate to carryout agricultural activities successfully. To compound this are the effects of climate change, which are resulting droughts that is further stifling agricultural activates. The main planning perspective is therefore to mitigate the effects climate change and adapt to low rainfall regimes experienced in the district. The best method to mitigate these harsh conditions is through water harvesting (GOX 2020, ZIMCODD 2022). There is therefore need to build more water bodies that will harvest water during the rainy season and use it to water crops for successful agriculture. The existing water bodies are heavily silted, which therefore call for rehabilitation of these water bodies so that they can hold water for irrigation. More dams can be built on the following rivers, which are some of the perennial rivers but there are no water harvesting along those rivers.

- i) Mwanezi river
- ii) Mwele river
- iii) Ingezi river
- iv) Muchipisi dam ward 2
- v) Chihungwe dan ward 19
- vi) Mahike dam
- vii) Mabika dam
- viii) Mutuvi dam ward 21
- ix) The confluence of Muchindwe and Dovi can also be built a dam that can be used for irrigation and supplying water to Mberengwa Centre.
- x) Water at Buchwa mine pool can be used to irrigate local areas. The advantage is that there is no need for pumping as water can flow by gravity.
- xi) There are also disused mines at Neta and other surrounding areas that collects water that can be used to irrigate surrounding area

Dams that are heavily silted and need scooping include:

- i). Gwavamutangi
- ii). Ruwange
- iii). Scova
- iv), Danga

Dams that are not fully utilised for irrigation.

i). Manyuchi Dam- there is need to plan irrigation schemes around the dam or plan to extract water for irrigation purposes from the dam

ii) Mundi- Mataga- The proposed extension of irrigation scheme should continue so that water can be used to support livelihoods around Mataga. It can irrigate more than 700 hectares of land. There is need to form a green belt around the dam by intensifying agricultural activities that are irrigated from the dam.

People in the irrigation schemes needs to take agriculture as a business so that they fully utilise the land. The 936 hectares of land under irrigation can produce an average of 12779 tons of maize per session which can be doubled to 25558tons if two cropping seasons are adopted. If well managed the area can produce an excess of 33656 tons of maize.

The siltation of most dams in the district is a result of farming practices that are common in the district. There is too much stream bank cultivation, which is causing destruction of wetland. There is need to carefully manage the catchments of these rivers so that we avoid siltation of dams. All farming activities in the river banks needs to be stopped.

Proper farming activities needs to be followed, where farmers give the required 30m leeway for the rivers. The activities of artisanal miners is also exacerbating siltation of rivers and dams. There is therefore need to control activities of artisanal miners so as to curb siltation of rivers and dams.

The low agricultural productivity in the district due to poor rainfall pattern requires adoption of climate resilient agricultural system. Therefore, we propose the following:

- Re organise the scattered settlements into villagised settlement to free more land for agricultural production and also allow proper management of land
- adoption of conservation agriculture in the district.
- Farmers to adopt conservation agriculture for resilient agricultural production.
- Rehabilitation and expansion of irrigation schemes (Mundi- Mataga irrigation, Chimwe irrigation).
- Introduce soil fertility management schemes among farmers where practices such as soil liming and manuring are incorporated in farming to improve agricultural productivity
- Incorporate private sector involvement in agriculture for funding and marketing of agricultural activities especially among small holder farmers.
- Open up more irrigation infrastructure (dams and put more land under irrigation)
- Promote stress tolerant crops for successful agriculture
- All farmers to be trained for conservation agriculture (Pfumvudza)
- Plan for control of erosion through preservation of wetlands, terracing and proper agricultural practices
- Soil erosion mechanisms will be intensified so as to reclaim and restore degraded land
- Introduce Big Data systems in agriculture for product marketing, management of climate change and sharing of agricultural information on where and who produces agricultural products for easy marketing.
- Farmers should be trained for land preservation and agricultural productivity (both communal and resettles farmers).

- Agricultural land should be carefully protected from rampant mining activities and put into irrigation schemes for increased productivity
- Appropriate mechanisation should be introduced to farmers so as to increase productivity (small tractors powered by diesel)
- Formation of agricultural corporation are very important in sharing infrastructure and knowledge
- To ensure food security and improve crop production there is need to improve soil fertility through use of organic and chemical fertilizers
- Improve on agriculture research and extension services so as to improve crop production
- Farmers to adopt modern inputs e.g. improved seeds for improved productivity.
- Farmers need to be financially empowered through linking them to finance and risk sharing facilities
- Farmers to go into intensive farming where they are going to concentrate their inputs on small manageable areas for greater productivity

The anticipated increase in agricultural production through establishment of irrigation schemes through the utilisation of our major dams (Manyuchi and Mundi-Mataga) require establishment of agro-based industries at Mataga Growth Point. The master plan therefore proposes establishment of agro- based industries at the growth point. These include:

- Food packaging
- Beef packaging
- Peanut butter processing
- Amarula processing
- Fish packaging (from Manyuchi and Mundi Mataga)
- Introduce horticulture at irrigation schemes
- Expand Nutritional gardens,

- Apiculture,
- Introduce Poultry Shops.

There is only one Grain Marketing Depot that is located at Mataga Growth Point. The location is in predominantly communal areas. The major crop producers are in the resettlement areas and the farms. There is therefore need to locate this facility close to major producers of agricultural products preferably at Jeka business Centre.

Beef industry can be a strong industry in the district, but cattle population has been experiencing a downward spiral due to diseases and shortage of grazing areas. The master plan is therefore proposing the following;

- Introduce veterinary doctors in the district who will keep strict surveillance on diseases outbreaks. Currently this service is in Zvishavane.
- Introduce artificial insemination to improve cattle breeds
- Increase access to vaccination products in the district. Currently there are no licenced dealers in the district as farmers go to Zvishavane to buy vaccines.
- Increase animal health centres in the district, currently there are only 7 animal health centres. The following centres should be upgraded to animal health centres:
 - Sandawana,
 - Bonda,
 - Danga,
 - Mataga,
 - Negove,
 - Vutsanana,
 - Mabika

○ Keyara,

This will make animal health services accessible to the majority of farmers and help to fight animal diseases that are threatening national herd.

There is dwindling pastures for animal grazing due to expansion of cropping areas and colonisation of pastures by evasive species called Lantana Camara. The master plan is therefore proposing the following:

- ✓ Re organise settlements to create areas for crop growing and grazing
- ✓ Reduce veld fires to protect grazing areas by building fire guards to protect grazing areas from fire.
- ✓ Introduce hay making programmes in communities to supplement feed for livestock
- ✓ Introduce and upscale small livestock rearing as an adaptation measure to the effects of climate change
- ✓ Create small livestock business centres to promote production and marketing of small livestock's like goats, pigs, chicken and rabbits
- ✓ Promote the use of crop residues for mulching to conserve moisture in the dry lands of agro-ecological region 4 and 5
- ✓ Provide cheap mechanisation for hay making in communities (e.g. solar powered)
- ✓ Intensify dipping programmes in the district to prevent diseases outbreaks
January disease
- ✓ Introduce diagnostic centres in the district to quickly detect disease before they outbreaks
- ✓ Research into how to control Lantana Camara to free land colonised by the evasive specie)
- ✓ Promotion of improve livestock breeds that are more adaptable harsh climates of ecological regions 4 and 5 through continued research

- ✓ Introduce animal supplementary feeding schemes in the district to prevent animals from dying of hunger and this also reduces the emission of greenhouse gases from livestock
- ✓ Introduce off farm smart agriculture such as weather index-based crop, livestock insurance and provide climate information services for smallholder farmers.
- ✓ Smart agriculture can also include introduction of water harvesting technologies to harvest water for use in drier seasons of the year.
- ✓ Increase cattle vaccination to control disease
- ✓ Introduce mini cattle slaughtering facilities in the district
- ✓ Introduce milk collection facilities
- ✓ Introduce viable animal markets
- ✓ Introduce livestock upgrading schemes so that the cattle breeds are improved both in beef and milk production so that farmers can sell their quality beef and milk.

12 Mining

12. 2.1 Existing Situation

The unreliable rainfall has made agricultural activities unsustainable as a source of livelihoods and people are turning into mining as a source of livelihood. The district is richly endowed by various mineral resources and people are taking advantage of that to engage into small scale mining. Inhabitants of the district rely much on artisanal mining for a living as they try to take advantage of the rich endowments of the district such as gold, emeralds, chrome, iron ore, tantalite, limestone just to mention a few. A lot of small scale miners are involved in gold extraction in the Northern part of the district and some of the mining activities are not regulated and there is need to formalize these activities in order to benefit local community and the country at large. There are several mining companies that are operating in Mberengwa district, which are mining minerals that include gold, limestone, chrome, lithium emeralds and iron ore. In addition to this, there are small-scale miners dotted around the district. According to Mberengwa Miners Association, there are 728 registered small scale miners and unnumbered and unregistered ones that are operating in the district (GOZ 2024). The district has no ancillary and supporting mining operations as miners go out of the district to process their minerals. This situation is tantamount to exporting of employment opportunities to other cities and towns in the country. If supporting industries were established in Mberengwa, this will see the mining activities contributing more to generation employment for the district. The table 7 below shows the list of established mining activities and their location in Mberengwa district. Map 11 shows mineral deposits in Mberengwa district

Map `10: Mberengwa Rural District Mining Areas

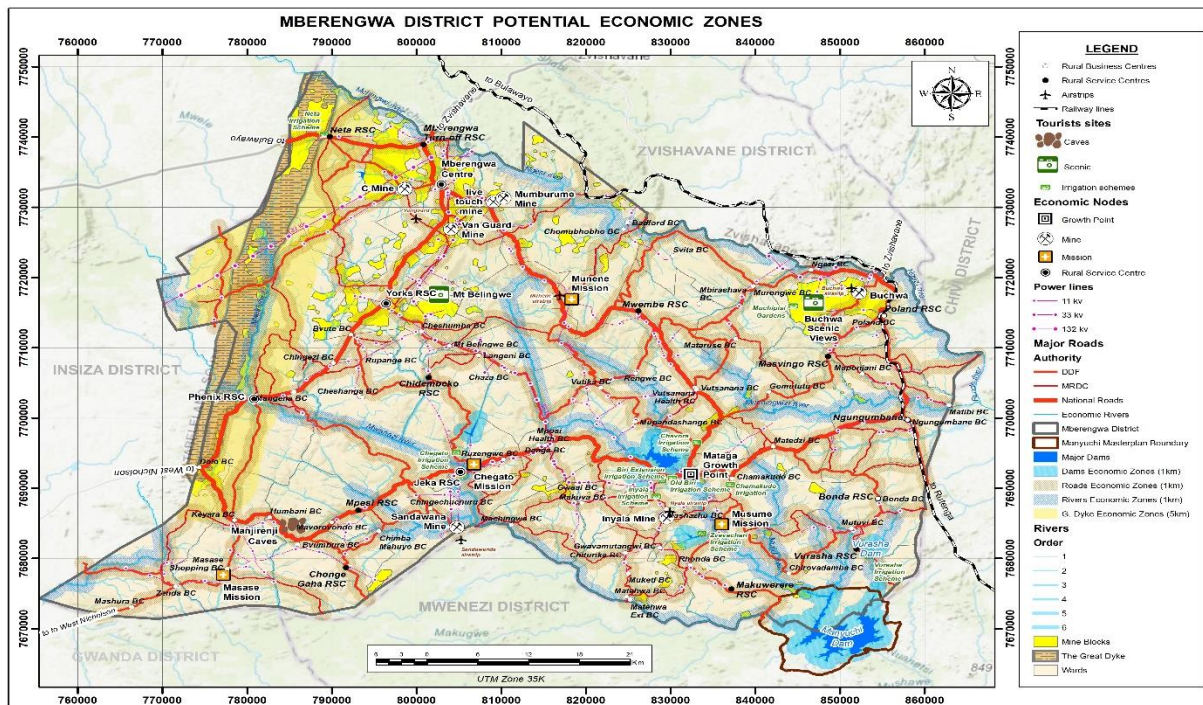


Table 12. Established Mining Activities in Mberengwa District

Mine name	location	Mineral	Status
Naldline	Ward 2	Limestone	Operating
Livetouch	Ward 2	Limestone	Operating
Inyala	Ward 26	Chrome	Resumption stage
C-mine	Ward 36	Gold	Unknown
Sandawana	Ward 33	Emeralds	Disused
Buchwa	Ward 4	Iron ore	Disused
Sandawana Area	Ward 29	Lithium	Not operational

There is also wide spread conflict between mining activities and agricultural activities as miners are invading and destroying farm land. Some miners are going to the extent of mining in important infrastructure such as dams, road shoulders, grazing areas and even in established human settlements. A proper Environmental

Impact Assessment (EIA) should be done before commencement of any mining operation in order to see what are the environmental issues that will be a result of the mining operation in an area. However, most mining operation in the district are accused of operating without an EIA or an environmental management plan and this has resulted in wanton degradation of land. The EIA should show the complete picture of the risks that are associated with the mining activities. These disused mining shafts, which are not rehabilitated are traps to cattle and other livestock and this has been a major cause of concern for farmers who are losing their livestock after falling into these open pits. A lot of miners are also fencing off their claims thereby reducing grazing areas and this has resulted in conflicts between farmers and miner. There is therefore need for a proper cost benefit analysis to see which activity should be given priority after making an assessment of which activity gives more benefits than costs.

12.2.2 Planning Perspective of Mining Activities in Mberengwa District

12.2.3 The major aim of the master plan is to:

- *Build domestic mineral extraction and processing capacity for beneficiation of locally produced minerals,*
- *Develop a service hub for mineral processing for the district*
- *Develop an environmentally sensitive mining industry in the district*
- *Create jobs for the district by establishing industries that are associated with mining*
- *Enhance locally produced construction materials need to be undertaken.*

12.2.4 Policy Proposals in the Mining Sector

For the mining sector to meet the vision 2030, a number of measures need to be put in place and these include:

- Building domestic mineral extraction and processing in the following minerals
 - ✓ Gold

- ✓ Lithium
- ✓ Chrome,
- Developing a service hub for mineral extraction and processing for the district
- Enhancing locally produced construction materials need to be undertaken.
- Promote private sector participation in exploration, mining and processing, and also in value addition of mining products to create more jobs for the district.
- Introduce quarrying for construction materials (sand, stones and clays) are predominant in District. This will also create jobs for the young generation and other active population of the District.

The rich endowment of minerals in the district needs to be benefited by the majority of people in the district. The common people must benefit from the natural endowments of the district. At present the industry is characterised by a lot of chaos, in terms of conflicts between artisanal miners and the administration of the district. There is also conflict between farmers and miner, where farmers are crying for their grazing areas that are being fenced off by the miners. There is also no beneficiation of minerals as miners are exporting unprocessed minerals outside the district and beyond. The master plan is therefore proposing the following in the mining sector:

- Introduction of industries that will process the district minerals at Mberengwa Centre.
 - E.g., Chrome processing industry and Gold Processing Industry, priority will be to establish Gold Service Centres Across the district so that the mining and processing of gold can be done easily in the district
 - Formalise Artisanal Miners through syndications so that artisanal miners, who amounting to over 2000, can be mainstreamed in the gold mining industry.

- Small scale chrome miners are playing a very important role in mining of chrome, strengthening this sector will allow continuous feed of chrome to the proposed chrome smelters
- Battery manufacturing industry
- Cement manufacturing

This will help to create jobs in the district, hence reducing rural urban migration. The establishment of these industries will also help to create other downstream industries.

The miner farmer conflict that is currently being experienced in the district can be solve by reaching an agreement for core-existence between the farmers and miners. There is need to undertake a land-use analysis (cost-benefit analysis) for current land use versus the proposed mining activities and use the analysis, this will reduce conflicts between the current uses and the proposed mining activities. Miners are also discouraged to fence-off only the area being mined so that they can leave other areas for animal grazing. The miners are also encouraged to rehabilitate their mine upon completion of their mining operation. This will create areas that are safe for animal to graze.

There are also conflicts between mining stakeholder as issues of mining boundaries and mine barons are common in the district. The ministry of mines and the local authorities should deal effectively with issues of demarcation of mine claims to reduce conflicts

The issue of artisanal miners is a complex one which requires the local authority, the ministry of mines and the community to deal with carefully. These miners are mining everywhere and this is threatening the environment and even the infrastructure. These artisanal miners need to be registered so that their operations are recorded. When they are registered this will make it possible to manage their operations and endorse the environmental laws. The present situation where they are panning rivers, near roads and even in dams is not sustainable. The ministry of mines and the local authority need to come up with policing services that will

keep strict surveillance on the operations of artisanal miners. A proper register of artisanal miners will help to collect a levy that will help the local authority and the ministry to administer activities of artisanal miners. This will also help to enforce measures that will protect the environment.

