iLembe District Municipality

ASSET MANAGEMENT PLAN

SECTOR:	WATER & SANITATION INFRASTRUCTURE
PERIOD:	2019 - 2028
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PREPARED BY:	WILBUR SMITH

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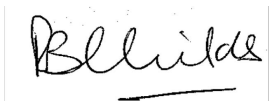
Wilbur Smith B.Eng. Civil Engineer — Date



23 August 2019

Rob Childs Pr Eng CAMA – Project Director — Date

Elias Bhengu: Manager of Water Services — Date

ACRONYMS

AM	Asset Management
AMP	Asset Management Plan
CRC	Current Replacement Cost
DM	District Municipality
DRC	Depreciated Replacement Cost
FAM	Financial Asset Manager
GIS	Graphical Information System
HH	Household
HIV	Human Immunodeficiency Virus
IDM	Ilembe District Municipality
IDP	Integrated Development Plan
kl/m	Kilolitre / Month
KPI	Key Performance Indicator
l/day	Litres per day
LOS	Level of Service
MIG	Municipal Infrastructure Grant
ml/day	Megalitres per day
mm	Millimetres
mSCOA	Municipal Standard Chart of Accounts
MTREF	Medium Term Revenue and Expenditure Framework
MWIG	Municipal Water Infrastructure Grant
NA	Not Applicable
PAM	Physical Asset Manager
PGDS	Provincial Growth and Development Strategy
PM	Per month
PPP	Public-Private Partnership
R	Rand
SA	South Africa
SDBIP	Service Delivery and Budget Implementation Plan
SDF	Spatial Development Framework
SMME	Small Medium and Micro Enterprise
SOS	Standard of Service
TC	Tribal Council
VIP	Ventilated Improved Pit
WSDP	Water Services Development Plan

CONTENTS

INTRODUCTION AND APPROACH

This report is the Close-Out Report for the contract to deliver the following documentation - Portion A: asset management plans & Portion B: scoping study for an asset management system for iLembe District and KwaDukuza, Mandeni Local Municipalities as set out in the Scope of Work (SoW).

The project forms part of the Vuthela LED Programme which was officially launched on 29 November 2017 by the iLembe District Municipality, together with the Switzerland State Secretariat for Economic Affairs (SECO) and the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (KZN DETEA).

The Vuthela iLembe LED Programme footprint comprises the iLembe District Municipality (IDM) and its local municipalities of KwaDukuza (KDM), Mandeni (MLM), Ndwedwe and Maphumulo. The primary purpose of the programme is improvement of the economic future of the iLembe District residents through sustainable economic growth of the local economy and the creation of higher, better and more inclusive employment and income-generating opportunities. The programme comprises five components, namely:

- Public Financial Management Component.
- Municipal Infrastructure Component.
- Private Sector Development Component.
- Building an Inclusive Growth Component.
- Partnership and Coordination Component.

This contract falls under the Municipal Infrastructure Component (MIC). The MIC focuses on the improvement and development of municipal infrastructure and services and has three sub-components:

- Reduced infrastructure constraints (improved scope and quality of basic infrastructure
- services);
- Increased planning capacity and financing strategies for an integrated and systematic expansion of (urban) infrastructure, as a basis for sustainable development of regional centres; and
- Enhanced planning and management of key infrastructure sectors.

The initial project was conducted as part of the Inception Phase of the Vuthela LED Programme, which focussed on the scoping, preparation and assessment of implementation-readiness for support projects during the Implementation Phase.

1. PROJECT CONSULTANT AND SUB-CONSULTANTS / CONTRACTORS

The project consultant was IMQS Software (Pty) Ltd and the Sub-Contractor was Amaqhawe Asset Management Solution. The workshare percentage split was 90/10 respectively.

2. OBJECTIVES OF THE ASSIGNMENT AS PER THE TOR

The appointment is for two particular assignments, consisting of Portion A for the development of asset management plans and Portion B for the scoping of an asset management system. Both assignments relate to the particular infrastructure functions of the IDM, KDM and MLM.

3. OBJECTIVES OF THE ASSET MANAGEMENT PLAN (AMP)

The Asset Management Plan (AMP) should enable the municipality to have an overview of its infrastructure assets' worth, condition and suitability to meet current and future service requirements based on the assets' life cycle. The AMP should enable the development of a strategy to support the optimal, functional management of existing assets whilst considering the financial and technical decision-making aspects for future service requirements.

The AMP should assist in project identification and selection, thereby integrating planning and development needs to ensure efficient and effective budgeting and implementation of projects. It should aid project prioritisation when considering available budget, service levels and required service levels.

The AMP should further be aligned to the available budget and revenue of the municipality and the development objectives of the municipality.

4. OBJECTIVES OF THE ASSET MANAGEMENT SYSTEM

References in this document to an Asset Management System (AMS), are considered as reference to each participating municipality's AMS. It was assumed at the time of writing the scope of work for this assignment, that there will be separate, but similar systems planned, designed and implemented in each municipality. Cognisance should however be given to the potential of information sharing, across platforms and between municipalities.

The AMS should enable the municipality to have access to detailed information on infrastructure assets' worth, condition and suitability to meet current and future service requirements based on the assets' life cycle. This means the incorporation or maintenance of the asset register, for financial and technical compliance and planning.

The AMS should enable the development of an Asset Management Plan (AMP) and strategy to support the optimal, functional management of existing assets whilst considering the financial and technical decision-making items for future services.

The AMS, through the AMP, should assist with project identification and prioritisation when considering available budget, existing service levels and required service levels. The AMS should further allow for integration with the financial management and planning of the municipality.

5. MAIN PROJECT COMPONENTS OR DELIVERABLES

The main deliverables as extracted on the tender document page 30 are as follows:

- Inception Report.
- Ilembe District Municipality AMP, three hard copies, one electronic copy.
- Kwadukuza Local Municipality AMP, three hard copies, one electronic copy.
- Mandeni Local Municipality AMP, three hard copies, one electronic copy.
- Workshop per municipality, to discuss the financial plan and prioritisation, for inclusion in the municipal budget.
- Workshop per municipality (IDM, KDM, MLM) to present and discuss the final AMP and results of the scoping for an asset management system.
- Scoping Report, for the design and implementation of an asset management system (applies to three municipalities
- Attendance of tri- weekly progress meetings and provision of meeting notes.
- Submission of weekly progress reports.
- Close-out report.
- Presentation to the Vuthela Programme PSC.

6. CONTRACTUAL DATES

IMQS Software (Pty) Ltd was officially appointed on the 08th August 2018. Project duration was for 5 months.

EXECUTIVE SUMMARY

Summary of the main aspects of the plan: scope and objectives; strategic context and status; key challenges, risks and opportunities; and proposed short, medium, and long-term tactical responses.

1	**PLAN OBJECTIVES**	To plan effective and efficient infrastructure-based service delivery for the water and sanitation sector in the iLembe District Municipality (IDM), utilising available resources. Determine tactics for the application of the municipality's infrastructure assets over a period of 10 years. as well as the improvement of the associated management practices over 3 years
2	**OPERATIONAL CONTEXT**	
2.1	**Municipal mandate**	In 2003 IDM became both the Water Services Authority (WSA) and the Water Services Provider (WSP) for the District. **Water Services Authority**As the WSA, IDM is responsible for ensuring that water delivery infrastructure is developed, operated and maintained. It is also responsible for the collection and treatment of sewage, wastewater and effluent The duty of the WSA is to ensure efficient, affordable, economical and sustainable access to water services subject to: • _ the availability of resources • _ the need for an equitable allocation of resources • _ the need to regulate access to water services in an equitable way • _ the duty of consumers to pay reasonable charges • _ the duty to conserve water resources • _ the nature, topography, zoning and situation of the land in question **Water Services Provider (WSP)** As the WSA, IDM has elected to perform the functions of a WSP itself. Consequently, it is responsible to develop, operate and maintain the infrastructure, manage revenue collection and customer relations, and promote health and hygiene awareness. Water services provision is not simply about operating and maintaining water services infrastructure; it is also about providing an efficient, affordable, reliable and sustainable service to consumers.