Artisanal miners are finding it difficult to access important machines to help in their mining activities, the master plan therefore proposes the establishment of mining fund that will help artisanal miners to buy mining equipment. This will boost production in the sector.

The master plan therefore proposes enforcement of programs for orderly decommissioning, rehabilitation, restoration, and utilization of mining sites after an operation so as to restore the environmental damages that were incurred during the period of mining. In areas that are mined metal it is encouraged to develop a mine drainage and leaching of contaminants plan associated with mining metals to avoid contamination of rivers, streams and water bodies. This will reduce the environmental impacts of the mining activities in the district. All new mining activities to develop and implement land-use master plan concerning the proposed mining activities so that their environmental programmes can be integrated into the mining programmes for sustainable mining.

Community seems to be left out from benefiting from the mineral resources that are endowed in the district. There is therefore need to create schemes that will allow communities to benefit from resources that are in their areas. Community share schemes need to be activated, where the mining sector can help to develop communities. The district has a lot of roads that are damaged mainly by vehicles that are into mining activities. The master plan therefore proposes establishment of community ownership schemes that result in miners investing in rehabilitation of roads, building of clinics, rehabilitation of irrigation schemes, and building of school infrastructure. These interventions will help to uplift communities that are endowed with resources for extraction.

12.3 Tourism and Hospitality Industry

12.3.1 Existing situation in Tourism Industry in Mberengwa

Although Mberengwa district has no active tourism activities there is a great potential for the sector due to the existing sites, and infrastructure that can be used for tourism. These sites include: Manuchi dam, Buchwa Mountains, Mberengwa Mountains, Mundi-Mataga dam and Manjirinje cave. The development of tourism in communities is the thrust of Zimbabwean government since 1990 to increasing national tourism competitiveness at local level, support poverty alleviation initiatives, increase environmental conservation, and preserve local cultures and heritage. Community based tourism (CBT) is widely accepted as a form of socially responsible tourism in which the activities of visitors are controlled and organised by the local communities (GOZ 2017). CBT enables tourists to discover local habitats and wildlife, celebrate local cultures, rituals and wisdom, and interact with local people. The community is central in delivering successful CBT products. Although Mberengwa district was not included in the first projects that promoted community based tourism activities, it has a great potential because of the above mentioned features that can be utilised for community tourism. Zimbabwe has been receiving a fair share of tourist from the neighbouring countries such as South Africa, Zambia, Malawi and Botswana. At some time, the visitors once peaked to over 2 500 000, with visitors from South Africa dominating (ZEPARU, 2013). The district therefore needs to tap in from the number of tourist that are arriving in the country by putting in place tourist services. This calls for massive publicity campaigns that will put Mberengwa tourist facilities on the world tourism map. So far there is very little that is being done to publicise the available tourist sites and also make available what the district can offer in the tourism industry. There are a lot traditional dancing groups, cultural sites and leisure sites that can be put in place to attract visitors to the district. Buchwa mine is one of the sites that is offering very good scenic views but nothing has been exploited to that effect (see figures 2 and 3 below)



Fig. 13&14 Scenery from Buchwa Mountain Range

Manyuchi dam has long been planned for a lot of leisure activities that include game viewing, boat cruising, hotels and chalets but nothing has been put in place and the dam is being underutilised. The following site are very good sites for tourism activities that needs to be utilised and drive the tourism industry in Mberengwa district.

Manjiribwe Caves

Manjirenji carves are located in ward 30 Vukomba Mberengwa West under Chief Mahlebadza. The caves have flowing streams inside; granary and it is believed it has some drawings which are of strong cultural and historic significance. It is also believed that a snake and leopard are usually seen at the entrance, which is strongly associated with the traditional spirituality in the area. The cave has therefore strong traditional and spiritual significance. Manjiribwe caves are also a burial place for the Mudavanhu Chieftainship

Buchwa Mountains

It is located in ward 4 Zvomukonde Mberengwa East under Chief Mataruse. It is popularly known for its scenic view and heart shaped pool. The pool is believed to be a sacred place and culture procedures should be done before entering the place. The place is good for tourism facilities such as mountain hiking and scenic views.

Mundi-Mataga Dam

This dam was Commissioned in 2004 and it is located in ward 18 Mataga, Mberengwa South under Chief Mataga and Chief Chingoma. Mundi-Mataga

Dam is the largest inland dam in Mberengwa which is untapped. It has great opportunities such as ecotourism sites, fishing, boat cruising and aqua culture.

Manyuchi Dam

It is shared by ward 22 Nyamhondo³ and Ward 24 in Mberengwa South under Chief Nyamhondo. Manyuchi Dam is at the boundary of Mwanezi District and Mberengwa therefore, it is shared by Mwanezi and Mberengwa. It has great opportunities such as ecotourism, boat cruising and fishing.

11.3.2 Planning Perspective for the Tourism Industry

12.3.4 Aim of the Master plan in Tourism Industry

The aim of the master plan in tourism is to develop smart tourism sector in the district

12.3.5. Policy Proposals in Tourism

The tourism industry is a very lucrative sector to generate revenue for the district. However, the growth of such industry can be stifled by the condition of district roads. The master plan therefore proposes the following:

- Intensive marketing of tourist attraction sites in the district (exhibitions, websites, fliers, TV and radio)
- Rehabilitation of district roads and tarring of some of the roads so that tourists are attracted to the district
- Establishment of a community Museum at Manjiribwe Cave in ward 30
- Promote tradition craft centres at the museum were local sell their tradition crafts
- Development of Mundi-Mataga Dam to a resort, water sports and fishing activities
- Development of Manyuchi dam resort area, water sporting and game reserve
 - Development of hotels
 - Development of lodges, chalets and holiday accommodation

13.0 Police and Policing in Mberengwa District

13.1 Existing Situation in Mberengwa Police

Generally, the district is showing an upward trend in reported crimes. The crime hotspots in the district include; Marongwe Business; Ngungumbane business Centre, Sandawana mine, Mataga growth Point, Vutika Business Centre, Bonda business Centre; Matchwa Business Centre and Yorks Business Centre. Sandawana mine and the surrounding areas are proving to be a major crime spot in the district, as it is contributing more than 35% of the crimes committed in the district. Most of the police officers are housed outside the police camps mainly because of lack of housing at police stations. Buchwa mine is in serious housing shortage as there are no housing schemes introduced at the centre. Police is still using the old mine infrastructure Sandawana is reporting increasing cases of crime mainly because of the discovery of minerals such as lithium, which is causing a lot of conflict in the community. Figure 14 below shows trends in crime rates in the district.

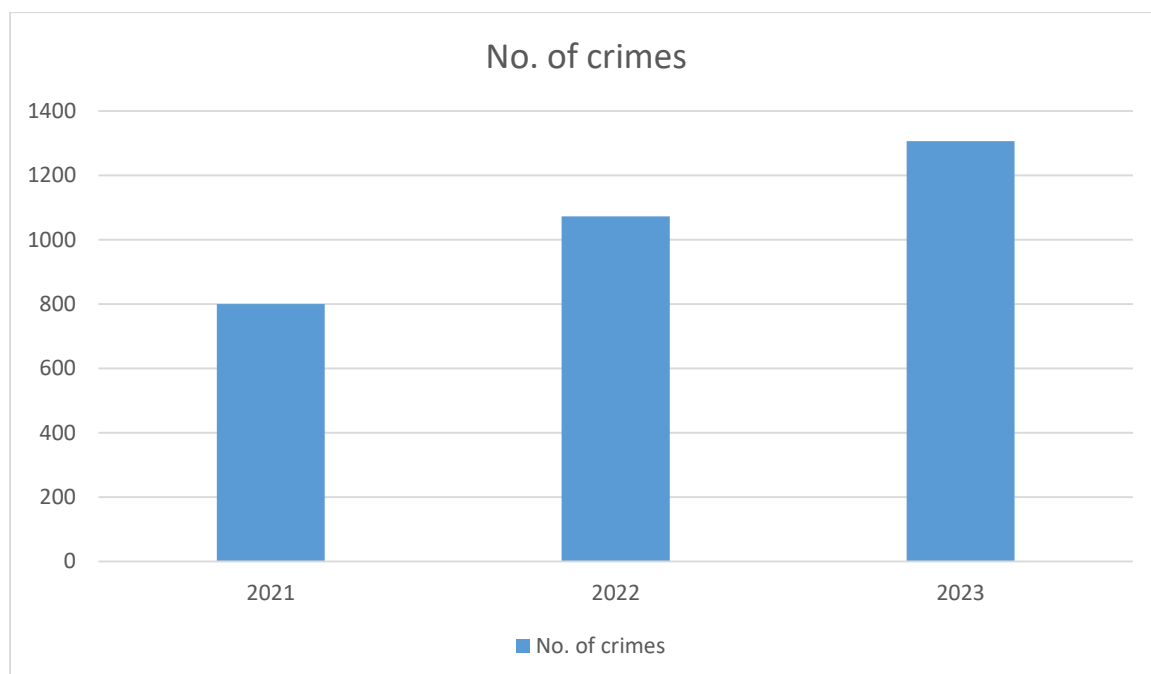


Fig. 15: Crime Rates in Mberengwa District

The district is not fully staffed in terms of police deployments, but they are complimented by police constabulary units and neighbourhood committees that are provided by the communities. Problems of fuel, transport, computers also compound the policing problems in Mberengwa district. For example, a police station at Buchwa has no reliable vehicle and this is stifling their operations. There are also other bordering communities like Svita and Ngungumbane that are at pains in accessing police services, which calls for establishment of police post in these areas so that such services are accessible in these areas.

13.2 Planning Perspective for Police in Mberengwa District

13.2.1 Aim of the Master Plan in Police

The major aim of the master plan in police sector is to create a peaceful district where people and business can carry out their duties without fear. This will create a good environment for investment and development.

13.2.3 Policy Proposals for Police in Mberengwa

There is a general increase in crime rates in Mberengwa district and the crime hot spots are:

- Marongwe Business;
- Ngungumbane business Centre,
- Sandawana mine,
- Mataga growth Point,
- Vutika Business Centre,
- Bonda business Centre;
- Matehwa Business Centre
- Yorks Business Centre.

There is therefore need to establish police post at these crime hot spot centres so that the district can curb the increase in crimes in the district. This will create peaceful environments that are conducive for investments. Yorks centre is a very active mining area, mainly dominated by artisanal miners and this is likely to cause an upsurge in crime cases. There is need for a police post at Yorks business centre. All rural Service Centres to have police substations so that effective peace and tranquilities will prevail. Establishment of police post will protect people and property, which will lead to more investors coming. Bordering communities such

14.0 Infrastructure for Economic Development in Mberengwa District

14.1 Roads

14.1.2 Existing Road situation of Road infrastructure

Mberengwa RDC is a very rich district which is endowed with a lot of minerals and other economic activities that require a good road network for effective utilisation of these resources. The district road network can be categorised into high, medium and low density roads. The roads are predominantly gravel roads. The table 13 below shows how roads in Mberengwa district are constituted.

Table 13: The Major Roads in Mberengwa

NAME OF ROAD	KM	STATUS
West-Nicholson	51.5	25km is surfaced and the remainder is gravel road
Zvishavane – Rutenga	73km	45 km surfaced the rest is gravel
Zvishavane - Mbalabala	18km	surfaced
Mberengwa - Mataga	71km	5km is under construction through ERRP and the remainder is at evaluation stage
Ngungumbane-Mangava	111.4km	35km is tarred (but its badly damaged and needs repair) the rest is a gravel road. Recently part of the tarred road was surfaced through ERRP

Table14: Classification of Roads in Mberengwa Rural District

Type of Road	Length (km)
Primary Roads	390
Secondary Roads	1076
Total	1466

Source Survey 2024

High density roads constitute the majority (390km), which represent 53.7% of the total length of the road network. The medium and low density roads constitute 10.8% and 35.4% respectively. These roads connect to very important and vibrant economic centres of the district, which include Sandawana mine, Inyala mine, C mine, the growth point, irrigation schemes at various centres in the district, and rural service centres. The conditions of these roads are in a very deplorable state with some of them being damaged to the extent that they are now causing an unbearable cost of doing business. Poor road infrastructure can cause a lot of overheads in terms of wear and tear on the vehicles, which discourages investors. The state of damage can also cause road users to use long alternative roads, which also increase the cost of doing business. The majority of the roads are not trafficable due to their state of disrepair. Most of the roads are not passable and hence need rehabilitations. To compound this bad state of roads, is the state of bridges on these roads. Most of them are low-lying and very narrow, which make them impassable during rainy season. There is need to upgrade these bridges so that there is improved connectivity in the district. Figure 15 below shows the composition of roads that are impassable in Mberengwa district.

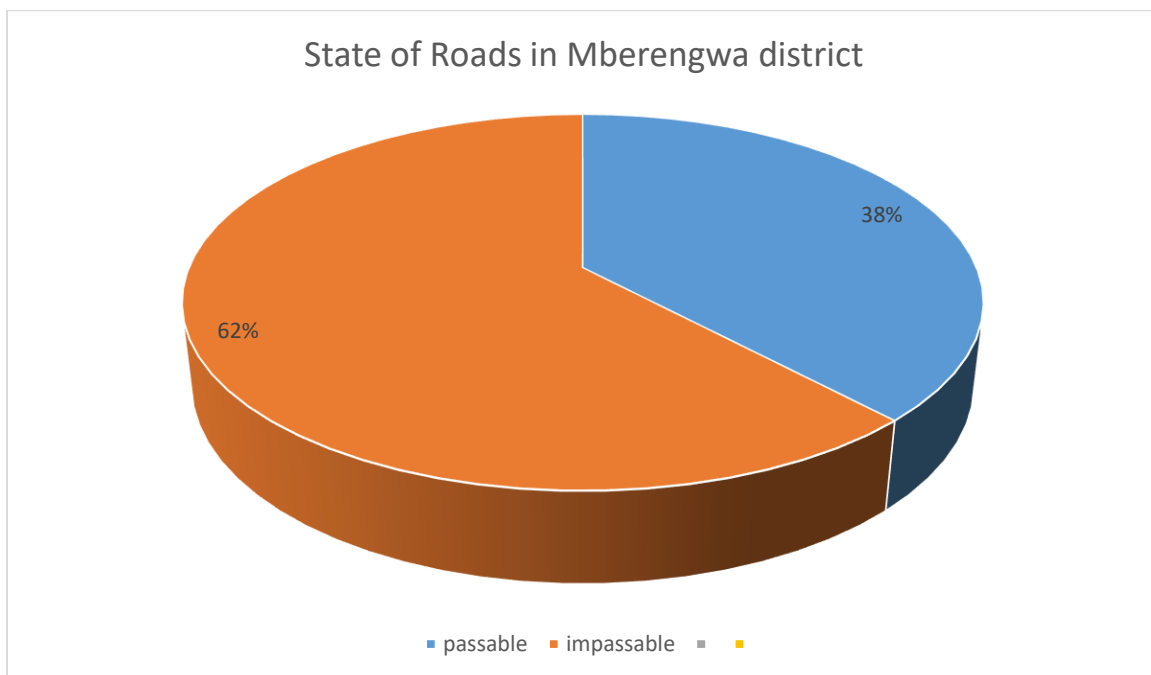


Fig. 16. State of Roads in Mberengwa District.

Most of the roads need gravelling but some have swept away bridges which needs to be repaired. Others have damaged structures that needs to be repaired. Some need to be re-done completely eg. Vutsanana-Ingezi road and Membwe-Chimimwe road because they are heavily damaged. The tarred road from Mataga growth point to Ngungumbane is in very bad state, which needs resurfacing. This road is the shortest route to Beit bridge border post but its state makes people to use alternative roads, which are longer and hence expensive.

Map 13 below shows the road network in Mberengwa Rural District Council (including informal ones)

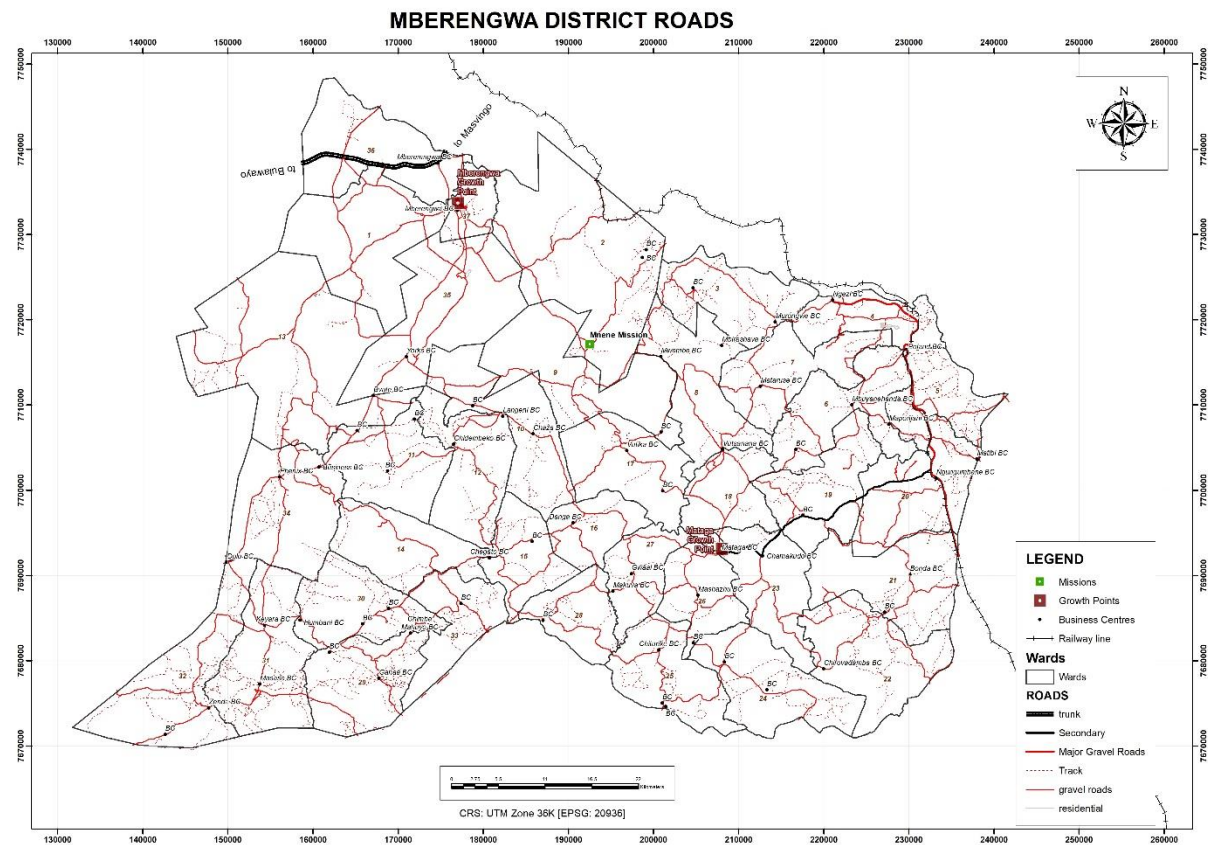


Fig:17 Roads that need to be tarred in Mberengwa District

Mberengwa – West Nicholson	- 26.5 km
Zvishavane- Rutenga road	- 37km
Mberengwa –Matage	- 66km
Ngumbane Mangava Road	-79km

There are also damaged bridges that needs rehabilitation and the table below shows the bridge name, the road and what needs to be done.

Table 15: Bridges that Need to done in Mberengwa District

Bridge	ROAD NAME	RIVER	STATUS/ COMMENT
Jeka Tandavari	Ngungumbane - Mangava	Mwanezi	The bridge is a make-shift
Phoenix dam Natbridge	Mwanezi Keyara road	Mwanezi	The bridge needs completion
Mambori	Ingezi - Vutsanana	Mambori	The bridge needs construction

14.1.3 Planning Perspective for the Road Network in Mberengwa District

14.1.4 Aim of the Master Plan On Roads in Mberengwa

The major aim of master plan on roads is to:

- *create a road net that will effectively serve the business, and communities of Mberengwa for effective business and social up being.*
- *Create accessibility to all areas in the district that will bring about inclusive development.*

14.1.5 Policy Proposals for Roads in Mberengwa District

The road network is very important in driving economic development; hence their status is very critical in influencing economic development. A bad road network

makes it very expensive to do business because they cause a lot of wear and tear. The roads in Mberengwa district needs to be rehabilitated so that they cause little of no wear and tear on vehicles. A good road network makes it easy to bring goods and services to such areas. A good road network will greatly contribute to the development of Mberengwa district. The interconnection of roads between urban, Rurban and rural areas, resettlement areas and other centres in the district will easing the movement of goods and services and also promote trade and easy access on agricultural production and market.

The roads in Mberengwa district can be described as follows:

- The roads are mainly gravel with small portions of tar
- Insufficient and irregular carriageway widths. They are very narrow to allow heavy vehicles to pass.
- Existing gravel road with poor riding quality They are very corrugated because heavy use
- Absence of cross drainage structures extensive damage to the road infrastructure, which is causing continuity of the roads. Traffic is using road shoulders
- Absence of proper road signs, and safety features

The master plan therefore is proposing the following on the road network:

- Regravelling of all roads in the district as they are all in bad shape.

Preference should be given to the following roads:

- Vutsanana-Ingezi road
- Membwe- Chimimwe road.
- Mataga to Ngungumbane
- Roads that link major economic centres such as mining areas and irrigation schemes need to be tarred and these roads include:
 - Mberengwa Centre to West Nicholson via Sandawana mine
 - Mberengwa Centre to Mataga via Yorks
 - Mberengwa Centre to Mataga via Munene
 - Mataga to Zvishavane via Ngungumbane
 - Mataga to Masase

- Mataga to Sandawana via Danga
- There is need to put more road signs along all roads to warn travellers of sharp curves, uphill, narrow bridges, distance to different centres.

Bridges in Mberengwa district are characteristically narrow and some are damaged which require repair. The master plan therefore proposes repairing of the following Bridges in Mberengwa district;

- Jeka Tanadavari Bridge on Mwanezi river along Ngungumbane – Mangava Road.
- Phoenix dam bridge on Mwanezi river along Mwanezi- Keyara road.
- Mambori on Mambori river along Ingezi –Vutsanana road

To facilitate utilisation of Manyuchi Dam as a tourist and leisure facility there is need to build new bridges at:

- Mundi River crossing on Musume to Firidzi road
- Mwanezi river crossing on Musume to Firidzi road
- According to the Manyuchi Dam masterplan there is also need to create 4 crossing points along Manyuchi river so that tourist facilities on and along Manyuchi dam can be accessed and these crossing points are in form of bridges.

14.1.5 Railway Transport

Railway system in the district is such that it does not service the major economic activities in the district. The district has several mining areas that include Inyala, Sandawana, C-Mine and several small scale mining claims but these areas are not connected to the rail system. This makes the business in the district to rely on expensive road transport system. The over reliance on road transport system in the district has caused extensive damage to the road network in the district because huge trucks are used to transport goods to and from mining areas. The use of railway system will reduce the amount of damage that is caused by use of haulage trucks. There is need to connect the growth point to railway network

because Mataga growth point is housing the Grain Marketing Board of the district, hence connection to the railway system will enable affordable transportation food in and out the district. The district is always in food deficit, which calls for transportation of food from other centres. This mode of transport will allow food to be sold at cheaper prices. Centres in the southern areas can be connected using the Ngungumbane line, which can connect Mataga growth point, Inyala Mine, and Sandawana Mine. Mataga is also an areas dominated by agri-business activities, hence the provision of railway system will allow people in the irrigation areas to sell their products to other centres outside the district. The northern centres can be connected Zvishavane side, at Oreti. This is shorter as it will only need 91km of rail to connect to the chrome mining fields at Neta and the surrounding mining areas.

14. 1.6 Policy Proposals for Railway Transport

The major aim of the master plan on rail transport is to:

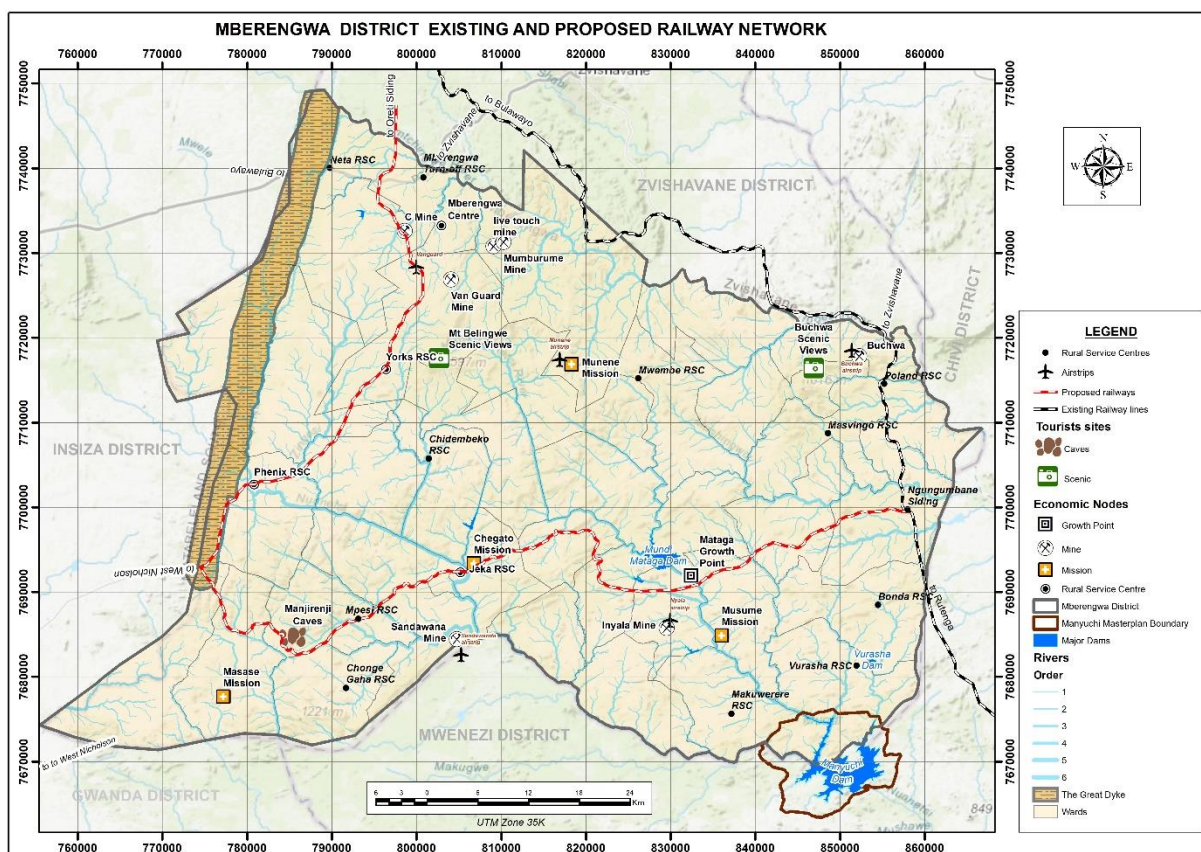
- *Connect all the major economic centres in the district with cheap railway transport for sustainable business.*

A good railway network is key to the growth of domestic, regional, and international trade as it connects all major economic centers and provide cheap transport system. It provides transport services for bulk raw materials, finished goods, and passengers. In addition, a good railway network also eases the burden on the road networks as well as reducing the costs of transportation of goods and services. However, the Zimbabwean rail network has experienced a number of challenges, which include aging of track infrastructure, insufficient ballast, rail wear, lack of spare parts, deteriorating earthworks, and obsolete rail signalling and communications systems. The freight carriage has therefore fallen from a peak of 18 million tonnes in 2007 to current averages of 3 million tonnes per annum. This means that the transport system in Zimbabwe is now predominantly road and this is causing unbearable costs on the maintenance of road network. It is therefore prudent to have the rail system resuscitated so that the industry and the commuting public can enjoy cheap transport system. Mberengwa district is not spared from these national problems as it is experiencing a dearth in rail transport system. The problem in Mberengwa district is compounded by the fact that the district has not developed a railway system that connects to the important economic activities of the district. The major mining areas are outside the railway transport system hence they are heavily relying on road transport.

The master plan is therefore proposing the following:

- ✓ Along term plan railway system that link the all mining activities in Neta, Sandawana, Inyala, C-Mine
- ✓ The new railway network into Mberengwa district should start from Loreto in Runde district to join the Ngungumbane railway line via Neta, C-Mine, Sandawana, Inyala Mine and Mataga Growth Point.
- ✓ Up-Scale Private Public Partnerships investment in railway infrastructure so as to speed up the construction of railway network.
- ✓ The whole railway line should be electrified to enable signalling and use of electric powered locomotive engines.
- ✓ Establish Service Level Agreements with these mines and other productive centres such as Grain Marketing Board so that the national railway will provide a reliable service to them.
- ✓ A good railway network will ease the way of doing business

Map14: Proposed Railway line in Mberengwa District



14.2 Water

14.2.1 Existing Situation

The water situation in Mberengwa district is very dire mainly because it is in agro-ecological regions 4 and 5, which receives an annual rainfall ranging between 450mm- 650mm. This rainfall regime does not help much in a predominantly agro-based based economy of the district. There is therefore need to adopt water harvesting techniques that will store water for use in the district. Currently there are four major dams in the district and Mundi-Mataga is the largest inland dam in the district with a capacity of 38 827 mega litres. Other dams include Manyuchi, Chimwe, Gwavamutangi, Biri, Vurasha, Zvavachari and Makuva. Table16 shows major dams, their location, size and agricultural activities around the dam.

Table 16: Major Dams in Mberengwa Rural District Council

Dam	Capacity(mega litres)	Location	Activities	Capacity to Irrigate(ha)
Mundi-Mataga	38827	Ward 16	Irrigating Biri, Inyala, Chemakudo and Chaora irrigation schemes	737
Biri	2300	26	Old Biri irrigation scheme	117
Vurasha	2200	22	Vurasha irrigation scheme	27
Gwavamutangi (weir)	unkown	26	Supply water at Mataga growth point	Weir
Zvavachari	3500	26		12
Mukuva	unknown	28	Makuva irrigation scheme	6
Chimwe	6416	11	Chimwe and Chegato schemes	64
Manyuchi	No irrigation	22	No irrigation scheme	No irrigation
Total				951

There are other small dams, which are largely in form of weirs whose capacity is not known and these include: Mponjani dam, Zikali. Bonda; Imbahuru; Gwehanga; Murongwe; Mbizvo; Chipinda; Danga; Vurayai; Mapunya; Mubaiwa; Mudzidzi and Chiwara. These small dams are only used to irrigate small gardens and for animal drinking. There are also water bodies that were created as a result of mining activities in the district. At Neta, the disused mines have been collecting water that is used to irrigate Neta Irrigation Scheme. Similar facility is lying idle at Buchwa mine, were a disused mine has collected water with a capacity to irrigate over a 1000 hectares of land.

14. 2.2 Boreholes in Mberengwa District

Most of the rural communities are being serviced by boreholes that are drilled in partnerships with local authority, the government and non-governmental organisation. There are over a 1000 water points in the district, which includes schools, clinics and villages. However, the distribution of boreholes in the district does not allow all people easy access to clean water. In most cases three villages share a borehole and in some extreme cases for example in ward 37, a population of 1683 is sharing only 7 boreholes (Zimstat 2022, 2012). There are also high yielding boreholes such as those at Mahole, Zherekezhe and Gomututu, which are estimated to have a capacity to irrigate a total of 1000ha but they are underutilised at the moment because there is no irrigation infrastructure near them. These boreholes have been surviving the most severe drought ever since. These boreholes can be used to start small irrigation schemes that can improve food security in the district. The map 7 below shows the boreholes that are in Mberengwa district.