2.2	Asset scope	The scope of the water and sanitation assets that are under the control of the municipality are as follows:
		• Water
		  ○ boreholes, distribution pipework, customer connections and meters, pump stations, reservoirs, water treatment works
		• Sanitation
		  ○ sanitation pump stations, reticulation, wastewater treatment works
		
		There is reasonable baseline information on the scope of above-ground assets, though detailed information on the nature, extent, location, status and performance of below ground assets is substantially not available. This is a substantial portion of the portfolio and significantly constrains the outputs of the asset management planning process. For the purposes of this plan, assumptions have been made in the modelling to establish a more

		complete picture of the lifecycle needs, albeit with a low level of confidence at this stage. Actual cost data from the financial asset register was used to inform the calculation of the extent of these assets.
2.3	Developmental context of the municipality and key statistics	• IDM covers an area of 3269km^2. • The total population was assessed in 2018 to be 660 478 people residing in 192 673 households. • The urban/rural split was 40/60, with some rural areas being under tribal jurisdiction.
2.4	Stakeholders	• iLembe DM • Maphumulo Local Municipality • Mandeni Local Municipality • KwaDukuza Local Municipality • Ndwedwe Local Municipality
2.5	Plan maturity (and implications on its use)	• This is the first asset management plan (AMP) for the water and sanitation services at IDM. It provides initial rudimentary information on the current status of the infrastructure, lifecycle needs, and management improvement needs. It establishes a baseline template for future plans and highlights the need for improved management practices to improve the quality of the plan. The AMP has been prepared with limited data and information – addressing this will be one of the key needs going forward. • Primary data sources for this asset management plan have been the IDP and masterplan documentation in conjunction with the current asset register.
3	**CURRENT STATUS**	
3.1	Infrastructure status	• Based on data in the current asset register, the current water and sanitation infrastructure portfolios can be assessed to be in "good health" (using the grading model noted in the CIDB Guidelines - this being a measure of the aggregate amount of deterioration a portfolio of assets has undergone, as represented by its aggregate depreciation). Tables 0-1 and 0-2 provide an overview of the estimated values and health grade breakdown in the respective portfolios. Again, it should be noted that data for below ground linear assets have been included in this health grade assessment with assumed data as this information was not available. • The majority of customers reside in rural areas and make use of VIP latrines. • The current replacement cost (CRC) of the infrastructure portfolio (based on the number of households served) is estimated to be R3.18 billion for water and R1.46 billion for sanitation (based on households served, and assumed costs). These values have been used for modelling the lifecycle needs for the municipality (and are significantly more than the values indicated in the asset register).

Table 0-1: Nature and extent summary of Water Infrastructure in the 2017/18 FAR

Classification	Extent	Unit	Cost Price (Rm)	Current Replacement Cost (Rm)	Depreciated Replacement Cost(Rm))	DRC/CRC	Portfolio Health
Borehole	97	No	23.01	27.612	13.806	50%	Good
Distribution	800 933	m	212.92	255.504	114.977	45%	Fair
Pump Station	99	No	86.61	103.932	54.0446	52%	Good
Reservoir	395	No	769.46	923.352	507.844	55%	Good
Water Treatment Works (WTW)	45	No	319.56	383.472	230.083	60%	Good
Grand Total			**1 411.55**	**1693.86**	**920.754**	**54%**	**Good**

Table 0-2: Nature and extent summary of Sanitation Infrastructure in the 2017/18 FAR

Classification	Extent	Unit	Cost Price (Rm)	Current Replacement Cost (Rm)	Depreciated Replacement Cost(Rm))	DRC/CRC	Portfolio Health
Sewage Pump Station	53	No	41.34	49.608	26.2922	53%	Good
Sewerage Reticulation	129 950	m	38.31	45.972	19.768	43%	Fair
Wastewater Treatment Works	15	No	62.62	75.144	42.8321	57%	Good
Grand Total			**142.27**	**170.724**	**88.8923**	**52%**	**Good**

3.2	Spatial structure	IDM is located to the north of Durban, a major economic hub of South Africa. It forms part of the Dolphin Coast but also has a substantial inland area. Major development is within the Ballito area located within the KwaDukuza municipal area.
3.3	Service delivery operations	• iLembe has a concession contract with Sembcorp Siza water to provide water and sanitation services in the KwaDukuza municipal area for a period of 30 years. The concession is currently in its 16th year. Under this agreement, Sembcorp is responsible for the operation and maintenance of water and sanitation assets. • The operations and maintenance responsibility for the balance of the iLembe District resides with IDM. • The design and supervision of all major capital projects are outsourced to external consultants, noting a requirement that the local workforce is to be used for the construction of the infrastructure.
3.4	Levels and standards of service	**Water** The levels of service (LOS) for water and sanitation have been determined by the national minimum standard as stipulated by the Water Services Act. The Act provides the right for people to have access to basic water supply. The national minimum level of service, communal standpipes within 200m has been adopted as the minimum that every customer should receive in the iLembe District. Customers living in urban areas receive a metered connection, with a minimum supply of 200 l/day. Currently, the total access backlog for urban customers is 24 492 HH about 28% of the total urban customers; and 47 002 HH in rural areas - about 36% of the total rural customers.

		Sanitation The target for rural areas is to provide customers with access to a Ventilated Improved Pit (VIP) latrine or equivalent facility. The target for urban customers is a minimum of an in-house low volume flush toilet with a septic tank and soakaway. The provision of sanitation services are regarded as a basic human right and thus eradicating this backlog needs to be a high priority as there are significant health and environmental risks. Currently, the total access backlog for urban customers is 27 880 HH (32%) and 41 820 HH (40%) of rural customers.
3.5	Financial Status	IDM is currently facing a number of financial challenges, including the following: • Provision of extensive indigent support • Financial dependency on grants • Low debt collection rate • Vulnerable liquidity position and low liquidity ratio • Significant water losses
3.6	Reported risk exposure	Sector-specific risks and their mitigation (as referenced in the municipality's risk register) are as follows: • Water losses (a reported level of 24% was recorded in 2016). Response: implementation of water demand management plans. • Inadequate water storage facilities. Response: telemetry system monitoring storage levels. • Poor water quality. Response: weekly and monthly drinking water testing. • Poor effluent quality. Response: submission of monthly wastewater quality reports. • Periodic interruptions in supply. Response: security personnel at certain plants.
3.7	Reported performance	• Actual performance is reported on a quarterly basis in the annual performance report against the adopted KPIs. The eradication of backlogs is a key indicator. • Projects are tracked to report in terms of the adopted KPIs. **Table 0-3**: Households connected for water and sanitation 2017/2018 depicts the annual KPIs and the target achieved for the 2017/18 financial year. It is clear from the results that additional resources will have to be spent on water to increase the number of connections.

Table 0-3: Households connected for water and sanitation 2017/2018

	Total Number Targeted	**Actual Number Connected**	**% Achievement Against Target**
Water	2527	10	0.4%
Sanitation	1160	2534	218%

3.8	Infrastructure management maturity	This is the first asset management plan created by the municipality. As is the case with many other district municipalities, IDM is coming off a low base of maturity and has engaged in this initial project with a view to improving its infrastructure management practices.

4	**FUTURE DEMAND**	
4.1	Demand forecast	Special priority areas have been identified for future growth. The towns of Maphumulo and Mandeni are classified as "Quaternary Nodes" – these nodes should provide service to the local community and respond to community needs. It should be noted that, in line with the PGDS, the towns of Maphumulo and Ndwedwe have been recently gazetted as formalized towns. Infrastructure capacity will need to be increased to accommodate the proposed focus of development particularly in these identified areas.
4.2	External bulk infrastructure implications and forecast	IDM sources most of its water from boreholes as well as from the river system that runs through the district. In addition, water is also bought from Umgeni Water Board. Due to the high demand for water in the area Umgeni Water has commissioned the Maphumulo bulk water supply scheme phase 1 which is expected to provide water to an estimated 158 000 people in the iLembe area. Phase 2 of the project will focus on the construction of the Imvutshane Dam. These projects are expected to provide the essential additional bulk capacity to address current backlogs and accommodate growth.
4.3	Municipal infrastructure implications	A Master Plan has been compiled that is based on the following growth forecast over a 10-year planning period: • Maphumulo: No growth • Mandeni: 1302 HH • KwaDukuza: 7490 HH • Ndwedwe: 204 HH The growth and changes in unit demand (over the next 10 years, an additional 9.08Kl/year/HH) means a total of 81.72Ml/year will be needed to address the water needs for the municipality. Additional infrastructure will be required such as: • Water treatment works • Wastewater treatment works • Water reticulation and bulk supply lines • Wastewater reticulation • Additional pump stations for water and sanitation In addition, there will also be a need for an increase in the operations and maintenance required for maintaining the existing and new infrastructure.
5	**LIFE-CYCLE PLAN**	
5.1	The short and medium-term plan	• Short term plans are the plans that have to be accomplished within a 1-year planning period. • Medium term plans are the plans that must be accomplished within a 3-year planning period. Table 0-4: MTREF project Budgets gives an overview of the MRTEF projects for the current 3 year period.