Map 17: Distribution of Boreholes in Mberengwa Rural District Council

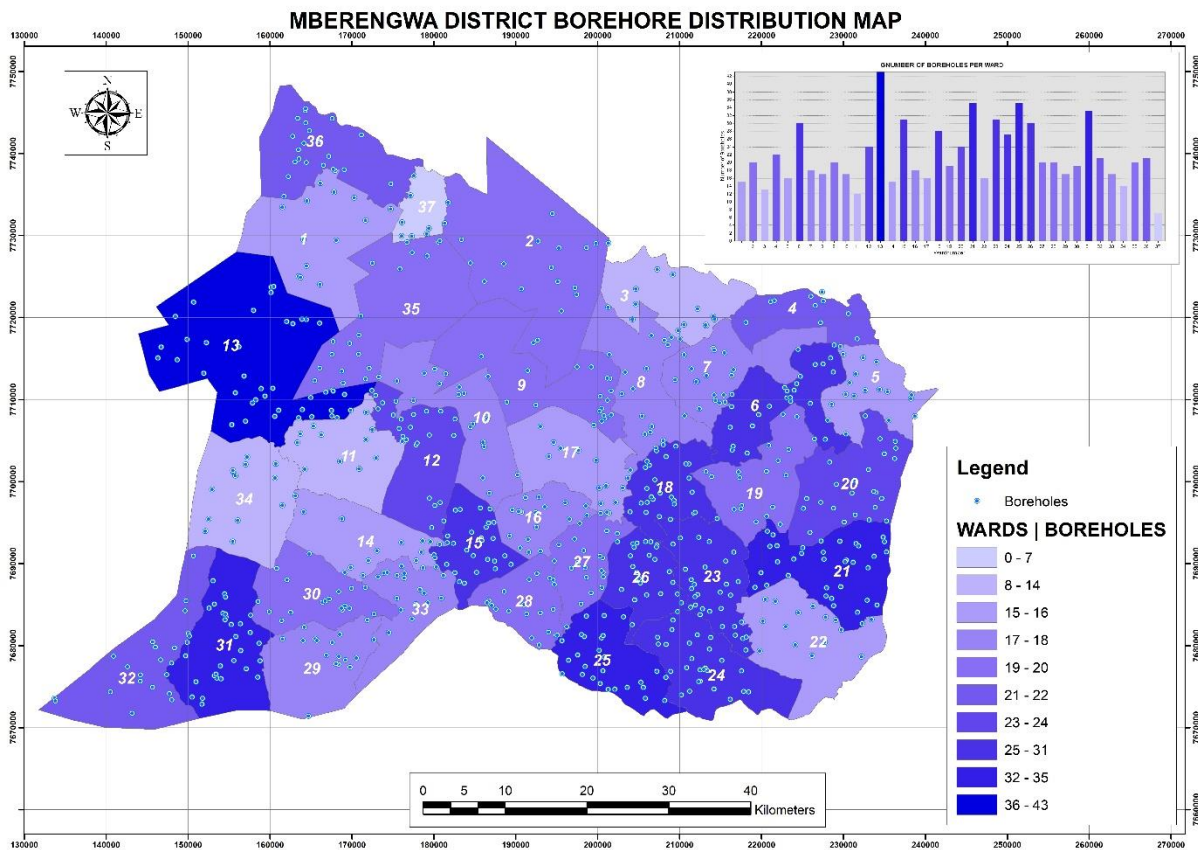


Table 17 Borehole distribution in the district

Borehole Owners	Number of Boreholes
Business Centre	70
Church	7
Communal	1529
Primary Schools	75
Secondary Schools	53
Health centres	31
Early Childhood Development	3

14.2.3 Dam Siltation.

Huge efforts have been done in Mberengwa district to build water bodies that can harvest water during the rainy season for use in drier periods. However, these

water bodies' life span is threatened due to poor catchment area management, which is causing heavy siltation in these dams. The siltation is in turn threatening the viability of agricultural activities around these dams. For example, in Mberengwa East, the following dams need scooping to remove silted sand; Zvematobwe; Chipinda, Chiwara, Bayayi, Mponjani, and Murerezi. While all these dams need rehabilitation, there is shortage of equipment to carry out the scooping exercise. The rural district council does not have such equipment. The available earth movement equipment is on high demand to rehabilitate the road network that is heavily damaged and impassable. The fleet has also been affected by lack of fuel to do the road rehabilitation, which makes it difficult to engage in other activities such as dam scooping. There has been some illegal mining along most rivers in Mberengwa and this has been a chief cause of dam siltation. The illegal mining activities need to be controlled in order to control the siltation in these water bodies.

14.2.4 Water situation at Mberengwa Centre and Mataga Growth Points

Mberengwa centre is a fast growing rural service centre which is now comprising of over 2000 houses, a district hospital, a prison, a primary school a secondary School and several government offices. The centre has now outgrown the Mataga, which is a designated growth point. However, the water situation at the centre is very dire. Residents are experiencing long hours of water rationing due to water shortages. The centre is serviced by only 3 boreholes with a total capacity of delivering 28.7 cubic metres per hour. The centre does not have a water treatment plant or a sewer treatment system. It also requires a more reliable water source in form of a dam with the right capacity. Residents at Mberengwa Centre are experiencing a severe water rationing as the system cannot manage to satisfy the demand. Most of the houses at the centre are using Blair toilets because of lack of water and this is exposing them to disease outbreaks. Figure below shows the residents at Mberengwa centre queuing for water at the council offices.



Fig: 18: Water queues at Mberengwa Centre

The situation is not any different at Mataga growth point, where water is being rationed for a long time. The water treatment plant at Gwanamutangi dam is failing to supply clean water as it is small and is overwhelmed by demand. People are relying on boreholes and open wells. The dam has a capacity of only 1000 mega litres and this is not enough to meet the demand at Mataga growth point. The water shortages at Mataga growth point is perennial despite the existence of a very large dam inland just close by. The Mundi-Mataga dam is the largest inland water body in the district with a capacity of 38 827 mega litres. The dam is only used for irrigation of the Biri Extension irrigation scheme as there is no water treatment plant at the dam to clean water for domestic purposes at the growth point. The Gwavamutangi dam is only a weir hence too small to supply the Mataga growth point with safe drinking water.

Access to water is a very important issue as we drive towards upper-middle class economy. The government thrust in the NDS1 is to improved water supply by increasing the proportion of the country's population using a secure, potable drinking water. The target is to increase access to potable water from 77.3% to at least 90% by 2025 and water storage capacity from the current 15.423×10^6 mega litres to 16.979×10^6 mega litres by 2025. (GOZ 2020)

14.2.5 Planning Perspective for Water in Mberengwa District

14.2.6 Aim of Master Plan on water

The aim of master plan in provision of water is to:

- *Provide universal and equitable access to safe and affordable drinking water for all*
- *Improve the sanitation and Hygiene of the district through good access to water*

14.2.7 Policy Proposals on Water in Mberengwa District

Mberengwa district is in ecological region 4 and 5, which are regions characterised by low rainfall. The district therefore need water harvesting infrastructure to store rain water. The district therefore requires massive construction of dams for expansion of irrigation services. There is need to expand dam construction programme so that water infrastructure is in every ward. This will allow everyone to participate in irrigation programmes and their will a better way to fight food security and poverty alleviation. All perennial rivers should have a dam that will irrigate surrounding communities. The following rivers can therefore be considered for dam and irrigation infrastructure:

- Ingezi river, Mwanezi river, Mwele river, Muchingwizi

14.2.8 Dams for sustainable Agriculture

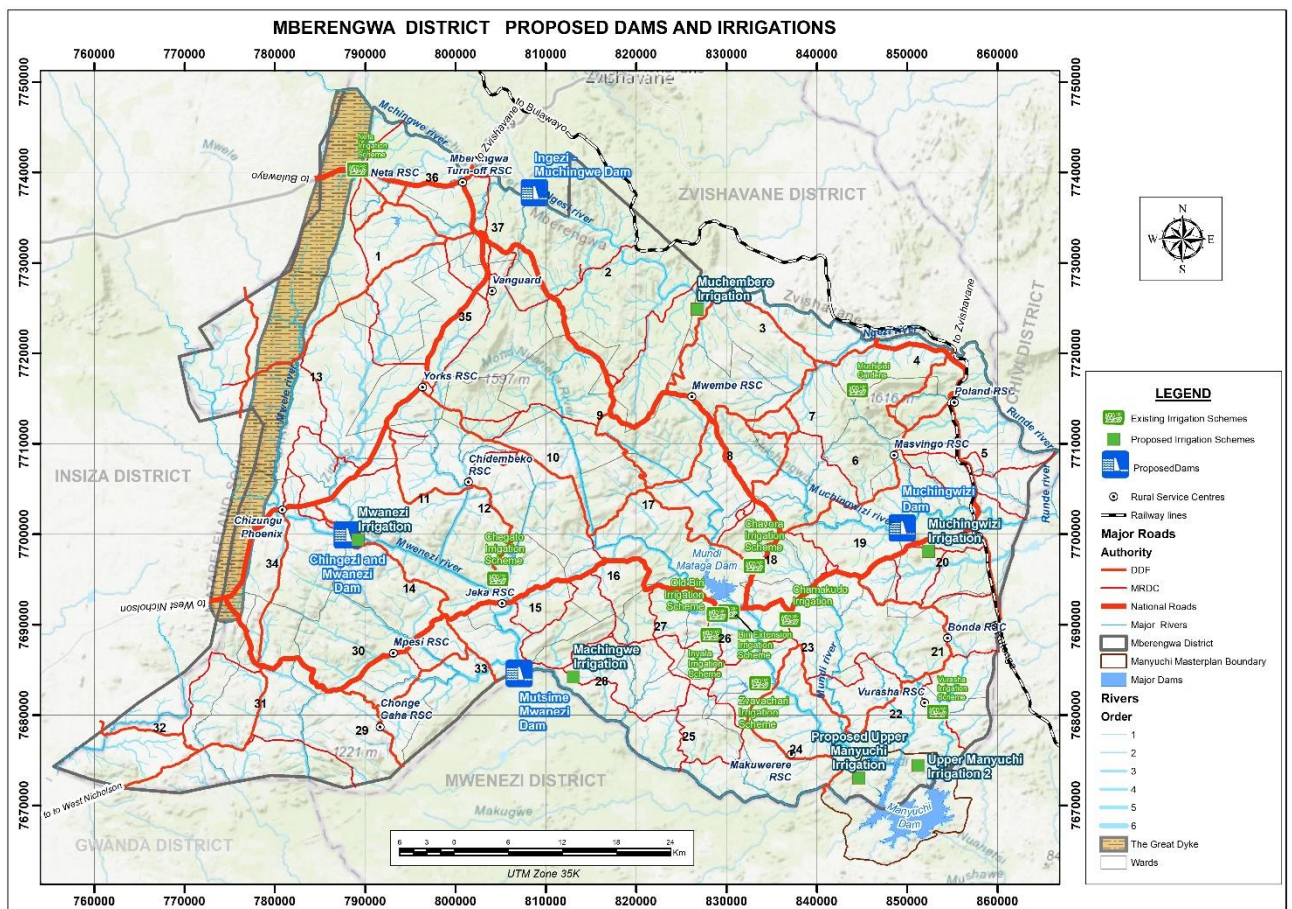
Construction of dams in Mberengwa district is the only way to achieve sustainable agriculture. This is mainly because the district is in ecological region 4 and 5, which receive an annual average of 300mm-600mm. It therefore calls for more infrastructure for water harvesting, which can be utilised for agriculture. There is no major investment into this infrastructure because all the available dams are very small to carry out meaningful agricultural activities. They are only benefitting a small portion of the population in a district that is largely rural and predominantly communal. Some of the irrigation schemes are only benefitting 6 households in a village that is swimming in poverty.

The master plan is therefore proposing to:

- ✓ Rehabilitate all silted dams and expand them so that they can hold more water and put more land under irrigation for sustainable and climate proofed agriculture
- ✓ The irrigation schemes should be operated on business lines where farmers are trained to produce for the market not the subsistence production that is currently happening.
- ✓ Mundi- Mataga dams is the largest inland dam and its size should be matched by the amount of production from the irrigated areas.
- ✓ Make sure that the enlarged water bodies and their environs are protected using proper conservation methods so as to protect them from siltation
- ✓ Settlements should be prohibited 50m from the water bodies
- ✓ Protect wetlands by creating a 20m buffer zone from it and this buffer zone can be utilised for forestry and other recreational facilities
- ✓ Water conservation techniques need to be integrated into the farming systems so that they can conserve water.
- ✓ Flood irrigation does not effectively use water, hence introduction of other irrigation types, such as overhead and drip irrigation are proposed on small dams and bore halls irrigation schemes.
- ✓ Further research is therefore proposed to keep in touch with the hydrological systems of the district, and ground water level of the district and even find new ways of adapting to climate change.
- ✓ There are high yielding boreholes in the district and these can be utilised to irrigate under drip irrigation for conservation of water. So there is need to solar power these boreholes so that they can also be usable by the aging population in the district.
- ✓ A lot of disused mines are still not rehabilitated and they are holding a lot of water, which can be solar pumped to irrigate crops in Neta area and Buchwa mine area.

- ✓ Water point in rural areas should be per village and they should be solar powered to cater for the aging population in the rural areas.
- ✓ Introduce solar powered boreholes that supply piped water in villagised rural settlements
- ✓ Introduce hand washing facilities at every house for improved household hygiene
- ✓ Provide water points within 30minutes in a to and from trip to a water point
- ✓ Water at Mberengwa Centre should be from a dam not boreholes. The ideal site for the dam should be at Dove and Mutschindwe confluence.
- ✓ Mataga growth point should get its water from Mundi-Mataga dam and a bigger water treatment plant should be constructed there.

Map15: Proposed Dams in Mberengwa District



14.0 Energy

14.3.1 Existing Situation

Energy is a very good driver of the economy. All industries and households are driven by energy. Zimbabwe currently has a national electrification rate of 42%, of which urban areas have 83% while rural is only 13% as per the National Energy Policy of 2012. The country has an installed capacity of about 2,300 MW, where Zimbabwe Power Company (ZPC), is generating around 95% and the bulk of it (more than 50%) is generated from hydropower power and the remainder is from thermal power plants, Bagasse, mini hydropower and small sized grid connected solar systems which is contributing about 130MW. The actual power generation according to 2019 estimates is just below 1000 megawatts and this is against a peak demand of 1700 megawatts. The country is therefore importing a total of 350 megawatts from Mozambique and South Africa to cater for the energy deficit but still we have a deficit of 350 megawatts. Zimbabwe has the potential to generate 15-20 MJ/m²/day but this capacity is not utilised.

Mberengwa district is fed by two 33kV feeders emanating from Zvishavane 132/33kV substation. The feeders are Mberengwa 33kV feeder with a 2023 peak demand of 5.29MVA and Zvishavane South 33kV feeder which had a 2023 peak demand of 5.44MVA. However, for Zvishavane South feeder, the load that is in Mberengwa district is 1.32MVA (Buchwa substation). Mberengwa feeder supplies load to 5 primary substations that is Mberengwa Centre substation, Mberengwa Rural substation, Livetouch substation, Inyala substation and Sandawana substation while Zvishavane South feeder only supplies load to Buchwa substation in Mberengwa district. The map below shows the distribution of power in Mberengwa District. The yellow line represents the bulk 334kv line, while the green line shows the 33kv line and the red line shows the 11kv line, which is the line distributing electricity to consumers. The network of distribution shows that electricity is fairly distributed in the districts, but there are still a lot of

Table 18: Projected Electricity demand in Mberengwa District 2034-2028

Substation	Capacity(MVA)	2023	2024	2025	2026	2027	2028
Mberengwa S5	1X2	2.26	2.27	00.00	00.00	00.00	00.00
New Mberengwa S5	2X5	00.00	00.00	4.57	5.57	6.13	6.74
Koodoovale Mine	1X2.5	00.00	1,25	1.38	1.51	1.66	1.83
Mberengwa South	1X2	1.34	1.95	1.15	1.17	1.2	1.22
Inyala	1X3	0,06	1,41	1.42	1.43	1.44	1.45
Sandawana	1X2						
Avoseh mine	2X2	00.00	1.4	2.8	2.94	3.09	3.24
Mberengwa local board	00	0.00	0.26	0.30	0.31	0.31	0.32
Feeder Total		5.29	9.42	12.24	13.64	14.63	15.71

The Projected Electricity Demand (MVA) Mberengwa District (2023-2028)

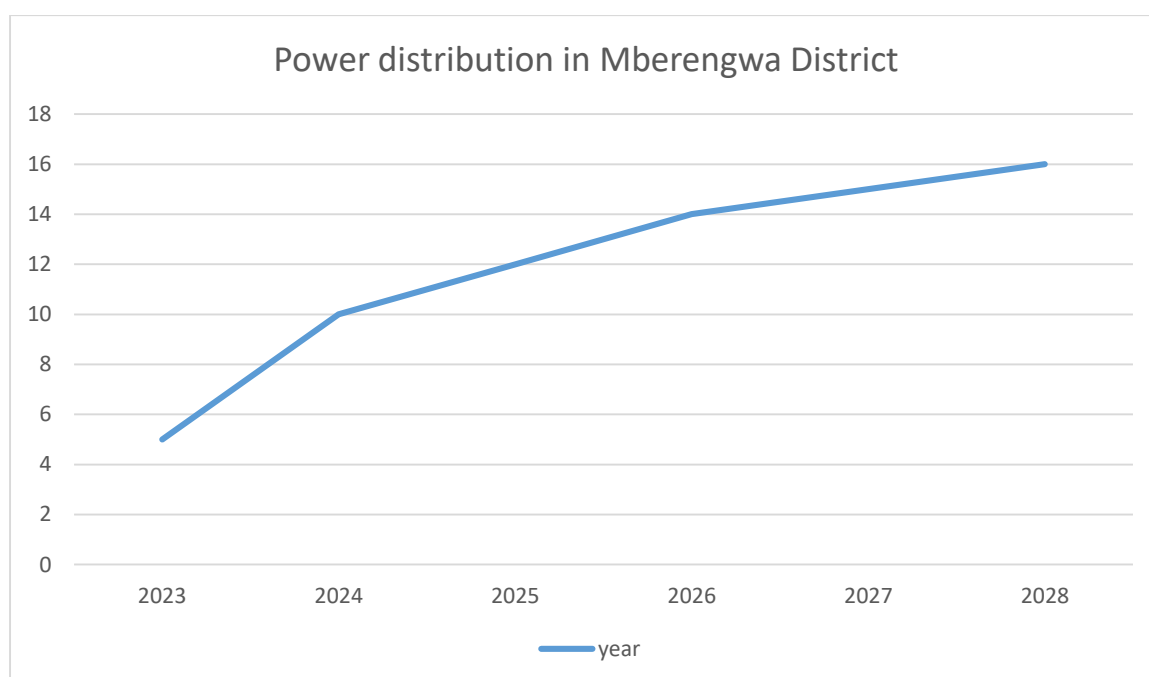


Fig. 19 Projected Power demand in Mberengwa District

1. Mberengwa S5 33/11kV Substation – Substation to be decommissioned in December 2024 at the commissioning of new Mberengwa substation. The substation has a historical load of 2.39MVA and a 2023 actual load was 2.26MVA. One of the 2MVA transformers failed in 2018 and transferred some load to Mberengwa S20 substation. New substation under construction and

expected to be completed by end of 2024. The load to be transferred to the new substation.

2. Mberengwa S5 33/11kV Substation – (New) - Expected to be commissioned by December 2024 and to pick 2.26 Mberengwa S5 load and 1.5 MVA Zimasco load in addition to 0.8 MVA load transferred to Mberengwa S20 substation. The period 2027 – 2028 is expected to have a load growth of 10% from housing developments around Mberengwa centre.

3. Livetouch Koodoosvale 33/11kV Substation - New substation commissioned in March 2024 with an installed capacity of 2.5MVA and an initial load of 1.25MVA. Load expected to grow at 10 % per annum for the 2025-2028 period as the mine develops further.

4. Mberengwa S20 33/11kV Substation - Historical load of 0.44MVA had a 2023 actual load of 1.34 MVA. Yanlin has a capacity of 1MVA at 0.6 Load Factor to be commissioned in Q3 2024. Another load of 0.8 MVA to be transferred back to Mberengwa S5 in December 2024. The period 2025-2028 is expected a load growth of 2% per annum.

5. Inyala substation 33/11kV Substation – Has a historical load of 0.6MVA and in 2023it recorded an actual load of 1. 06MVA. The substation is supposed to add another load from Africa Jin Baily of 500kVA at 0.6 Load Factoris supposed to be commissioned Q4 2024. Projected growth of 1% from 2025 to 2028.

6. Avoseh Mine 33/0.4kV Substation - Avoseh Investments has applied for 5MVA. First phase to be commissioned by December 2024 with 3MVA. Second phase to be commissioned by June 2025 with 2MVA. The expected growth for 2026- 2028 is 3%.

7. Sandawana 33/11kV Substation – Historical load of 0.57MVA and 2023 actual load is 0.63MVA. Projected for 2024 is 0.84MVA. The expected growth for 2025-2028 is 10%, there has been a lot of activity in the area due to lithium discoveries

8. Mberengwa 33kV Local Load (33/0.4kV) – Historical load is 0.23MVA and 2023 actual load is 0. 26MVA.Projected load for 2024 is 0.3MVA.

The electricity demand in Mberengwa district is showing an upward spiral, a development which is coming against a 700 megawatt power deficit. This therefore calls for other sources of energy that can supplement the current supply.

14.3.2 Sources of Energy In Mberengwa

The major sources of energy in Mberengwa district are: solar, wind, electricity, LP gas, paraffin and biogas. Electricity is a very important source of energy and a critical driver of industrial activities. The majority of households (56.7%) in

Mberengwa district have access to any form of power, while (32.4%) of the households in Mberengwa District are using green energy in form of solar energy. Only a few (4.9%) are connected to national electricity grid and a minority (0.5%) are connected to local mining electricity grid. Very few generate their power from generators and wind mainly because generators are expensive and wind has no infrastructure to generate power (Zimstat 2022). Figure 18 below shows house source of power in Mberengwa District.

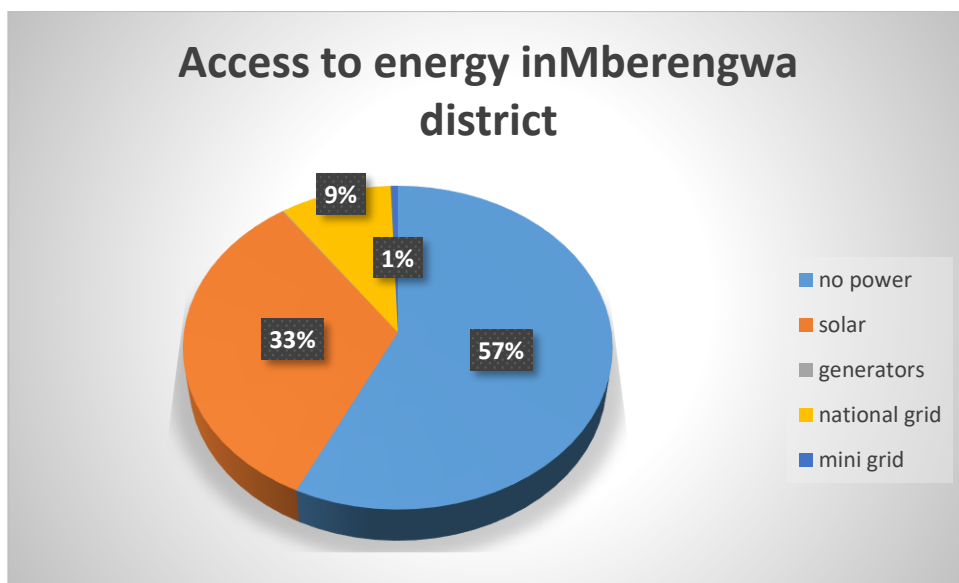


Fig. 20: Sources of Energy in Mberengwa District

Solar energy is the most preferred source of energy especially in the rural areas and they are using it mostly for lights. It is also used to power water systems to provide piped water in some villages and other institutions such as schools and hospitals. The use of clean energy is a positive step towards achieving an upper middle class economy. The Zimbabwe Renewable Energy policy is pushing towards use of clean and sustainable energy as a way of driving towards vision 2030. Clean sources of energy will improve people’s quality of life through; social upliftment, gender equality and employment creation. According to Zimbabwe National Renewable Energy Policy, the country is targeting a generation capacity of 2100 megawatts of clean and sustainable energy by 2030. This should improve the contribution of clean energy from a mere 5% in 2017 to over 27% by 2030 and this will be a major step towards uplifting of quality of life

especially in rural areas where there is great need for power. This will also be complemented by installation of more than 250 000 solar geysers in old and new buildings. Other clean and sustainable sources of energy that are being championed by the renewable energy policy include; biogas digesters, and solar water pumping systems. These off the grid sources of energy are likely to increase energy access especially in rural areas.

Rural Electrification Fund is mainly mandated to provide electricity in the greater rural part of Zimbabwe. The agency is using three technologies to supply energy in rural areas. The first technology, which is more popular is the grid system, which aims to connect rural areas to the main electricity grid system. The second technology is the solar, where they are installing solar systems to power rural institutions. The third technology is the biogas system where they are building biogas plants at rural institution so that they provide power for heating. The major problem with biogas plants is that the project is fiscally funded and funds are not trickling at the required pace, hence poor progress. So far they have only installed one at Chegato secondary school.

The Rural Electrification agency is approaching this service using a four pronged approach. Their aim is to provide power at household level. The first tier in their energy provision system is to provide a lantern that will provide lights at each household. This will enable households and school children to do their school work at home. The second tier is the one that provides lighting lantern and power charging system. This will allow villagers to have lights in their houses and also charge their gadgets such as phones. The third tier is the one that have lights, charging system and cooking facilities. The last tier will provide power for all household use including some economic activities such as irrigation. All these facilities will be provided by an off the grid power supply system, which is mainly from solar. This system is augmented by a grid power supply system, where Rural Electrification Agency will be connecting rural areas to the main power supply grid of the country. Their first point of call are rural institutions such as schools,

clinics, and chief’s homesteads. So far they have electrified all chieftainships in the district and they are working on connecting the new chiefs that have been installed. The table 19 below shows the chiefs that have been connected to the main power grid of the country. They have also electrified some schools and clinics ant tier target is to first electrify all schools and clinics

Table 19 Chiefs and their connection Status

Chief	Electrification status	
	chieftanship	current
Ngungumbane	grid	grid
Mtepaidze	grid	grid
Nyamondo	grid	Yet to install
Mahlebadza	grid	grid
Mketi	solar	solar
Mudavanhu	grid	grid
Negove	grid	grid
Maziofa	grid	Yet to install
Mataga	grid	grid
Mataruse	grid	grid
Mataruse	grid	grid
Chingoma	grid	Yet to install
Chizungu	grid	grid
Bvute	grid	grid
Mposi	grid	grid
Mapiravana	grid	grid

The other sources of energy in country include wood fuel, coal, electricity and petroleum products (see figure above). However most of the rural areas and some urban areas still do not have access to electricity because there is persistent lack

of adequate and reliable electricity supply in Zimbabwe and this has significantly affected the economy. The over reliance on fossil fuel as primary energy source is leading to wide spread deforestation and pollutes the environment.

14.3.3 Renewable Energy Policy In Zimbabwe

The Zimbabwe National Renewable Energy Policy seeks to achieve the following:

- Overall development of the energy sector in the country resulting in the economic and social empowerment of the citizens.
- Develop sustainable energy resource for the country which will not only benefit the current generation but also create a sustainable future.
- Create a balance between project viability and affordable energy cost to
- provide citizens of Zimbabwe with cleaner, greener and cheaper energy options.
- Reduce the carbon intensity of energy as well as increasing energy access to make it available to everyone.
- To achieve a Gender Just Society where men and women, boys and girls, enjoy equality and equity, and participate as equal partners in the development process of the country.
- Promotes development of Renewable Energy resource to create opportunities for better health, employment and income generation equally for men and women, boys and girls.

The renewable energy policy comes in to support the broader energy policy that seeks to achieve:

- Applicable energy- provide energy that is energy that is responsive to the needs of stakeholders
- Acceptable Energy – energy that is supplied in acceptable standards in terms of technical quality, social and environmental sustainability.

- Affordability- there should be cost effectiveness in pricing energy so that it promotes the needs of investors and also balance it with the affordability of customers.
- Accountability- every power project should have someone who is accountable for development implementation and monitoring.
- Availability- the State should make sure that the infrastructure for energy is adequate for the production, transportation, delivery and utilisation of energy services

14.3.4 Planning Perspective for Energy in Mberengwa District

13.3.5 Aim of Master Plan on Energy In Mberengwa District

Aim of the master plan in the energy sector is to:

- *Provide energy that will drive the district into a fully functional economy*
- *Electricity connectivity in the district to cover all domestic, economic and business consumptions,*
- *Develop alternative sources of energy that will complement the non-renewable sources of energy*
- *Develop energy sources that will allow people in the district to lead a productive life through utilisation of sustainable sources of energy*
- *Advance gender equality through use of affordable and easily accessible sources of energy in the district*
- *To improve the electrification level from a mere 2.4% to over 50% using both renewable and non-renewable sources of energy*
- *Provide energy that will help in eradication of poverty*

14.3.7 Policy Proposals for Energy in Mberengwa District

Energy is a driver of industrial and household development, hence there is need for industry and households to access energy (GOZ 2019; 2020). The number of households accessing power in the district is very small (57%),

(Zimstat 2022). Only supplying 2.4% of the population in Mberengwa is connected to the national power grid (Zimsta 2022). The majority is without power and is a sign of poverty. Power is needed to run industrial machines, light houses, power hospitals and schools. There is need to promote renewable sources of energy as these are sustainable and cause very little damage to the environments. Clean sources of energy does not contribute to climate change (GOZ 2019, 2020). The master plan is therefore proposing the following in power generation and distribution.

- The major dams (Mundi-Mataga and Manyuchi) to generate power for local consumption through construction of small Hydro- power plants to be constructed.
- All chief's homesteads are electrified, this will create infrastructure to distribute power to local communities through rural electrification.
- All business centres to be electrified so that people can start small rural industries such as welding. These rural industries will help in generating incomes for rural communities, which will uplift their well-being.
- The district should upscale the use of renewable energy, such as biogas and solar. So far there is minimal utilisation of biogas as this is only at one school and one clinic. Schools, clinics and even local townships should have biogas plants that will provide power to local communities/
- Villagers have a lot of waste (cow dung, waste foods and even waste from Blair toilets) at their homesteads this should be used to generate biogas energy, which can be used to power their homes.
- Every household should have some form of solar power to either as light, charging appliances and even for cook

- The district can build mini solar grids to power communities, power irrigation schemes, townships etc.
- Wind power to be used to power irrigation schemes, community boreholes and even water treatment plants. This form of power is not utilised in the district and there is a great potential to invest in it.
- Private sector to partner in the provision of renewable energy
- All schools, clinics and hospitals to be connected to power, preferably renewable energy (biogas or solar). So far only one school has a biogas plant but it has long stopped working
- Develop a Green Corridor, where power lines will be transmitting renewable energy to centres such as business centres, irrigation schemes, tourist resorts and areas of economy in developments in the district
- All new houses in the Rurban areas of Mberengwa and Mataga growth point to have mandatory solar water heaters to save on the non-renewable energy
- Every ward should have a mini solar grid to ensure that every household is connected to power.

14.4 Communication

14.4 1 Existing Situation

The district has electricity network coverage which stands at 10.8% according to census 2012. Almost 98% of secondary schools in the district are electrified but most of them have no ICT infrastructure as only 21 schools (both secondary and primary) have functional ICT infrastructure. Rural Electrification Agency (REA) has been complementing Zimbabwe Electricity Distribution Company in extending electricity network in the district, but their coverage has been very slow as most of the rural areas are without electricity. In fact, the whole district has only 4.9% of households with access to electricity and most of these are at rural growth points and rural service centres.

Netone, Econet and Telecel have installed boosters in some parts of the district to enable communities to communicate easily. However, the district seems to heavily rely on Netone network coverage as the other two network provider have very poor connectivity in the district. There is no network coverage in wards 21, 22, 23, 19 and the upper Manyuchi region need to be covered by network providers. The over subscription of network is causing poor trafficking of network in the district, which calls for expansion of boosters so as to cover the whole district efficiently. The provision and availability of internet is very important in the education system for easy access of information from the internet and teaching of ict. This can also link the district with the global village and make information available to both learners and teachers. However, there are still other places that are not covered by any network. The Netone network is the most widely used network because of coverage, while other networks have restricted coverage. There is need for more service providers in the district so as to create competition, which will benefit the community.