Table 0-4: MTREF project Budgets

MTREF	Budget 2018/19	Budget 2019/20	Budget 2019/21
New Infrastructure	236 756	237 225	274 869
Renewal of existing infrastructure	51 591	71 396	83 301
Upgrade of existing infrastructure	5 217	11 304	17 391
Grand Total	**293,564**	**319,925**	**375,560**

5.2	Long term lifecycle plan	The total long-term lifecyle need for the water sector to address the entire access backlog, asset renewals, asset upgrades as well as future growth and the associated operations and maintenance in the district over 10 years. is estimated to be R3,3013 Million CAPEX and R1,718 OPEX. For the sanitation sector, it is estimated to be R1 536 Million CAPEX and R819 Million OPEX (current day Rands). It is estimated, based on current trends, that 60% of such funds may be available, implying a need for determining priorities. The prevailing focus is substantially on addressing the water access backlog.
6	**FINANCIAL PLAN**	
6.1	Financial health, budget availability, trends, forecast	The water and sanitation sector generates approximately R 130 million revenue per annum, however not all of this is collected with consumer debtors increasing by 18% from 2015/16 to 2016/17 and a further 6% increase in 2017/18, resulting in a total increase of 24%. The total bad debts written off after these increases is R30 million (23%).This challenge affects the municipality's ability to increase the tariffs on service provision to generate more revenue. The municipality is faced with high unemployment rates and payment of any increased tariffs is likely to be problematic. The municipality is highly dependent on grant funding as revenue streams are relatively small. Capital grants budgeted total R 346.70 million in 2018/19 for Water and Sanitation needs. There is a need to increase capital spending on renewal of existing assets, in addition to addressing the backlogs. The total for grant funding vs CAPEX needs is shown in Table 0-3: Total Grant available versus 3-year MTREF Capital Budget

Table 0-5: Total Grants available versus 3-year MTREF Capital Budget

Grant availability	**2018-2019**	**2019-2020**	**2021-2022**
Total Water & Sanitation Capex needs	346.70	412.04	419.91
3 year MTREF	303.64	308.47	362.01
Total surplus or (deficit)	43.06	103.57	57.90

6.2	Revenue management status	The low rate of collection of revenue continues to undermine the ability of IDM to deliver services to all the communities. It is against this background that the district is adopting a revenue enhancement strategy, focusing on ensuring accuracy, a valid, and complete collection of revenue raised on already identified revenue sources as well as exploring other revenue streams. Revenue growth in the Water and Sanitation sector is on average 9.5% pa although tariff increases of 10% are targeted. The municipality needs to consider the affordability of tariffs in order to avoid an increase in bad debts. Forecast revenue for the sector increases from R 129.5 million in 2018/19 to R145.5 million and R 174.4 million in 2019/20 and 2020/21 respectively. However, the proposed tariff is lower than the bulk water increase.

		The sector plan includes a provision for increasing billed services in the urban areas to ensure some growth in the billing base.
6.3	Cost management	Operating expenditure is increasing year on year, and needs to be reviewed – that will require accurate data to determine effective responses
6.4	Financial management strategy and plan	The capital funding needs of R 346.70 Million in the 2018/19 financial year, increase to R 412.04 Million in 2019/20 and to R 419.91 Million in 2020/21. This will require an adjustment to the current planned budget for a deficit of R204.53 Million in budgeted MTREF grants available for the sector.
7	**ASSET MANAGEMENT PRACTICES**	
7.1	Context	iLembe is a Category C municipality and is coming off a low base of asset management practice. However, it has demonstrated a commitment to improving its practices through engagement in the Vuthela-Ilembe LED project. The asset management practices assessment evaluated the following key areas of asset management: • Asset knowledge • Strategic planning • Capital and maintenance management practices • Asset management plans • Information systems • Organisational tactics
7.2	Current and target performance	The assessment indicates that the municipality's practice was generally at a rudimentary level ("awareness" of recognised good practice), with most areas requiring significant improvement. The municipality recognises that it requires a well-defined and funded programme sustained over a few years to achieve recognised best practice.
7.3	Priority improvement needs	• A proposed practices' improvement plan has been prepared to indicate priority actions over three years. Enhancing the maintenance management process has been identified as the first priority as this will have the most tangible benefits for members of the community. If implemented effectively, it could foster support for further improvements. • The second highest priority item identified is to enhance asset data as this is crucial for cross-department integration, vertical alignment (linking operational activities to the strategic objectives), and more effective life-cycle planning and reporting. It is proposed that this is addressed in the second year. • The final year entails the enhancement of the management processes associated with projects and a review of the preliminary AMPs being prepared in this initial phase (then with improved data and models).
8	**CONCLUSIONS AND RECOMMENDATIONS**	
8.1	Objectives, challenges, and proposed response strategies	**Objectives** To minimize the whole-life cycle cost, including the operation, maintenance and replacement or disposal of each asset in the system and to strive to provide services with the available resources. **Challenges**

		The main challenges experienced in the water and sanitation sector are: • Non-payment from customers • Insufficient funding to address all backlogs • Inadequate asset information to inform effective lifecycle analysis (including spatial data on pipe networks) • Assets coming to the end of their useful life • Continual pipe bursts and extensive water losses • The need to augment raw water sources to cater for the bulk needs for the whole period • Risk of groundwater contamination
8.2	Proposed programs and budgets	The following water infrastructure programs are being pursued to ensure the availability of water (Umgeni Water). The key ones currently being implemented are the following; • The Ndulinde sub-regional water supply scheme intended to serve a total of 42,752 people residing in 10,691 households. The scheme's estimated cost is R270 million. • Macambini sub-regional water supply scheme intended to serve a total of 58,480 people residing in 7,310 households with an estimated cost of R617 million. An estimate of the total IDM budget needs and proposed application of the envisaged available budgets has been made to ensure continuance of existing services and to extend this to address backlogs according to available funds to as many custiomers as possible, informed by servicing areas identified in the SDF for development.
8.3	Recommendations	It is recommended that Council: • Note the content of this first AM Plan, which has been prepared through the Vuthela-Ilembe LED Programme based on existing available information, which is limited; • Confirm that the report findings be used , at a high level, to inform; o the preparation of budgets, strategies and plans relating to the lifecycle management of the sector infrastructure; and o proposed improvements to the management practices in the sector, subject to securing the required funds.

1 INTRODUCTION

The purpose and scope of the plan, its stakeholders, an overview of relevant internal and external context, the asset and asset management system status, and approach to reporting the level of confidence in the plan's outputs.

1	Plan objectives	• The purpose of the infrastructure asset management plan is to review the current state of assets to manage the performance, budgets and risks associated with these assets. • In addition, management practices are also reviewed in this plan.
2	Mandate	In 2003 iLembe District Municipality (IDM) became both the Water Service Authority and the Water Services Provider. **Water Services Authority** **Water** IDM is responsible for ensuring that infrastructure is developed, operated and maintained. It may perform the functions of a water services provider itself (i.e. it may develop, operate and maintain the infrastructure, manage revenue collection and customer relations, and promote health and hygiene awareness itself), or it may contract another water services provider to carry out this function on its behalf. Municipal infrastructure comprises the municipal reservoirs, pump stations and pipelines used to reticulate the water to the consumer. **Sanitation** The water services authority is responsible for the collection and treatment of sewage, wastewater and effluent. It may perform this function itself, or it may contract a water services provider to carry out this function on its behalf. Municipal sewage and wastewater treatment infrastructure comprise the sewerage pipes and sewerage treatment plants used to collect sewage, wastewater and other effluent and to treat it before returning the treated water back into the river or sea. The duty of the WSA to ensure efficient, affordable, economical and sustainable access to water services is subject to: • _ the availability of resources • _ the need for an equitable allocation of resources • _ the need to regulate access to water services in an equitable way • _ the duty of consumers to pay reasonable charges • _ the duty to conserve water resources • _ the nature, topography, zoning and situation of the land in question **Water Services Provider** • It is important to note that water services provision is not simply about operating and maintaining water services infrastructure; it is also about providing an efficient, affordable, reliable and sustainable service to consumers.
3	Stakeholders	• iLembe DM ○ Maphumulo Local Municipality

		○ Mandeni Local Municipality ○ KwaDukuza Local Municipality ○ Ndwedwe Local Municipality
4	Social Context	• Dispersed rural population providing a challenge in terms of service provision. • Service provision backlogs in rural and urban areas. A significant challenge of informal settlements that are situated in the periphery of Sundumbili Township and Isithebe Industrial Estate. There is a high rate of unemployment, poor access to productive resources, lack of marketable skills and a general lack of job opportunities. • Settlement patterns in the remaining areas are substantially unstructured - unevenly spread rural settlements formed in line with the natural environment, grazing and arable land. These patterns and low densities are not conducive to the provision of infrastructural services. Smaller rural nodes, such as around tribal courts, trading stores or clinics are scattered, though traditional housing dominates.
5	Political Context	• Ward councillors chair the ward committees and are responsible to ensure that the issues and needs of residents are well represented in the municipal council. However, the functionality and effectiveness of the ward committees remain a challenge. The number of people per ward and the geographic size of the wards influence representation and participation, as well as the costs of the operations and effective functioning. • In terms of legislation, the Integrated Development Plan is the principal strategic planning instrument that must guide and inform all planning, budgeting, management and decision-making in a municipality. The IDP provides a rolling 5-year plan that is updated - and where required amended – annually, to guide Council. It aims to give effect to the developmental responsibility of the municipality to improve the quality of life and this includes the provision of basic services as well as the creation of jobs, promoting democracy and accountability, and poverty eradication. The IDP is established through a process of consultation with the respective communities.
6	Economic Context	• IDM is pursuing stronger articulation of macro and microeconomic policies, stronger alignment of industrial policies and programs with further investment and export promotion programs. It is also pursuing better alignment to general and specific sector strategies. • The maintenance and upgrading of infrastructure have been recognized as a specific opportunity for job creation in the local community.
7	Technical context	• The provision of basic infrastructure is hampered by topographic constraints, low densities and low affordability levels, particularly in rural and traditional areas. • Service infrastructure in iLembe's urban areas needs upgrading and replacement, however, the municipality is addressing this challenge with the support of grant funding from the Department of Water and Sanitation (MWIG). • Rural areas are severely affected by a deficit in basic services and continued service delivery backlogs. • Bulk water supply is a major constraint that affects the entire District and in urgent need of attention. • The urban areas have adequate water-borne sanitation systems, but the peri-urban and rural areas rely substantially on VIP latrines, and some areas have no formal system. This places tremendous strain on the environment and poses a health risk.

		• In recent years, ILembe has been hampered by drought which has diminished the Municipality's ability to provide water to all inhabitants.
8	Financial context	• Although IDM is financially stable and sustainable, the low revenue base is a high risk. iLembe consists of rural areas characterised by high levels of poverty and low levels of economic activity. The revenue base has not increased significantly for a long period. This highlights the need to develop viable strategies to stimulate economic growth and facilitate private sector investment in the area.
9	Legal context	• Legislation, regulations, environmental standards and council bylaws dictate the way assets are managed and determine the minimum level of service to be provided.
10	Institutional Context	• IDM's Water and Sanitation Department is split into 2 areas of operation. Area 1 consists of KwaDukuza and Ndwedwe and area 2 consists of Mandi and Maphumulo. • The main water and sanitation depot is located in KwaDukuza.
11	Procurement strategy	• Currently, there is a 30-year concession signed with Sembcorp Siza water to provide water sanitation services to residents in the Dolphin Coast. • The municipality has adopted a Contractor Development Policy and Implementation Strategy aiming at uplifting and empowering previously disadvantaged entrepreneurs by providing them with opportunities in the civil, construction and electricity sectors. This programme seeks to achieve the following: • To increase the active participation of Municipality SMME's and cooperatives in the local economy by 5% every year through sustainable black economic empowerment programme. • To formulate a policy that enables Municipality to impact significantly improving the quality of life of most of its citizens/customers, by optimising employment and Economic Empowerment in all its dealings; resulting in the annual procurement spend generally reflecting Municipality Demographics. • To mainstream the local and previously disadvantaged SMMEs and cooperatives development in the affairs and structures of the municipality through annualised planning, implementation, monitoring and evaluation of black economic empowerment programme utilising and escalating budget of at least 10% of the municipal budget. • The Contractor Development Programme is aimed at uplifting and empowering previously disadvantaged entrepreneurs and emerging contractors by providing them with opportunities in the building/construction industry.
12	Sector strategic objectives	• Backlog eradication • Accommodating growth • LOS and SOS upgrading • Water loss eradication • Economic alignment to strategic growth areas/ development nodes • Increased blue and green drop rating
13	AM objectives - AMS	To develop the municipality's management system for governance, planning and oversight of the water and sanitation sector in line with recognised good practice, appropriate to its operational environment, with the available resources.

14	AM objectives - Infra	Ensure assets controlled and owned by the municipality are properly developed, renewed, operated and maintained to continue to provide service to the customers in line with Council's objectives and priorities, with the available resources.
15	Key developmental themes	• A focus is placed on establishing and documenting a complete picture of the status quo and reviewing what levels of service are appropriate and affordable. Given the extensive and complex nature of the infrastructure in this and other sectors, it is essential that a structured approach is adopted so that decision-making can be consistent and optimised within the sector, and indeed across the whole city. • The asset management plan specifies approaches, programs, projects, activities, resources, responsibilities and time frames over the short and medium term. A 10-year time frame is considered appropriate for life-cycle planning of infrastructure assets as they typically have long lives, appropriate solutions need to be well considered (especially given the large investments required and the potential critical impacts on community well-being now and in the future), the long periods associated with implementing infrastructure projects, and the need to pursue long term sustainability. • The future should not simply be an extrapolation of the past, and significant shifts in the municipality-scape may often take many years to accomplish. • Actions in the short term, however, need to be planned to give effect to achieving those longer-term goals and objectives. • The plan is intended to inform council, top management of the municipality, management and staff working in the sector, as well as external stakeholders. It is the municipality's intention to update, extend and improve this AMP in future versions as part of its commitment to a service driven culture and the pursuit of continuous improvement in service delivery. The plan aims to provide a complete picture of the needs (current and future), identify priorities in terms of managing risk and performance linked to available resources, and propose strategic direction and programs to be implemented.
16	Spatial structure, ongoing development initiatives	Settlements have undergone change and are highly influenced by accessibility and proximity to public transport routes, basic services and social facilities. The net effect is a complex migration pattern that involves population decline in remote, rural parts of the municipality and an increase in the population along transport routes and around development nodes. • Encouraging settlement within the rural context in identified development nodes. • Introducing incentives that attract development initiatives. • Preserving and protecting the natural environment and applying conservation management. • Ensuring regular maintenance and upgrading of existing infrastructure. • The existing settlement is substantially influenced by prevailing topographic conditions, physical access and access to land - consequently, a series of settlement bands developed parallel to the coast. The prevailing settlement structure is also influenced by the existence of major commercial agricultural activities in the east, the existence of a series of east-west linkages and the opportunities of the coast. Another contributing factor to the settlements pattern is land tenure and customary allocation of households by the Traditional Authorities through Amakhosi
17	Key sector AM roles (and suppliers)	Two key roles in asset management can be identified - he PAM (Physical Asset Manager) and the FAM (Financial Asset Manager). At present, the main focus is on financial asset management,

		with the physical asset management role (focussed on the use of assets for service delivery) needs to be more formalised.
18	Overview of infrastructure	• The current state of infrastructure (using data from the asset register compiled by SMEC) indicates that both the water and sanitation portfolio have good "portfolio health". This is a measure of the amount of deterioration a portfolio has undergone, thus both the water and sanitation fall within the 46-70% bracket. • The current consumption of the water and sanitation portfolio, according to this data, is about 47% (excluding the below-ground assets). • The below-ground linear assets are assumed to be in a slightly less good state of health, based on an understanding of the performance of the network – though of course, it will be important to verify this. • Table 1-1: Extent summary of Water Infrastructure and Table 1-2: Extent summary of Sanitation Infrastructure indicate the current extent of assets in the iLembe water and sanitation portfolio. • The extent of the below-ground water assets is substantially more than that of the sanitation. The majority of customers are rural and make use of the VIP latrine sanitation facilities. • The current replacement cost (CRC) of the portfolio (based on the number of households served) is estimated to be R3.179 billion for water and R1.46 Billion for Sanitation. These will be the values used for modelling the needs for the Municipality. The model suggest that the CRC indicated in the asset register of the sanitation portfolio appears to be significantly undersated. .

Table 1-1: Extent summary of Water Infrastructure from IDM's 2017/18 FAR

Classification as Per MSCOA	Extent	Unit	Original Prices (Million)	CRC (Million)	DRC (Million)	DRC/CRC (Health)	Description
Borehole	97	No	23.01	27.612	13.806	**50%**	**Good**
Distribution	80 0933	m	212.92	255.504	114.977	**45%**	**Fair**
Pump Station	99	No	86.61	103.932	54.0446	**52%**	**Good**
Reservoir	395	No	769.46	923.352	507.844	**55%**	**Good**
Water Treatment Works (WTW)	45	No	319.56	383.472	230.083	**60%**	**Good**
Grand Total			**1 411.55**	**1693.86**	**920.754**	**54%**	**Good**

Table 1-2: Extent summary of Sanitation Infrastructure from IDM's 2017/18 FAR

Classification as Per MSCOA	Extent	Unit	Original Prices (Million)	CRC (Million)	DRC (Million)	DRC/CRC (Health)	Description
Sewage Pump Station	53	No	41.34	49.608	26.2922	**53%**	**Good**
Sewerage Reticulation	129950	m	38.31	45.972	19.768	**43%**	**Fair**
Wastewater Treatment Works	15	No	62.62	75.144	42.8321	**57%**	**Good**
Grand Total			**142.27**	**170.724**	**88.8923**	**52%**	**Good**

19	Overview of the level of performance	The water and sanitation department is primarily addressing the renewal and maintenance of infrastructure assets. Programs have been established to address the access backlog. Additional risks to consider are: • Financial constraints. • Contractors demanding work in areas that are not of immediate attention • The high cost of addressing backlogs in the sparse rural population • Additional funding needs for the sanitation sector
20	AM maturity	• iLembe is a category C municipality and is coming off low asset management practices base, however, it has demonstrated its commitment to improving its practices by implementing the Vuthela-Ilembe LED project.
21	Availability and quality of key data and information, lifecycle models	• In general data, reliability has been very low to moderate, whilst there has been effort spent validating the accuracy of the information, much of it has been gained from multiple sources and much has had to be used without independent verification. • There is a shortage of basic infrastructure data (in the asset register). Due to this, infrastructure indicators and masterplans need revision and confirmation in future stages. • iLembe does not have comprehensive GIS records for all water and sanitation infrastructure within the area of supply.
22	Key data/modelling assumptions	• Population growth • Household size • Current capital expenditure • Water and sanitation LOS and SOS targets • Cost of services provided per household • Maintenance cost or target
23	Chapter summary	• Based on the information there is a clear need for improved asset management processes and systems to be established. • The Physical Asset Management role needs to be more formally established with a focus on the alignment of long, medium and short term planning and implementation of infrastructure with a view to service delivery, to work in conjunction with the Financial AM function (which is focussed on asset accounting). • Additional work needs to be done to improve the asset register. Crucial information to be able to reliably perform lifecycle modelling needs to be added.