14.4. 2 Planning Perspective for Communication in Mberengwa district

14.4.3 Aim of the Master Plan on Communication

The aim of the master plan in ICT is to:

- *Create internet connectivity to all part of the district for easy business*
- *Promote industrialisation and innovation*
- *Promote sustainable development*
- *Promote developments that are environmentally sustainable and socially inclusive*
- *Increase access to information communication technologies*
- *Foster innovation and technological progress*
- *To have the generality of population in the district to have infrastructure access, store, transmit and manipulate information*
- *Improve the digital inclusion in the district by spreading ICT infrastructure*

13.5.3 Policy Proposal for Communication in Mberengwa District

Communication is key in driving modern day business, hence the infrastructure to provide communication is very vital. Information communication technologies have become an integral part of everyday life (GOZ 2020; Marimbe 2017). Information Communication Technologies (ICTs), are key enablers of economic development, hence their entrenchment across all national development strategies for universal access to be attained by 2030 is indispensable. ICTs have enabled economies to participate in global economic environments (GOZ 2013; Bandaiko e.t.al. 2016). Leon and Rosen (2020) argued that ICTs have transformed traditional cities into smart cities due to their digital content that emphasizes on infrastructure and solutions driven by the digital content. Knowledge intense products and services rely on ICTs. There is therefore need to promote the development of ICTs. This will improve the environment in which business is carried out. Zimbabwe is ranked lowly in terms of ICT usage hence the need to upscale the installation ICT infrastructure. The ICT enables users to

access, store, transmit and manipulate information. ICTs can be used in telecommunications, broadcast media, intelligent building management systems, audio-visual processing and transmission systems, and network-based control and monitoring functions. Mberengwa district is lagging behind in terms of smooth coverage of network for effective communication. There is only one dominant network coverage, that which is provided by Netone. The master plan is therefore proposing the following:

- ✓ Improve ICT intake in Telecommunication for easy communication
- ✓ Improve ICT uptake in Finance for financial inclusion
- ✓ Improve ICT uptake in Agriculture, Education, Health and cities to provide smart agriculture, smart health and smart transport and safety in all areas in the district
- ✓ Introduction of e-services to the citizenry in areas such as health, education, research and development, as well as the creation of Community Information Centres in some of the disadvantaged communities so that all communities are connected to important services and also promote trading of goods and services.
- ✓ Improve on the number of service providers in the district rather than allowing one to dominate. More providers will allow more competition, which result in lowering cost and provision of more effective network.
- ✓ Mobile penetration should be 100%, where no pockets of communities are in the shadow of communication
- ✓ Internet should be accessible at village level and all villages including the bordering villages should be covered
- ✓ All schools to have ICT infrastructure so that learners can effectively participate in learning systems
- ✓ Improve ICT literacy, by mainstreaming ICTs into the national curriculum as well as rolling out of ICT capacity development programmes.
- ✓ All business (including government) to be done on electronic platforms in line with the global trends
- ✓ Expand ICT provision to include regularisation of ICT vendors, which should make ICT availability to everyone.

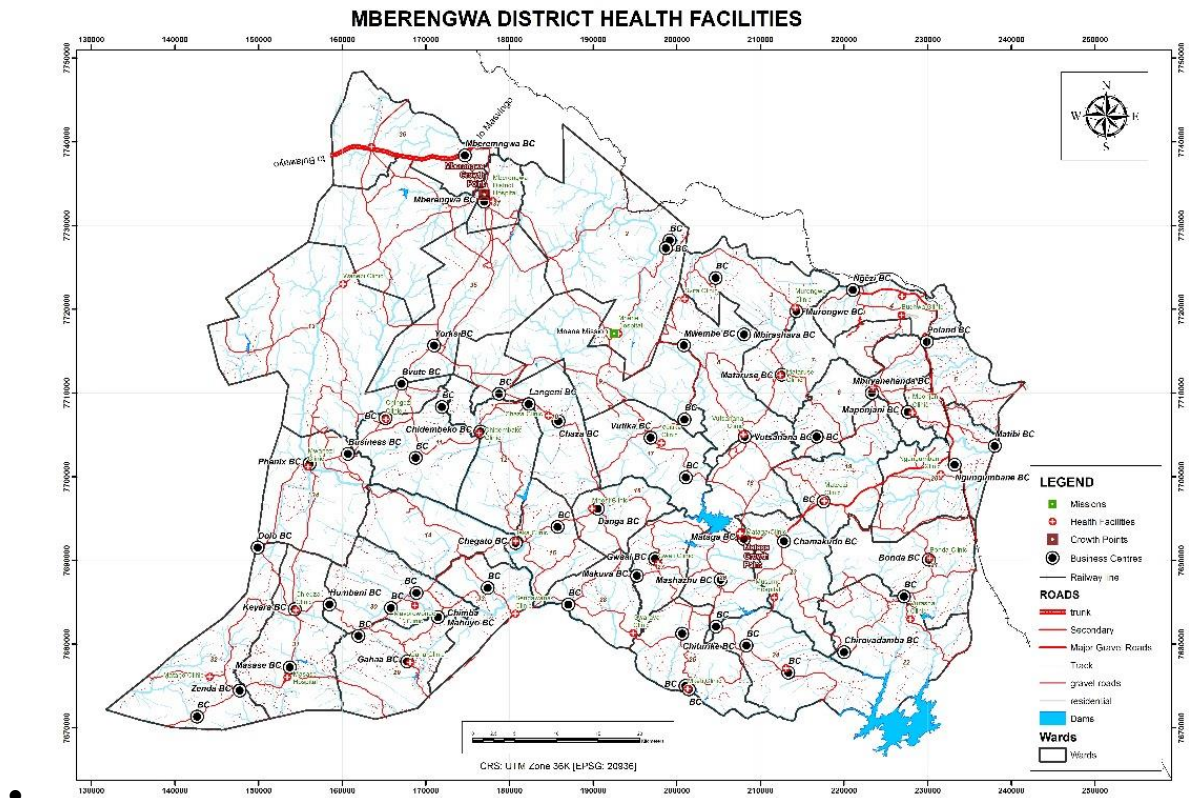
14.5 Business Centres and Rural Service Centres

14.5. 1 Existing Situation

There are several business centres and rural service centres in the district. Mataga is the district growth point, according to development process, growth points are supposed to be poles of growth that should transmit development to other areas around the district. These poles of growth were established by a presidential proclamation that was done soon after independence. These poles of growth were incentivised by the government so that they promote development in rural areas. The government introduced a suite of incentives to create growth points in each district, which will act as poles of growth.

Mataga Centre is supposed to be a pole of growth that should drive development in Mberengwa district. There are other rural service centres that are dotted around the district and these centres include; Jeka, Masase, Musume, Poland/Hwikwi, Danga, York/Kushinga, Mberengwa Centre, Mberengwa Turn-off and Neta, which are offering services to the people. Most of these rural service centres are offering health, commercial, administrative, agricultural and mining services. Mberengwa Centre is fast growing and has already out passed Mataga growth point and is a good centre to develop into an urban centre for the district. The developments at the centre are driven by good road network and a rich mineral deposits around the area. There are several mining activities around Mberengwa Centre, which is driving development. These service centres are also supported by business centres that offer lower order services to the people. The map below shows rural service centres and business centres in Mberengwa district.

Map19: Business Centres in Mberengwa District



14.5.2 Planning Perspective for Business Centres.

14.5.3 Aim of Master Plan on Business Centre

The aim of the master plan on Business centres is to

- Develop centres that will offer services to the people.
- All rural service centres (Yorks, Jeka, Danga) to offers some higher order goods and services
- Make sure all business centres provide lower order goods and services.

14.5. 4 Policy Proposals on Business Centres

The master plan is therefore proposing the following:

- Upgrading of Yorks, Jeka and Danga to a rural service centre such that they can offer other services such as housing and light industrial activities.
- All rural service centres (Yorks Jeka and Danga) to expand its services to provide housing scheme to accommodate more people.

15. 0 Urbanisation of Mberengwa Settlement

There are two main rural centres in Mberengwa district that are growing toward urban centres and these are Mberengwa Centre and Mataga Growth point. Although Mataga Growth point is the designated growth point of the district, it is growing at a slower rate than Mberengwa Centre. Mberengwa Centre is showing all signs of an urban centre, with its housing sector far out growing the supply of houses. Generally, the Centre has been out growing its service provision, which calls for up scaling of urban services at the centre. According the urbanisation strategy of Zimbabwe, the aim for 2030 is to upgrade 60 district centres to town status, where, people are enjoying an upper middle class economy. These settlements should be commensurate with services that match an upper middle class economy driven by smart city concepts. They are characterised by basic services provision and connectivity to regional and international trade centres, they are vibrant provincial economies propelled by modern technologies, reliable energy, safe and secure liveable environments that are attractive to live, work and play.

The need to develop some centres in Mberengwa district into urban centres is in line with global trends in urbanisation process, which estimates that more than 60% of world population will be living in urban centres by 2030 (Hebe and Karin (2019; Wu and Lin 2019). Mataga Growth Point and Mberengwa Centre are development hubs connecting rural and urban areas and this should act as buffer with major urban centres as it will ease rural urban migration. They will play a critical role in connecting urban and rural areas, which will help in achieving sustainable urbanization goals. The spatial distribution of existing rural settlements or growing centers, will act as poles of growth that will create urban environments for the predominantly rural Mberengwa District. The following factors were taken into consideration when selecting rural centres for urban

development: emerging and existing potential trading centres; high pressure of rapidly increasing residential settlements as a result of huge economic impacts; peat development; existing and developing infrastructures such as roads, water, electricity, health facilities, employment opportunities, and education facilities. Mberengwa Centre and Mataga Growth point are centres that are poised for a quick development into urban centres in the district. Mberengwa Centre is driven by the mining activities in the areas, which have been driving speedy developments at the centre. Mataga Growth point is the designated growth point and there are a lot of agricultural activities around the centre that can drive the urbanisation process of the centre. The development of these two urban centres in the district will drive job creation especially for the youth, create markets for rural products and this will uplift the welfare of rural people. It will also reduce rural-urban migration by creating opportunities for rural people in these centres. Mberengwa Centre and Mataga Growth Point are poised for extensive expansion due to economic activities in these areas. Mberengwa Centre is fast growing and it has now out-paced Mataga growth point in terms of development. The table 20 below shows the current housing demand at Mataga and Mberengwa centre.

Table 20: Housing Demand at Rurban Centres of Mberengwa District

Area	Houses provided (by 2024)	Housing waiting list
Mberengwa Centre	2809	274
Mataga Growth Point	2100	19
Mberengwa Turn off	15	36
Total	4924	329

Mberengwa Centre is now housing more than 2809 houses and a waiting list of more than 274. Mberengwa Centres seems to be the centre of development at the present moment and it is growing very fast judging from the rate of development, it is estimated that by 2030 Mberengwa Centre will be holding more than 3512

houses. The development of Mberengwa Centre has been spurred by active mining activities that is happening around the centre and greater accessibility as it is close to Bulawayo-Mutare road. The figure 16 below shows the projected number of houses at Mberengwa centre up to the year 2039.

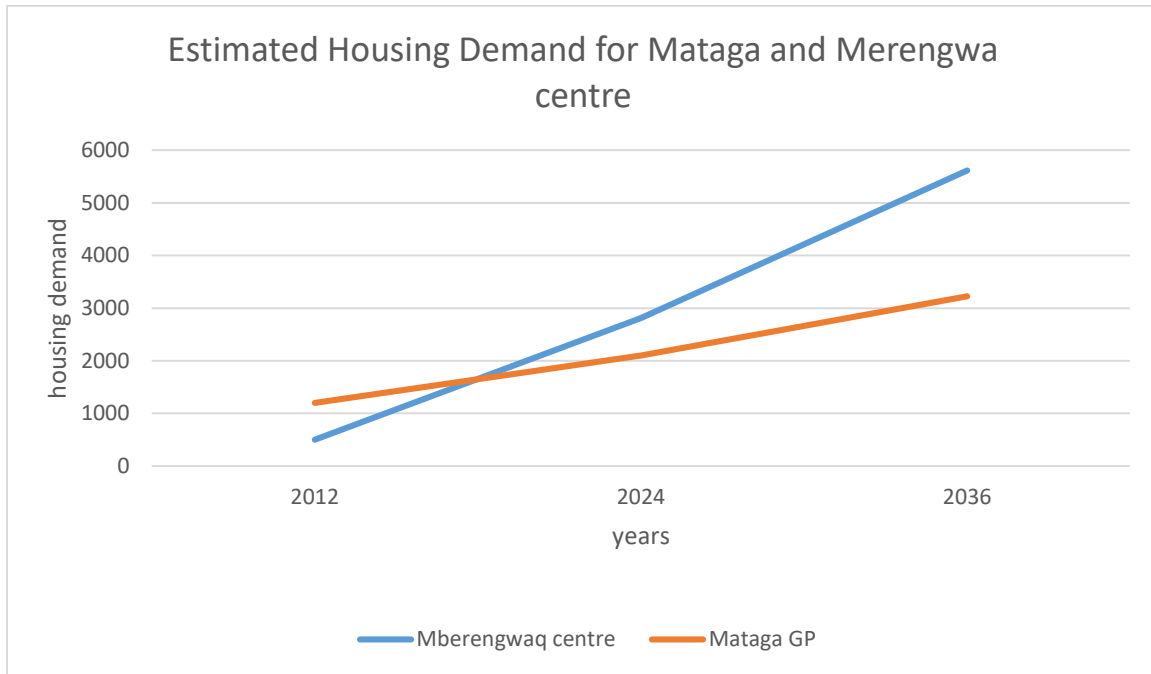
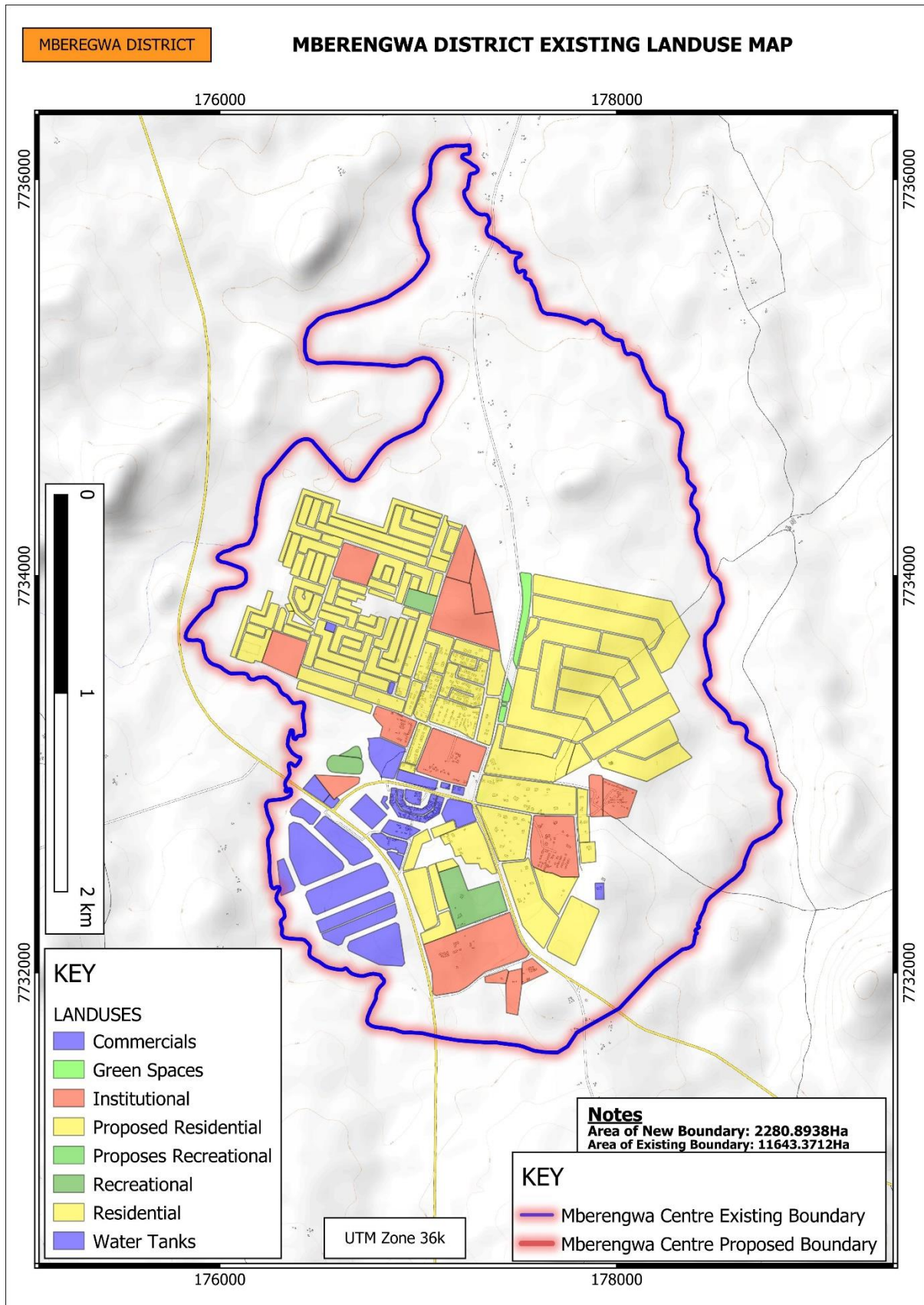


Fig: 21 Housing development at Mberengwa Centre

Most land around Mberengwa Centre is apparently under the leadership of Chiefs thus communal lands are difficult to acquire for residential purposes because of the number of people who are to be displaced to pave way for the expansion of the centre. The weak development control systems by the Local Authority, some community leaders have resorted to provide unplanned stands to home seekers in and around these Rurban centres in the district. Most of these settlements still lack basic services like roads and water. The map below shows the land uses at Mberengwa Centre

Map 20 Land uses at Mberengwa Centre



15.1 Planning Perspective for Urbanisation of Mberengwa Centre

15.2 Aim of the master Plan On Urbanisation of Mberengwa Centre

The aim of the master plan on Mberengwa Centre is to:

- *Develop a compact urban settlement in line with smart city concept.*
- *The settlement should incorporate green urbanism.*
- *Mberengwa Town to develop into a major tourist Centre*

15.3 Policy Proposals for Urbanisation of Mberengwa Centre

The master plan is therefore proposing the following at Mberengwa Centre:

- Mberengwa Centre to develop into a town Centre
- The boundary to incorporate development at Mberengwa Turn-Off and informal settlements at Vanguard
- Developments at the Centre to utilise land that is currently in the existing boundary i.e. high density residential areas to expand west of the old Zvishavane road while the low density residential areas expand east of the same road.
- Mberengwa Centre to develop with strong emphasis on unique architecture that incorporates green technologies
- Include large shopping Centres
- Promote night life using clubs, bars, restaurants, and live music venues
- Promote safety (through public lighting, surveillance cameras, and community policing)
- Include business and convention centres, through provision of conference and exhibition facilities
- Promote good accessibility through public transport, walkability and bikeability
- The commercial area to assume compact developments by developing upwards

- Settlements at Mberengwa Turn-Off to grow towards Mberengwa Centre using Mberengwa Centre as its Commercial and Industrial Centre.