2 LEVELS OF SERVICE

An overview and assessment of the prevailing levels and standards of service; current backlogs, historic and existing initiatives; summary of needs, challenges, associated strategic risks, opportunities and priorities; and proposed strategic and tactical responses.

1	Existing levels and standards	The levels of service (LOS) relate to the physical water and sanitation infrastructure provided to customers (for which there is some data). The standards of service (SOS) relate to the soft issues with respect to service delivery (such as water quality, pressure, flow, interruptions etc) for which there is little reliable information.

Table 2-1: Water supply LOS

LOS	Maphumulo		Mandeni		KwaDukuza		Ndwedwe		Total
	% of population	No of customers	% of population	No of customers	% of population	No of customers	% of population	No of customers	
Level 0	6%	5 075	10%	15 012	3%	9 555	14%	20 49	50 133
Level 1	69%	60 026	22%	32 402	11%	30 634	40%	57 602	180 665
Level 2	4%	3 500	7%	9 958	2%	6 464	3%	4 298	24 221
Level 3	0%	0	0%	0	0%	0	0%	0	0
Level 4	22%	18 900	61%	91 263	83%	234 397	43%	60 897	405 459
Total	**100.00%**	**87 502**	**100.00%**	**148 637**	**100.00%**	**281 053**	**100.00%**	**143 289**	**660 480**

Table 2-2: Sanitation LOS

LOS	Maphumulo		Mandeni		KwaDukuza		Ndwedwe		Total
	% of population	No of customers	% of population	No of customers	% of population	No of customers	% of population	No of customers	
Level 0	14%	11 812	4%	5 499	4%	12 085	7%	9 743	39 141
Level 1	6%	5 250	5%	6 837	3%	7 307	8%	10 746	30 141
Level 2	36%	31 675	24%	35 375	25%	69 982	28%	40 120	177 154
Level 3	23%	20 300	16%	23 484	22%	60 426	20%	28 944	133 155
Level 4	0%		0%		0%		0%		
Level 5	18%	15 400	23%	33 443	8%	21 922	30%	42 413	113 179
Level 6	0%		0%		0%		0%		
Level 7	1%	1 137	3%	4 756	5%	14 614	3%	4 585	25 093
Level 8	0%		0%		0%		0%		
Level 9	2%	1 925	26%	39 240	34%	94 714	5%	6 734	142 614
Total	**100.00%**	**87 501**	**100.00%**	**148 636**	**100.00%**	**281 052**	**100.00%**	**143 288**	**660 480**

2	Historic trends and ongoing initiatives	Water and sanitation provision remains one of the key areas of service delivery for the IDM. In 2013 the district became a Water Service Authority and in 2016 the Water Services Development Plan (WSDP) was adopted. Table 2-3 indicates the water and sanitation provision for the period 2010 – 2018 (from the IDP). It should be noted that the backlog eradication program implemented in the

		Maphumulo Local Municipality has been very effective in addressing the backlogs in the area. The number of households that do not have access to water and sanitation services is decreasing, albeit slowly.

Table 2-3: Households without access to water

Location	Population	Households	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Mandeni	138 078	38 235	23 031	20 930	20 793	20 741	20 665	19 747	19 613	19 613
KwaDukuza	231 187	70 284	9 725	7 056	6 859	6 613	6 253	6 253	6 253	6 253
Ndwedwe	140 820	29 200	6 255	5 346	4 419	4 419	4 419	4 419	4 419	4 419
Maphumulo	96 724	19 973	11 116	10 369	8 079	8 079	7 160	5 614	1 664	863
Total	**606 809**	**157 692**	**50 127**	**43 701**	**40 150**	**39 852**	**38 497**	**36 033**	**31 949**	**29 422**

Figure 2-1: Access to water in the district

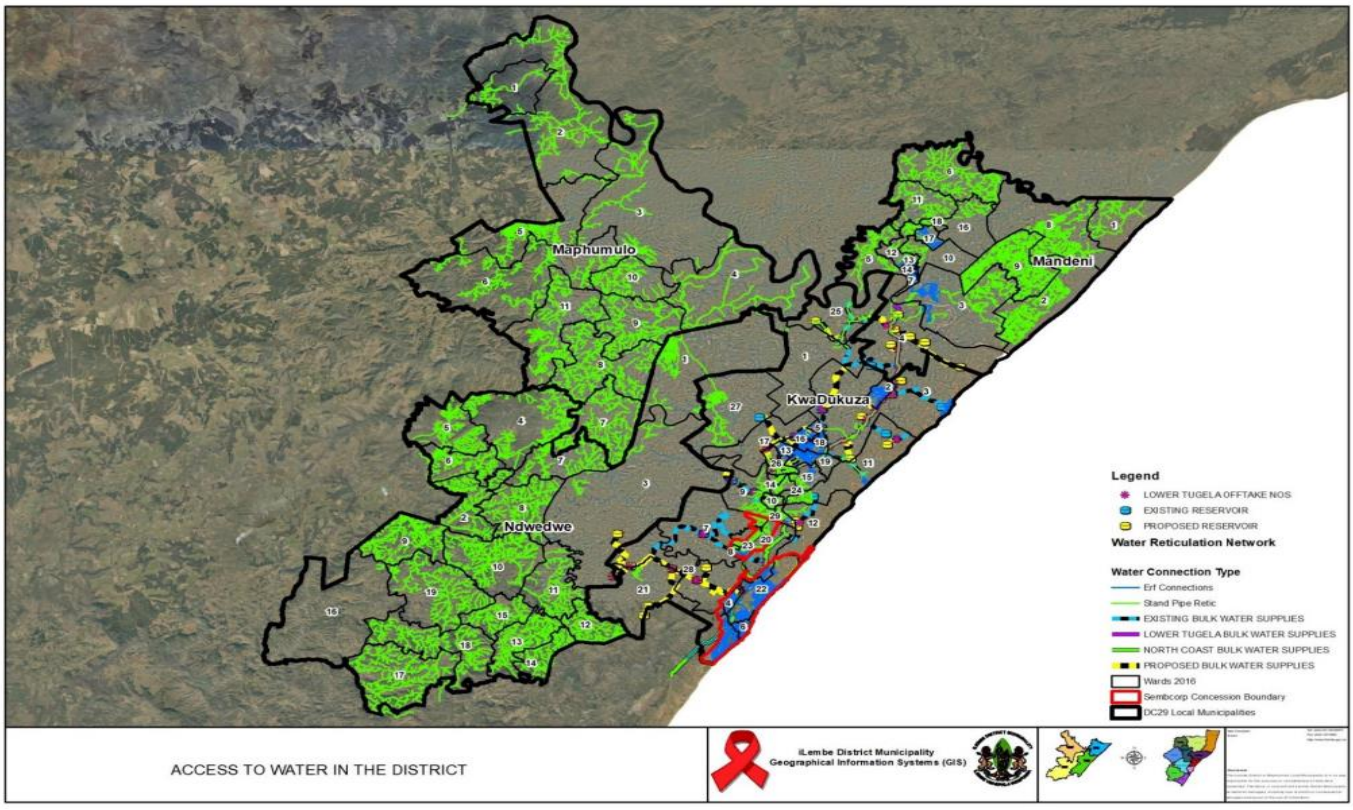


Table 2-4: Water backlog eradication per year

	Population	Households	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Number of HH without access to water	606 809	157 692	50 127	43 701	40 150	39 852	38 497	36 033	31 949	31 148
% of HH without access to water			31.79%	27.71%	25.46%	25.27%	24.41%	22.85%	20.26%	19.75%
Achievements per year			**2 350**	**6 426**	**2 746**	**1 103**	**1 355**	**1 464**	**4 084**	2 527
Number of HH without access to water			47 777	37 275	37 404	38 749	37 142	34 569	27 865	28 621
% of HH without access to water			30.30%	23.64%	23.72%	24.57%	23.55%	21.92%	17.67%	18.15%

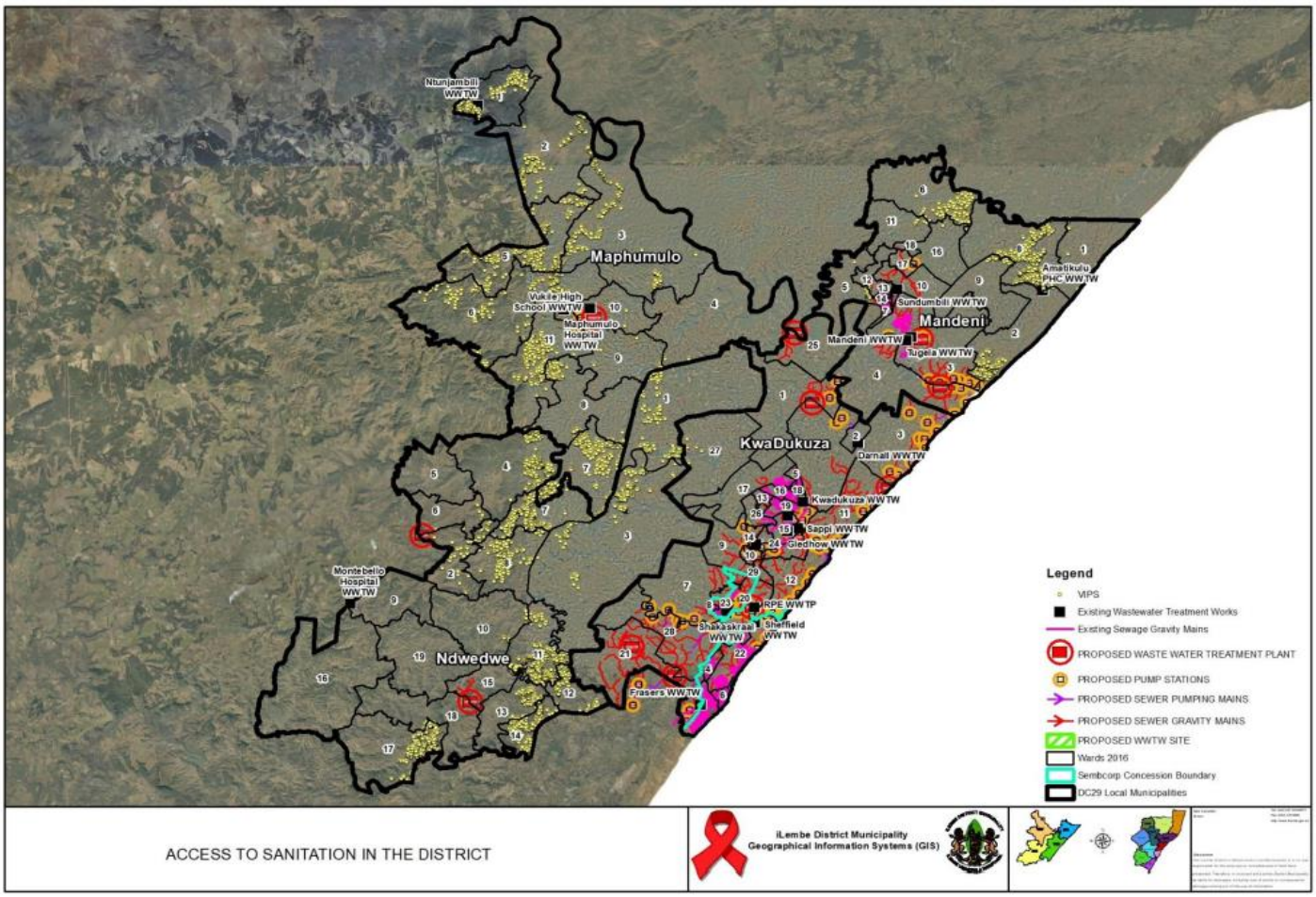
Table 2-5: Households without access to sanitation

Location	Population	Households	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Mandeni	138 078	38 235	8 167	6 767	5 256	3 786	2 919	1 892	1 571	1 171
KwaDukuza	231 187	70 284	12 311	12 311	12 311	12 311	12 311	12 311	12 311	12 311
Ndwedwe	140 820	29 200	12 660	11 116	9 395	7 995	6 805	5 053	4 741	4 361
Maphumulo	96 724	19 973	19 440	18 040	17 169	15 769	14 579	13 182	13 093	12 713
Total	**606 809**	**157 692**	**52 578**	**48 234**	**44 131**	**39 861**	**36 614**	**32 438**	**31 716**	**30 556**

Table 2-6: Sanitation backlog eradication per year

	Population	Households	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Number of HH without access to sanitation	606 809	157 692	**52 578**	**48 234**	**44 131**	**39 861**	**36 614**	**32 438**	**31 716**	**30 556**
% of HH without access to sanitation			33.34%	30.59%	27.99%	25.28%	23.22%	20.57%	20.11%	19.38%
Achievements per year			**6 219**	**4 344**	**4 103**	**4 270**	**3 247**	**4 176**	**722**	**1 160**
Number of HH without access to sanitation			46 359	43 890	40 028	35 591	33 367	28 262	30 994	29 396
% of HH without access to sanitation			29.40%	27.83%	25.38%	22.57%	21.16%	17.92%	19.65%	18.64%

Figure 2-2: Access to sanitation in the district



3	Strategic Directives	The following strategic projects were identified in the previous IDP - subject to funds being made available from the Department of Water and Sanitation

Table 2-7: Strategic interventions from previous IDPy

Municipality	Project	Wards	Cost	Objective
Mandeni	Ndulinde sub-regional water supply scheme	5,6,11,12,16,17	R270 197 304	The initial intent was to supply communal standpipes at a walking distance of 200m. Due to illegal connections, the scheme was upgraded to individual yard connections for all households.
	Macambini sub-regional water supply scheme	1,2,3,8,9	R616 572 540	To upgrade the Sundumbili waterworks from 27 ML/day to 40 ML/day.
	Inyoni housing bulk water and sanitation project	10	R33 564 711	To provide bulk water and sanitation to 3050 sites within the housing project.
KwaDukuza	Lower Thukela regional bulk water scheme		R1 283 580 681	To increase the potable water supply to coastal areas. Umdloti and Umvoti river system cannot cope with water demand.
	Groutville D Household Sanitation project		R254 888 000	The aim is to provide waterborne sanitation to Chris Hani, Lliyads, Ntshawini, Mnyundwini, Etsheni and Njekane (Project is still in feasibility stage)
	South regional bulk water and sanitation project		R563 134 000	To upgrade the bulk water and sanitation and reticulation to Nkobongo, Shayamoya, Shaka's Head and Etete township. The area is currently services through standpipes and VIPS which are failing due to the high water table in the area.
Ndwedwe	Umshwati bulk pipeline	4,5,6,8,9		To augment the water supply to Ndwedwe Ozwathini area. This project will be implemented in conjunction with Umgeni Water.
Maphumulo	Balcome/KwaSizabantu sub-regional water scheme	3,5,6	R450 000 000	To upgrade the water supply infrastructure in the area to a household connection.
	Maphumulo/KwaDukuza sub-regional water scheme	1,2,3,4,7,8,9,10,11	R326 474 169	TO provide bulk water supply and water reticulation as well as yard connections from Maphumulo to KwaDukuza.
	Maphumulo town Bulk water-borne sanitation project		R37 000 000	To provide the whole of Maphumulo with access to waterborne sanitation services.

4	LOS / SOS criteria	**Table 2-8:** Level of service water and **Table 2-9**: Level of service Sanitation indicate the levels of service criteria used. SOS for the municipality criteria have not yet been formally developed.

Table 2-8: Level of service water

LOS	WATER SERVICE	
	Water	**Customer consumption measure**
Level 0	Natural resources	kl pm
Level 1	Water point more than 200m distance	kl pm
Level 2	Communal standpipe less than 200m distance	kl pm
Level 3	Yard tap connection (single tap)	kl pm
Level 4	15 - 25 mm connection to the building (multiple taps)	kl pm
Level 5	40 - 100 mm consumer connection	kl pm
Level 6	150 mm or larger consumer connection	kl pm

Table 2-9: Level of service Sanitation

LOS	SANITATION SERVICE	
	Sanitation	**Customer consumption measure**
Level 0	No formal service	N/A
Level 1	Bucket system	Bucket removal (No. visits pm)
Level 2	Unventilated pit latrines and soakaways	Vacuum tank service (av no. visits pm)
Level 3	Ventilated improved pit (VIP)	Vacuum tank service (no. visits pm)
Level 4	Dry composting toilet	Compost removal (av no. visits per month
Level 5	Communal chemical toilet	Vacuum tank service (no. visits pm)
Level 6	Flushing Communal Toilet	kl pm
Level 7	Septic or conservancy tank	Vacuum tank service (no. visits pm)
Level 8	Waterborne sewerage to each stand 110mm connection (no toilet structure)	kl pm
Level 9	Waterborne sewerage to each stand 110mm connection, with toilet structure	kl pm
Level 10	Waterborne sewer available, max connection size 150 mm or larger	kl pm
Level 11	Waterborne sewerage, discharge load is above normal limits.	kl with discharge loading pm

5	Targets	**Water** The minimum LOS for water and sanitation have been determined by the national minimum standard as stipulated in the Water Services Act. The Act provides the right for people to have access to basic water supply. The national minimum level of service, communal standpipes less than 200m distance is the targeted minimum level of service that every customer should receive in the iLembe District. This minimum LOS is the target for in the rural areas. , For customers living in urban areas who receive a higher level of service than the national minimum, the targeted level of service is set to supply a 200L/day metered connection to a building, thus a targeted level 3 level of service. **Sanitation** To provide all customers with access to a VIP latrine or equivalent facility, thus a targeted level 2 level of service. This is the target set for rural residential customers. For urban customers a minimum target of in-house low volume flush toilet with a septic tank and soakaway is set, thus a targeted minimum level of service of level 3..
6	Lifecycle cost implications	LOS backlogs are determined as the 'gap or shortfall' between the minimum standard of service and the current level of service. The following tables indicate the current access backlog as well as an estimate of the funding required to provide the targeted level of service.