The map below shows proposed developments at Mberengwa Centre.

Map: Proposed Developments at Mberengwa Centre

Water

Mberengwa centre does not have adequate water supply. Currently only 3 boreholes supply the water at the centre.

There is need to augment water system by constructing a dam that will supply water at the centre.

A dam should be constructed at the confluence of Dove and Mutshindwe river to provide water at Mberengwa Centre

In light of the envisioned developments into a town centre, there is need to build a water treatment plant at the centre

Waste management

Mberengwa Centre needs a sewer reticulation system and a sewer treatment plant so that the waste generated is treated for environmental safety. Solid waste needs infrastructure for collection. Currently dippers and other solid wastes are flying all over the areas without any collection. An off-site refuse dumping site need to property constructed and filled. Currently they are burning the dumped refuse collected at the dump site.

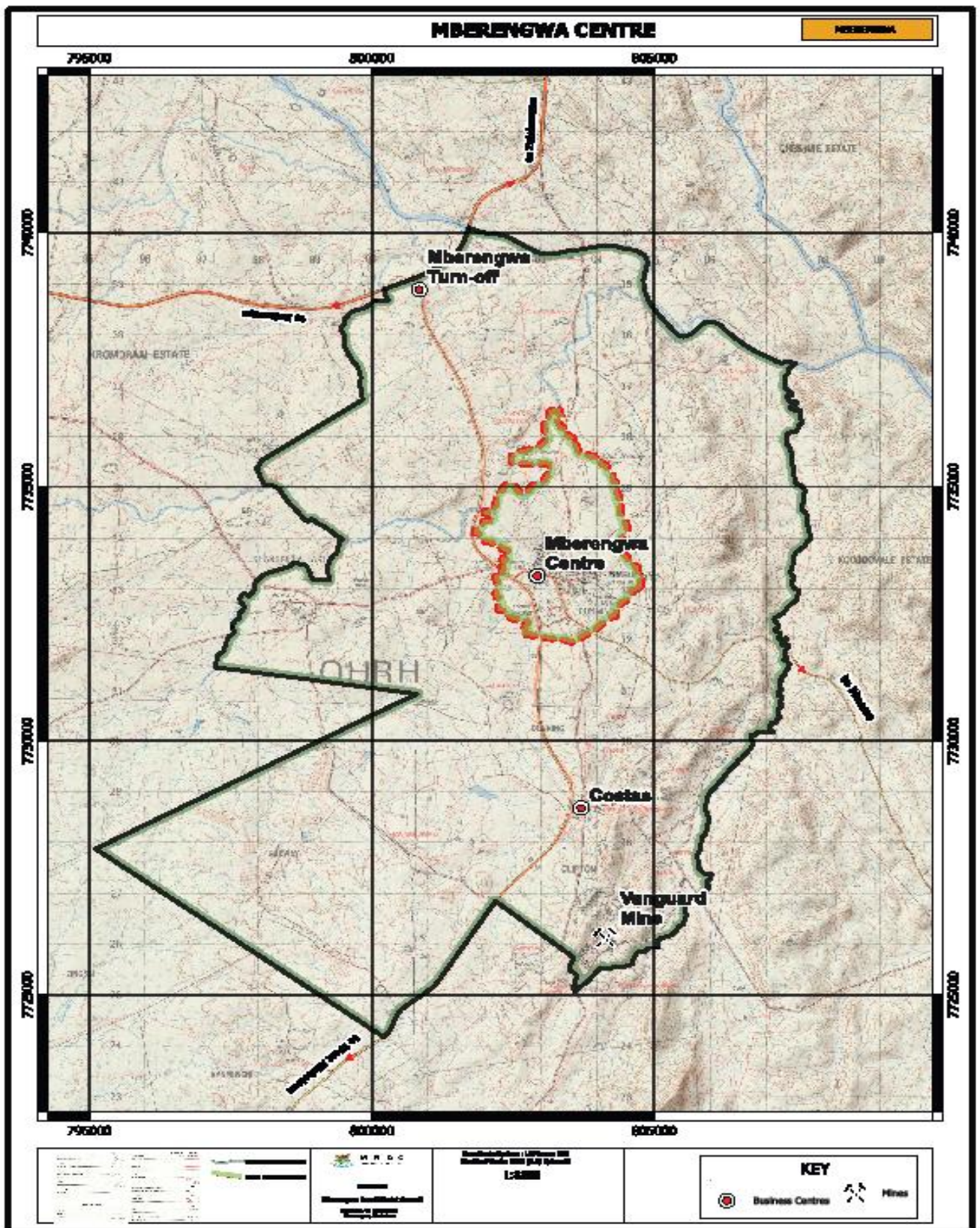
Sporting and Leisure Facilities

The centre needs a stadium for sporting activities. In light of this issue we propose a composite. There is need for a community hall for community gatherings, performing arts, recreational, sports, social gatherings, political functions and even emergency services.

Informal Sector

The centre needs to provide space for the informal sector into its developments, the commercial and industrial stands. Currently the informal sector in the commercial area are operating in streets and in the open.

Map 21: Proposed Map of Mberengwa Town



14.4 Planning Perspective for Mataga Growth Point

The aim of the master plan is creating a pole of growth that will be responsible for transmitting development to all parts of the district. All developments in the district should therefore be seen coming from Growth point to its hinterland. The pole of growth should provide higher order goods and service to its hinterland. At the moment the growth pole is just like any other business centre in the district in terms of goods and services provided at the centre. The master plan in therefore proposing the following:

Water

The Mataga growth point has experienced stunted growth mainly because of poor road network and low economic activities in the area. Investors have therefore been favouring Mberengwa centre as an investment destination. However, the growth point has several housing problems. Chief among the housing problem at the centre is water and sewer reticulation. The water treatment plant at the centre is very small and can no longer cope with the huge water demand at the centre. The water source, which is Gwavamutangi dam is heavily silted so that it can no longer meet the growing demand, which now include irrigating smallholder gardens near the dam. There is therefore need to make use of Mundi-Mataga dam, which is the largest inland dam in the district and is the closest to Mataga growth point.

Compact Developments

The Mataga Growth point is mainly in need of regenerative projects and compact developments that will uplift the face of the centre. As it is right now the development are haphazard and does not resemble a growth point. The regeneration projects should focus on developing compact developments at the centre so that they make use of large pockets of land that are available at the centre. The centre requires a well-defined land uses preplanning as there is no clearly defined central Business District. The commercial hub of Mataga growth Point resembles rural shopping centres with only one bank. There is need to

regenerate the centre so that it becomes a vibrant commercial district. Developments should assume upward developments in the commercial sector. There should also space for high rising flats to make use of sparse developments that characterise the growth point.

Illegal land deals in periphery of the Growth Point

There is rampant illegal sale of land in the periphery of Mataga growth point, where headmen are selling land to prospective home seekers from the growth point. These land deals are illegal. The master plan is therefore proposing to regularise these settlements by incorporating them in the growth point boundary

Local and Regional Bus Inter-change

The bus terminus needs to be relocated and redesigned so that it become a modern bus terminus, with proper sheds and associated facilities that include ablution facilities, shops, and an all-inclusive bus terminus that includes taxis, and even linked to the railway system. It therefore requires relocation to a site close to the high density areas. The present site for bus terminus is right at the centre of the commercial and prime land of the growth point

Civic Centre

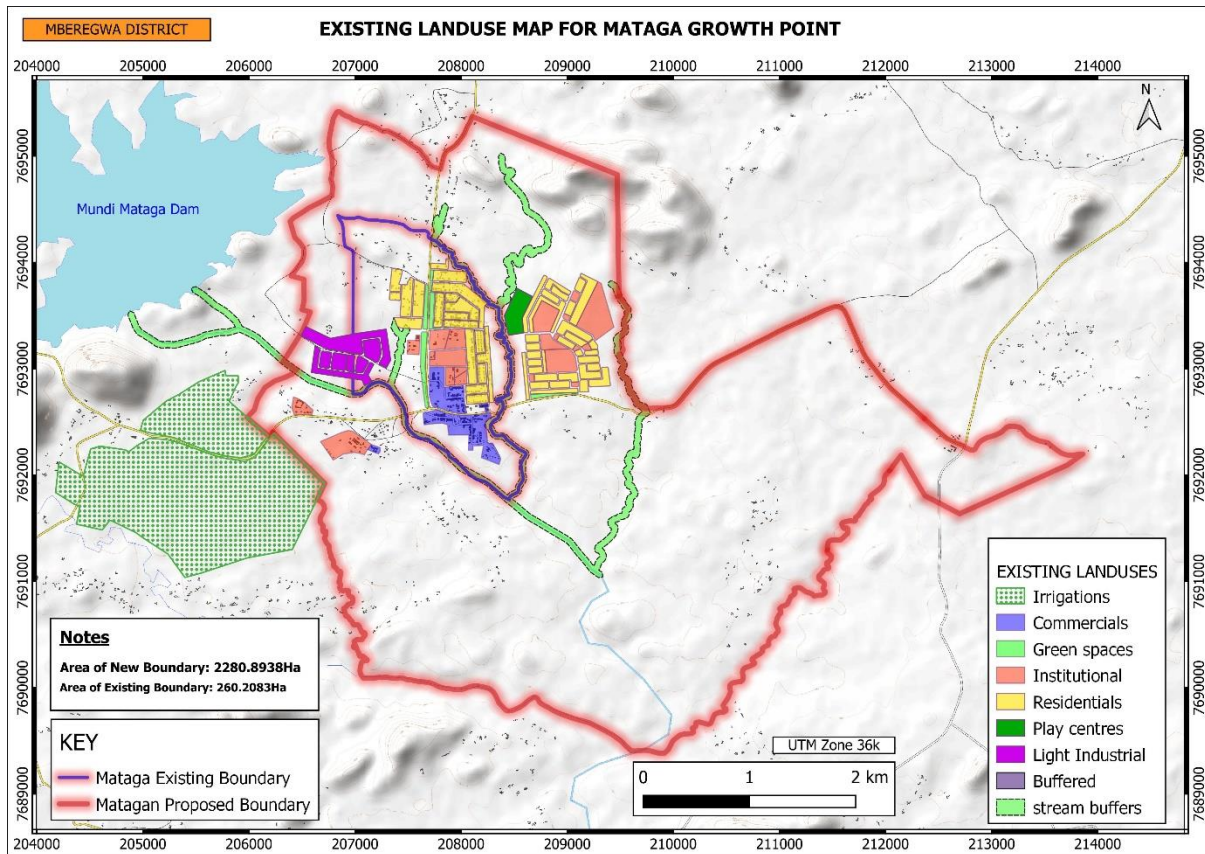
There is also need to develop a theme park around the administration centre. This theme park should contain the activities that portrays the identity of Mberengwa district in general and Mataga area in particular e.g. its culture and its heritage.

Sporting and Leisure facilities

A stadium should be built at the centre to promote sports for health communities. The stadium should have facilities for all sporting activities including in door and out-door sporting activities. There is need to upgrade the existing community hall at Mataga Growth Point to a centre that offers a lot functions such as performing arts, social gatherings, meetings, sports and fitness, cultural activities and political events. This sporting facility can be complimented by rehabilitating Buchwa mine sports stadium so that people around Buchwa mine can use the

sporting facility. There are several soccer teams in the district that are playing in division 2 but they are playing on open grounds.

Map 22: Mataga Growth Point Existing Land uses and Proposed Boundary



14.5 Buchwa Growth Point.

This centre was designated as one of the growth points of the district but up to now there is nothing that has been done to develop the centre. The centre is housing a police camp and a police training centre. There are houses, a community centre, a school and a shopping centre which were left by the previous mining operations. Most of the houses were ceded to the council after the folding of mining operation. There is need to plan for the development of the growth point in line with the growth [point proclamation. The master plan is therefore proposing starting with housing developments at the centre. The high density houses can be planned to the western side of the community, while the medium and low density houses will develop in the eastern side into the nearby hill. The

medium will start in the foot of the hill while the low density will occupy the upper part of the hill. So far the centre has a housing waiting list of 800 people.

14.6 Green Urbanism in Mberengwa District

Green urbanism is a drive towards cleaner and safer urban environments. This form of urbanism is hinged on climate resilient and green growth initiatives. It is very important to integrate green urban principles in our planning. Principally green urbanism is driven by sustainable land use planning and sustainable land use management. These two key principles should promote low carbon foot prints through green building designs. Human settlements should therefore preserve and protect the biodiversity and natural environment.

The master plan is therefore proposing integration of green urbanism in the development of Mberengwa Centre and Mataga Growth Point. This can be achieved through the following initiatives:

- Infrastructure for the storm water management system should be installed. This reduces the impact of storm water on people and the environment
- Developments should preserve wetlands so as to reduce flooding in settled areas
- Water harvesting techniques should be integrated into the built environment so that people and industries reduce reliance on rain water. This will create more reliable sources of water for power and human use
- Reduce land clearance through expansion of built up areas. This should be supported by planting of trees so as to protect soils from erosion
- All human settlements at Mberengwa Centre and Mataga Growth Point should adhere to good principles of environmental management as enshrined in Environmental Management Act
- All settlements should incorporate climate resilience principles so that they are adapted to the changes in the environment.

- The centres should have reliable and sustainable infrastructure in order for them to be resilient to climate change (Energy and water efficient systems).
- Promote densification and avoid urban sprawl
- Promote food security by availing land for urban agriculture
- Industry should promote greener and cleaner production systems thorough promotion of circular economy
- Industries should promote green technologies for safer environments
- Promote Green urban designs in our two major Rurban Centres.

14.6.1 Waste Management in the Rurban Settlement of Mberengwa

Mberengwa Rural District's waste management practice is not quite enough to ensure sustainable management of the waste in the District. The major percentage of the population lacks access to a formal waste collection infrastructure and most of the waste is just dumped at open spaces especially at Mberengwa Centre and Mataga Growth Point. There is serious lack of a clear operating waste collection and transportation systems. Solid Waste Management is becoming complicated and requires long term and sustainable programmes for its solution (Mudzengerere and Chigwenya 2013). According to UN-Habitat (2006), less than 20% of urban solid waste is collected and disposed of properly. There are several areas which are deposited solid waste and very few attempts are made by the council to collect these waste for proper disposal at dump sites. This expose people to disease outbreaks. Sewage system and waste water network are not clearly defined, as some households are using blair toilets, where borehole water is the main source of water.