The funding to meet this need is beyond the current availability of funds, and spending will, therefore, need to be prioritized in some manner, possibly including a focus on the development nodes identified in the SDF.

The costs for addressing the backlog per household have been estimated for life-cycle cost modeling purposes as follows:

Water

- Urban: R20 000
- Rural: R28 000 (noting the low-density development)

Sanitation:

- Urban: R16 300
- Rural: R7 900.

After the assets in KwaDukuza have been constructed, Sembcorp is responsible for the implementation of their operations and maintenance.

Table 2-10: Total access backlog for water and Table 2-11: Total access backlog for sanitation indicate an estimate of the expenditure that would be required to eliminate the access backlog over the 10 year planning period.

Table 2-10: Total access backlog for water

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Area		**2018/19**	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**
Maphumulo	Urban	594	594	594	594	594	594	594	594	594	594
	Rural	891	891	891	891	891	891	891	891	891	891
Mandeni	Urban	586	586	586	586	586	586	586	586	586	586
	Rural	879	879	879	879	879	879	879	879	879	879
KwaDukuza	Urban	530	530	530	530	530	530	530	530	530	530
	Rural	795	795	795	795	795	795	795	795	795	795
Ndwedwe	Urban	739	739	739	739	739	739	739	739	739	739
	Rural	1 109	1 109	1 109	1 109	1 109	1 109	1 109	1 109	1 109	1 109
Total	(Million)	151	151	151	151	151	151	151	151	151	151

Table 2-11: Total access backlog for sanitation

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Area		**2018/19**	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**
Maphumulo	Urban	445	445	445	445	445	445	445	445	445	445
	Rural	667	667	667	667	667	667	667	667	667	667
Mandeni	Urban	590	590	590	590	590	590	590	590	590	590
	Rural	884	884	884	884	884	884	884	884	884	884
KwaDukuza	Urban	1 179	1 179	1 179	1 179	1 179	1 179	1 179	1 179	1 179	1 179
	Rural	1 769	1 769	1 769	1 769	1 769	1 769	1 769	1 769	1 769	1 769
Ndwedwe	Urban	574	574	574	574	574	574	574	574	574	574
	Rural	861	861	861	861	861	861	861	861	861	861
Total	(Million)	78	78	78	78	78	78	78	78	78	78

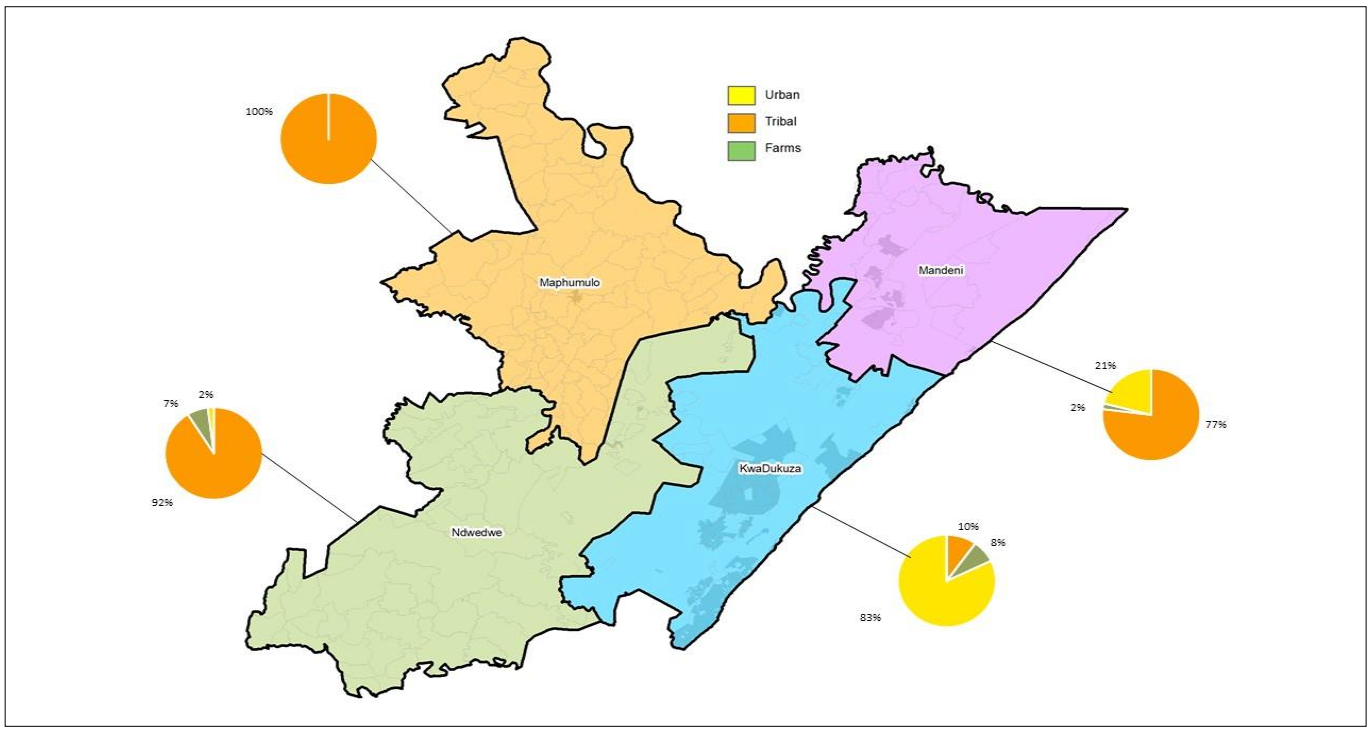
7	Service delivery backlogs	• Current backlog targets are not being addressed mainly due to a shortage of funding • The District has been experiencing rapid growth over the past 15 years and in most cases, infrastructure delivery has lagged significantly behind this growth. • The intensification of residential, commercial and industrial greenfield developments has necessitated a structured infrastructure response, especially for water and sanitation. • To this end, the iLembe Water and Sanitation Masterplan was developed and adopted by Council in 2017.
8	LOS / SOS backlog reduction tactics	To enable the effective eradication of the backlog, the following strategies can be applied: • The prioritisation of areas where the backlogs are to be addressed to be linked to the availability (and planned future availability) of bulk water supply; • Areas with a significant number of customers currently not at the minimum level of service should be prioritised; and • Political aspirations and/or pressure from communities should be taken into consideration in the prioritisation of the backlog eradication.
9	Chapter confidence	• There is a nominal level of confidence in the data provided in the chapter. The data has been compiled making use of diverse sources of information. • Kkey assumptions made were the projection of the population to 2018/19 based on the 2011 - 2016 census data obtained from Stats SA.
10	Chapter summary	The following infrastructure characteristics, issues and challenges impact on the future development of the iLembe District: • The provision of basic infrastructure is hampered by the topographic constraints, low densities and low affordability levels, particularly in rural and traditional areas. • Service infrastructure in iLembe's urban areas needs upgrading and maintenance, however, through grant funding from the Department of Water and Sanitation, particularly MWIG, the municipality is substantially addressing this challenge. • Rural areas are severely affected by a shortage of basic services and continued service delivery backlogs. • Bulk water supply is a major constraint that affects the entire District and is in urgent need of attention. • 11% of the population still does not have access to clean water and obtain water from rivers and streams. This poses a health risk with further implications regarding the provision of social services. • 9% of the population still do not have access to basic sanitation. • The urban areas have water-borne sanitation systems, but the peri-urban and rural areas rely on VIP latrines or no system at all. This places tremendous strain on the environment and poses a potential health risk. • ILembe has been severely hampered by drought in recent years, which has diminished the Municipality's ability to provide water to all inhabitants. • It is estimated that capital in the order of R145.7m per year would be required to eliminate the existing backlogs over a 10 year period (R84.9m pa for water infrastructure, and R60.6 m for sanitation).

3 FUTURE DEMAND

An overview of customer growth trends; existing and proposed demand management techniques; associated infrastructure implications; summary of needs, challenges, risks and opportunities, and proposed strategic and tactical responses.