The two proposed urban settlements of Mberengwa district need proper waste management systems to be integrated in the urban management. The rapid growth at the two growth poles of the district calls for emergence integration of waste

management practices so as to create sustainable urban settlements. Of major concern is the management of solid waste, as the settlements do not have proper solid waste management. The achievement of an upper middle class economy should be matched by the quality of solid waste management practices. When people stay and live in filthy environments, they are exposed to disease outbreaks, which down grade their quality of life. A good quality of life is also associated with good sanitation and hygienic conditions, where housing provision include provision of flushing toilet systems for proper disposal of solid wastes (CIAT; World Bank. 2017). To ensure up-to standard solid waste management in the urban centres of Mberengwa district the following proposal are made by the master plan:

- Low-density areas to have on site treatment: where septic tanks reticulate solid waste
- Industrial areas to have on site treatment: Industries to treat their own effluent on site through adoption of industry-specific technologies;
- High-density areas to have off site treatment, where flush toilets are connected to sewer network, which are then treated at a wastewater treatment plant. These treatment plants should be constructed at Mataga Growth Point and Mberengwa Centre
- The two centres of growth should have a robust solid waste management scheme, especially those that promotes recycling of waste products,
- Households should therefore be encouraged to separate waste at household level emphasizing on zero waste generation
- Generated waste should be used for generation of energy and production of fertilizers

14.6.2 Pollution Control

- Through enforcement of laws that govern environmental standards

- Develop and maintain a district pollution inventory where pollution and their sources are documented for proper enforcement of environmental laws. This gives the government agencies a quick reference of activities in their areas.
- The district to have its own environmental audits to take stock of environmental issues in the district

14.6.3 Urban informality

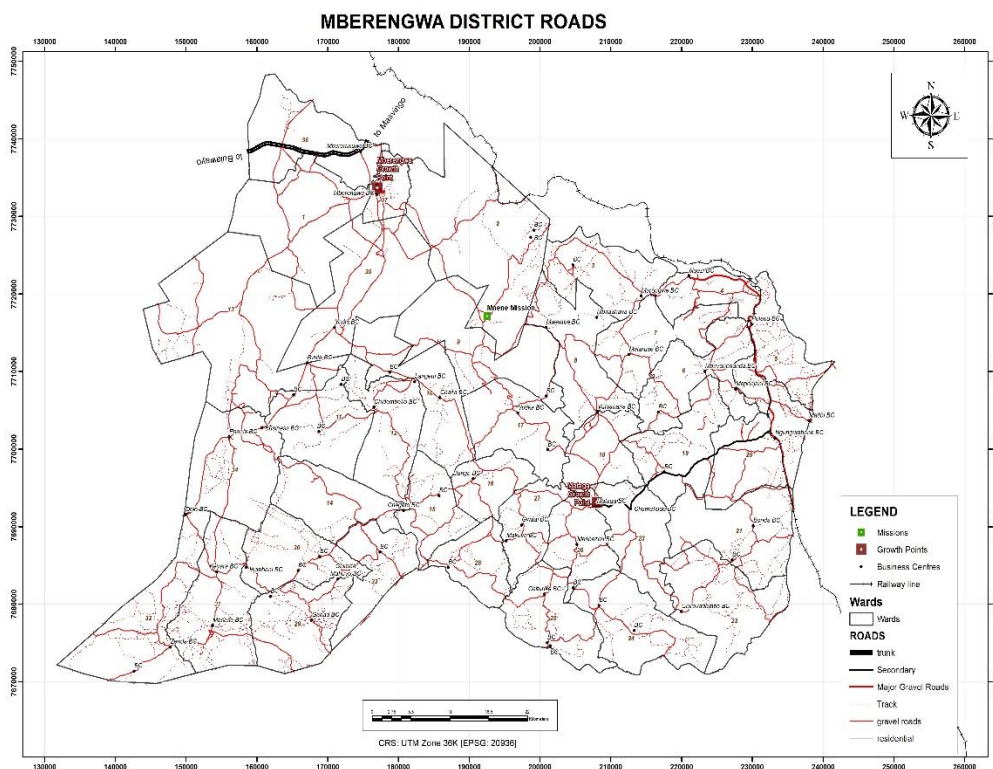
Urban informality is now a phenomenon that cannot be separated from urbanity. It is the major sector that is giving livelihoods to urban population. It is the major sector that is generating new jobs (Kamete 2019, Chigwenya 2019). It is now very difficult to urbanise without informality (Huchzermeyer 2011). Cities of the global South are fighting to deal with urban informality. It is therefore now an urban imperative to integrate urban informality into the mainstream economy of cities. Integration of small-medium enterprises is not only a way of giving the urban poor a source of livelihood, but it is a way of giving the urban poor their right to the city. There is need to allow all city inhabitants a chance to shape towns and cities according to the desires of their hearts (Harvey 2012). This will allow every city inhabitant a chance to access city space for their livelihoods.

Urban informality has therefore a right to occupy spaces in cities and towns and appropriates these spaces for their livelihoods, this will result in just and sustainable urban areas. The informal imperative in Zimbabwean economy is emanating from the ever dwindling formal economy as a source of livelihood. This has seen the upwards scaling informal operations in all cities as people seek livelihood options for survival.

In Mberengwa district there has been mushrooming of informal activities in their urban centres of Mberengwa Centre and Mataga Growth Point. The informal sector has virtually penetrated all sectors of economy (i.e. manufacturing, housing, mining, transport, trading). For example, in transport sector, the

mushika-shika transport is dominating every route and is the most used mode of transport on Zvishavane- Mberengwa road. It is even found deep in the rural areas, where it is providing services in areas where conventional buses are not servicing. This mode of transport is seen as the most convenient because it uses very flexible routes, thereby transporting people close to their homes. See map 23 below.

Map 23: Informal Tracks Used by Informal Transport Systems



The dotted lines are the informal routes that the informal transport system is using to transport people closer to their homesteads.

20.4.1 Planning Perspective for the Informal Sector.

The aim of the master plan is to:

- *Provide an inclusive development in the district where all people are allowed to participate in the development of the district.*

- *Integrate informality in the mainstream Economy*
- *Promote livelihoods of the poor in all settlements*
- *Provide infrastructure for small-medium enterprises*
- *Improve the working conditions of people in the informal sector*

The master plan is therefore proposing to:

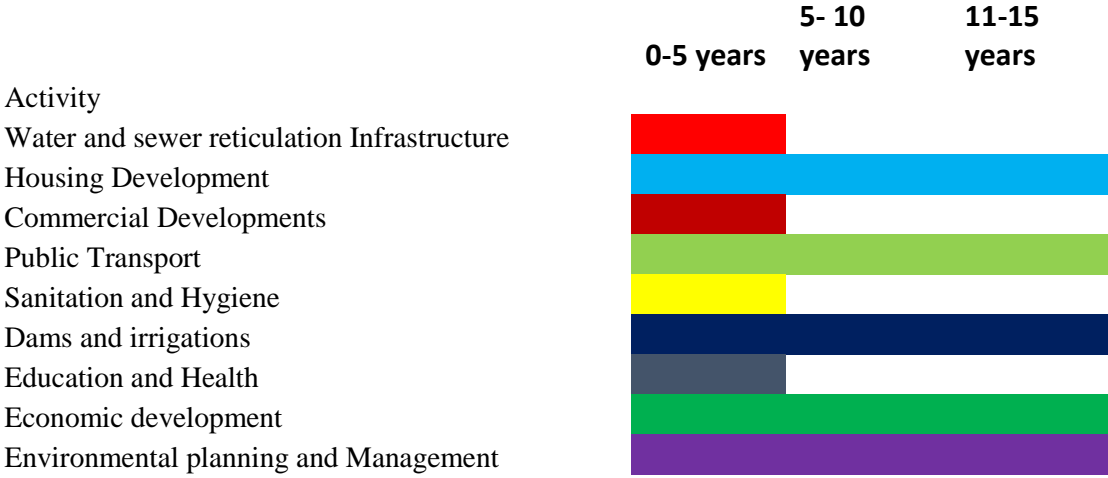
- Provide space for informal sector in all centres (Mberengwa Centre, Mataga Growth Point and all the business centres in the district)
- Provide incubation facilities for informal activities at Mberengwa Centre and Mataga Growth Point
- Make sure all the sectors of economy have section for informal activities so that these activities are integrated in the economy.
- Improve the working conditions of people in the informal sector by providing essential services like water, electricity, waste management and sewer reticulation
- Make sure that the informal sector has been linked to essential economic structures and processes so that they can fully participate in the economy (e.,g linking to the markets, providing financial assistance, and training that will allow them to fully economically function)

Annexures

Costing of Infrastructure

Modern Bus terminus	2	4600000
Dams @275 000000/unit	4	1100000000
water Treatment Plant		5000000
Sewer Treatment Plants		5000000
Water reticulation system Mberengwa Centre		20000000
Sewer reticulation system Mberengwa centre	10000	20000000
Housing at Yorks Business Centre (500)	500	110 000 000
Housing at Jeka, Danga (200)	200	44 000 000
Bridges	7	16800000
Tarring Roads @1.5 m/km	210	315 000 000
Regravelling @	1046km	12 600 000
Ventilated Improved Pit Latrines @ 3000/unit	20000	60 000 000
Classroom blocks @ 30 000/unit	15	420 000
Staff quarters @20000	35	700 000
Railway Line	186 km	186 000 000
Clinics @350000	12	4 200 000
TOTAL		1 904 320 000

Development Matrix of Mberengwa District



Minutes of Validation and Adoption of the Master Plan

MBERENGWA RURAL DISTRICT COUNCIL
FULL COUNCIL MEETING
NUMBER 2 OF 2024

MINUTES PAGE 3(6)
DATE OF MEETING
1 JULY 2024

D.F.ZHOU
D.T.MATIKA
T.RUVENGO
L.ZHOWAKE
C.MUCHIMWE
M.NYENJE
W.PISIRAI

ZIMSTAT
CARITAS GWERU
BETHANY PROJECT
BETHANY PROJECT
WORLD VISION
ZIMSHEC
LID AGENCY

CHIEFS

MKETI
NEGOVE
CHINGOMA
MUTEVAIDZE

APOLOGY

A.CHARIDZA
M.P MBERENGWA CENTRAL
MP.MBERENGWA EAST
M.P. MBERENGWA WEST
PROPORTIONAL REPRESENTATION
CeSHHAR
ZHI

IN ATTENDANCE

T.MAERESERA	CEO
S.DUBE	E.O.SOCIAL SERVICES
J.MASIYE	INTERNAL AUDITOR
P.T.MWEDZI	E.O. SPATIAL PLANNING
S.DUBE	E.O.SOCIAL SERVICES
R.MASHAYA	ENVIRONMENT TECHNICIAN
T.MABIRE	E.O.ADMI AND HR
J.GUMBO	E.O.FINANCE
B.K.JAYA	ACTING CIVIL ENGINEERING TECHNICIAN
S.KATIVHU	SECRETARY

INVITED

PROFESSOR A CHIGWENYA MASTER PLAN LEAD PLANNER
T.GOTO (RANANGA CONSULTANT) VALUATION ROLL – (CAME LATE)
CONFIRMATION.....

CHAIRMAN

DATE



MBEREGWA RURAL DISTRICT COUNCIL
 FULL COUNCIL MEETING
 NUMBER 2 OF 2024

MINUTES PAGE 2(6)
 DATE OF MEETING
 1 JULY 2024

- BRANTEEN MDHLANO
- SIBOTSHIWE HOVE
- NYEMBEZI SHUMBA
- PRINCE MATONGO
- CHEMEST MUZIKAMWI
- KIRMLEY NGWENYA
- SIPHEPHISIWE MHONDE
- PRIMERA SHUMBA
- CHENJERAI MAISVA
- TREVORS D.MLAMBO
- ELIZABETH MADYA
- NAIPHET B CHAUKE
- KOLLEN MHLORO

SECTOR

- | | |
|---------------|-------------------------------|
| V.HLAVATI | LOCAL GOVERNMENT |
| A.MADZOKERE | MOD |
| D.CHIPARE | ZPCS |
| M.MAHAMBARE | ZPCS |
| D.MUPAUKWA | NATIONAL HOUSINMH |
| P.SHOKO | MINISTRY OF WOMEN AFFAIRS |
| P.ZONDO | RIDA |
| P.MHLANGA | EMA |
| S.MATAVA | YOUTH |
| B.MAKOVERE | AGRITEX |
| A.CHIWIRA | WAR VETERANS AFFAIRS |
| A.MAGAYA | LOCAL GOVERNMENT |
| M.NYANGA | EDUCATION |
| A.MUCHISVO | PSC |
| B.MUTSINDIKWA | ZRP |
| S.MATIBE | ZRP |
| B.MHONDERA | ZRP |
| L.MUJURU | FORESTRY COMMISSION |
| MR MKONDO | GMB |
| T.SIMANGO | OPC |
| T.MOYO | OPC |
| MR PFEVENI | HEALTH |
| MUTEMBA G | BETSERANAI HOME BASED CARE |
| T.HUNGWE | MUREREZI COMMUNITY DEV. TRUST |

CHIEF EXECUTIVE OFFICER
 MBERENGWA RURAL DISTRICT COUNCIL
 02 JUL 2024
 P.O. BOX 30, MATAGA
 TEL: 092 36276/277/435
 mberengwa@yaboo.co.uk



CONFIRMATION.....
 CHAIRMAN

.....
 DATE

C2/1/24 PRAYER

The chairperson asked councillor Pedzisai Zhou to bless the meeting with a prayer.

C2/2/24 INTRODUCTIONS

The chairperson introduced committee chairpersons who in turn introduced their committee members. The Chief Executive Officer was asked to introduce council staff and the DDC also introduced government departments and development partners to the house.

C2/3/24 CHAIRPERSON'S OPENING REMARKS

The chairperson welcomed all members to the meeting. He commended the CEO for observing the meetings timelines. He also remarked that the local authority had to work towards the fulfilment of the blue print deadlines; the valuation roll and the validation of the Master Plan among other issues in the 'Call to Action' blue print.

C2/4/24 VALIDATION AND ADOPTION OF DRAFT MASTER PLAN

The Spatial Planning Officer highlighted that a Report of Study Draft was presented to the house on 15 May 2024 for consideration by council. From the input of the house the Master Plan Team came up with proposals for the Written Statement of Proposals and accompanying maps tables and statistics to back up the proposals. He highlighted that the proposal be adopted with amendments after which the document would go for Public Exhibition for 60 days as required by the Regional Town and Country Planning Act Part V section 13 to 16. The Public will be given the chance to give comments, objections and or corrections before after which it would be forwarded to the Minister. If the Proposal Report meets the Minister's expectation, the document would be approved.

The Spatial Planning Officer called upon Lead Planner Professor Chigwenya to unpack the proposal document to the house.

The document was summarised since it was voluminous. The Professor touched on the following pertinent issues among others

- Land for modern housing both rural and urban communities

CONFIRMATION.....


CHAIRMAN

DATE

02 JUL 2024

P.O. BOX 30, MATAP

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- Arts and Culture – the importance of cultural heritage, identification of tourist centres within the communities and possibly upgrading of some heritage features.
- Preservation of natural resources: There was need to protect wetland areas, identification of species that destroy other vegetation and possibly use chemicals to destroy such. The communities should also reclaim gullies.
- Campfire projects: The local authority should assist the communities in conjunction with the Parks department.

On the part of Social Services

The issue of STEM subjects was a cause for concern in schools. The science subjects were taught in very few schools. In schools where science subjects were taught, there should be a functional laboratory for the science subject. The need to have ICT infrastructure could not be over emphasized. Vocational training centres should introduce courses that goes inline with mining activities since the district had mining as a major activity.

As for health delivery, health system should start at village level where the communities are expected to get health services before taken to hospital.

Agriculture as source of the communities' livelihoods, need for climate change adaptation and consider resilient crops.

Reaction

One member asked whether the document had considered the District Heroes Acre. The officer informed the house that those were the corrections which should be pointed out when the document is on Public Exhibition, however, they were noted.

Adoption

The Master Plan Written Statement of Proposals draft Report was adopted with amendments.

That it should now be placed on Public Exhibition as required by the Regional Town and Country Planning Act Chapter 29:12, Part V for 60 days

Proposer N.Shumba

Secõnder C.B.Shoko

CONFIRMATION.....
CHAIRMAN

MBEREGWA RURAL DISTRICT COUNCIL
02 JUL 2024
DATE
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