1	Historic growth trends	Several factors were considered for the impact on population growth: • Age distribution • General mortality rates • HIV infections rates as well as HIV mortality rates • In migration The growth rates per local municipality were taken from Stats SA data as follows: • iLembe: 0.34% • Maphumulo : -1.4% • Mandeni: 0.28% • KwaDukuza: 0.78% • Ndwedwe: 0.06%
2	Demand drivers	The current demand drivers include: • Growth and backlog • Ecotourism • Agriculture • Manufacturing
3	Growth strategy	The following pillars have been set as key performance areas to be used to measure the goals set for the year 2050: • A diverse and growing economy • In harmony with nature • Equity of access • Promote social wellbeing • A liveable region

Figure 3-1: Population Split



4	Sector demand forecast	Each spatial priority area grows at a different rate. Currently, the largest number of customers fall within the KwaDukuza municipal area. KwaDukza is classified as a Tertiary Node. In terms of functionality, this node should provide service to the sub-regional economy and community needs. The towns of Maphumulo and Mandeni are classified as "Quaternary Nodes" which means, in terms of functionality, these nodes should provide service to the local community and respond to community needs. It should be noted that, in line with the PGDS, the towns of Maphumulo and Ndwedwe have been recently formalized and gazetted as formalized towns. The respective municipalities are currently in the process of increasing the infrastructure capacity to be able to accommodate potential developers. **Table 3-1:** Growth rates indicates the historic growth trends for the different local municipalities. The growth rates have been used to model future population growth until the year 2028.

Table 3-1: Growth rates

Municipality	**2001-2011**	**2011 - 2016**
Ilembe	0.80 %	1.70 %
Maphumulo	-2.21 %	-7.00 %
Mandeni	0.81%	1.40 %
KwaDukuza	3.20 %	3.90 %
Ndwedwe	-0.27 %	0.30 %

Table 3-2: Assumed HH growth for the 10-year planning period and cost of addressing service needs

Area	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Maphumulo										
Mandeni	128	128	129	129	130	130	130	131	131	131
KwaDukuza	723	728	734	740	745	751	757	763	769	776
Ndwedwe	20	20	20	20	20	20	20	20	20	20
Total HH	872	878	884	890	896	902	908	915	921	927
Cost Water (Million)	19.43	19.56	19.69	19.83	19.96	20.09	20.23	20.37	20.50	20.64
Cost Sanitation (Million)	12.13	12.21	12.30	12.39	12.48	12.57	12.66	12.75	12.84	12.94

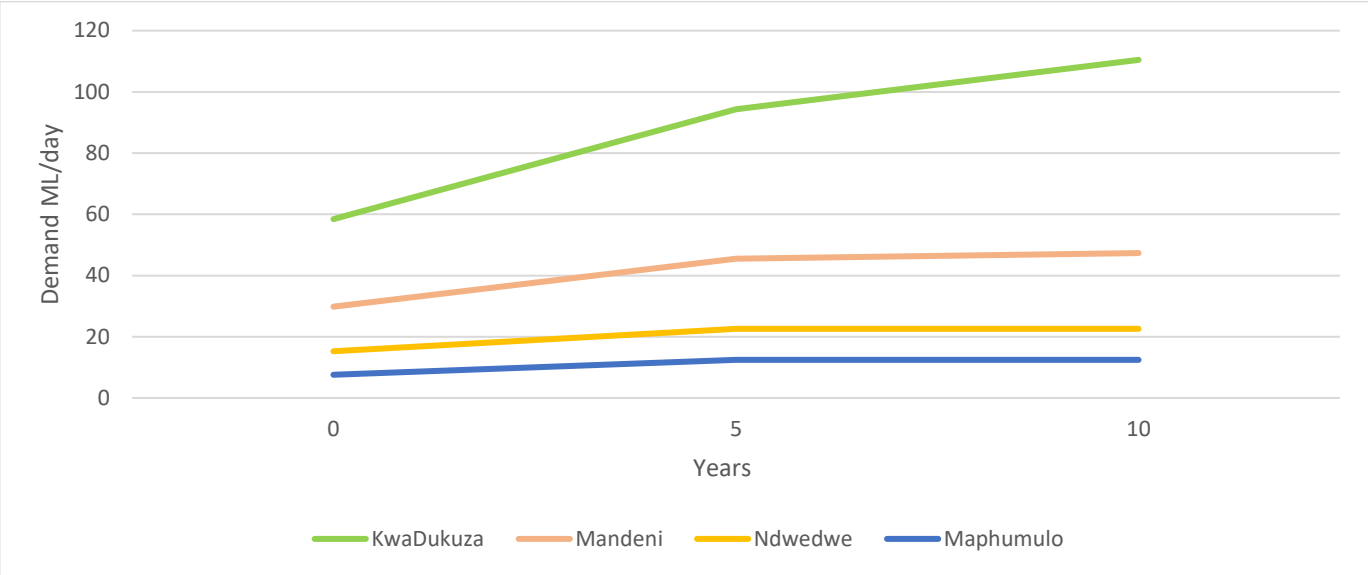
5	Infrastructure impact	iLembe District Municipality expects the following growth over the 10-year planning period to be: • Maphumulo: No growth • Mandeni: 1302 HH • KwaDukuza: 7490 HH • Ndwedwe: 204 HH All capital growth costs have been included in the high-level life-cycle model used in the prepation of this AMP, as this is part of the responsibility of the munici cipality (including portions managed by Sembcorp). The growth will in turn also have a significant impact on the operations and maintenance cost for the portfolio as there will be more assets under the control of the municipality. In the case of sanitation in the rural areas, the operations cost would increase (including emptying latrines) but the maintenance cost would not as the VIP toilets are handed over to the households. This growth will also have an impact on the water demand for the municipality. Over the next 10 years, an addition 9.08Kl/year/HH is needed. This means a total of 81.72ML/year is needed to address the water needs of the municipality. • Due to the growth in population addition infrastructure needs to be constructed such as: • Water treatment works • Wastewater treatment works • Water reticulation and bulk supply lines • Wastewater reticulations • Additional pump stations for water and sanitation • In addition to the increased physical demand, there will also be an increase in the maintenance and operation required for maintaining the infrastructure. • The future demand needs from each of the local municipalities are listed below. The increased demand will have an impact on the current infrastructure state and.

		the rate of deterioration will increase as the infrastructure will have to cope with the increased demand.

Table 3-3: Current and projected water demand

Local Municipality	Current Demand (ML/day)	5-year Demand (ML/day)	10-year demand (ML/day)
KwaDukuza	58.42	94.34	110.44
Mandeni	29.83	45.45	47.33
Ndwedwe	15.26	22.59	22.59
Maphumulo	7.58	12.45	12.45
Total	**111.09**	**174.83**	**192.81**

Figure 3-2: Future demand



6	Demand management tactics	Apart from the need to develop and expand the respective networks, there is a need to adopt formal demand management tactics in line with recognized industry practice, including water loss minimization. This implies the need for accurate and complete data on the network layout, consumption, and payment data.
7	Chapter confidence	There is nominal confidence in the data used in the preparation of this chapter. The data has been compiled making use of the IDP as well as the Water and Sanitation Master Plan.
8	Chapter summary	The main challenges associated with future demand are: • Development of sufficient bulk water resources (including the development of new sources by Umgeni Water); • Addressing backlogs in remote and sparsely populated areas; and • Access to enough financial resources to address the infrastructure lifecycle needs (capital and maintenance) associated with the increased infrastructure network to meet future demand. It is estimated that IDM would need an average of about R31. 56m per year (R19.43m for water and R12.13m for sanitation) to keep pace with the provision of minimum services for future development.

4 LIFE-CYCLE PLAN

An overview of the infrastructure life-cycle needs, affordability, constraints, delivery tactics, risks and opportunities, and proposed short, medium and long-term responses (projects, programs and budgets).

1	Life-cycle risk profile	Insufficient information is currently available to assess capacity, utilisation and performance risks. The overall portfolio health (DRC/CRC according to the asset register) of the water infrastructure is 54%, and 52% for sanitation infrastructure. This is an indication that both portfolios are in good health.
2	Capital programs	iLembe currently has a capital program which has been developed. Error! Reference source n ot found.**Table 4-1** depicts a summary of the MTREF projects for a 3-year period.

Table 4-1: MTREF projects

MTREF	Budget 2018/19	Budget 2019/20	Budget 2019/21
New Infrastructure	236 756	237 225	274 869
Renewal of existing infrastructure	51 591	71 396	83 301
Upgrade of existing infrastructure	5 217	11 304	17 391
Grand Total	**293,564**	**319,925**	**375,560**

3	Maintenance management	The maintenance regime adopted, influences the functional performance and useful life that can be expected from an asset or group of assets. Good maintenance practices and standards require planned preventative and planned reactive maintenance measures to function optimally and efficiently. Currently, IDM applies almost exclusively a reactive maintenance regime. Currently, the available budget for operations and maintenance for water is R52 million (including KwaDukuza) and, for sanitation, only R5 million. The total maintenance needs are assessed to be higher, especially for sanitation, as illustrated in **Figures 4-1 and 4-2**.

Figure 4-1: Water O&M Needs

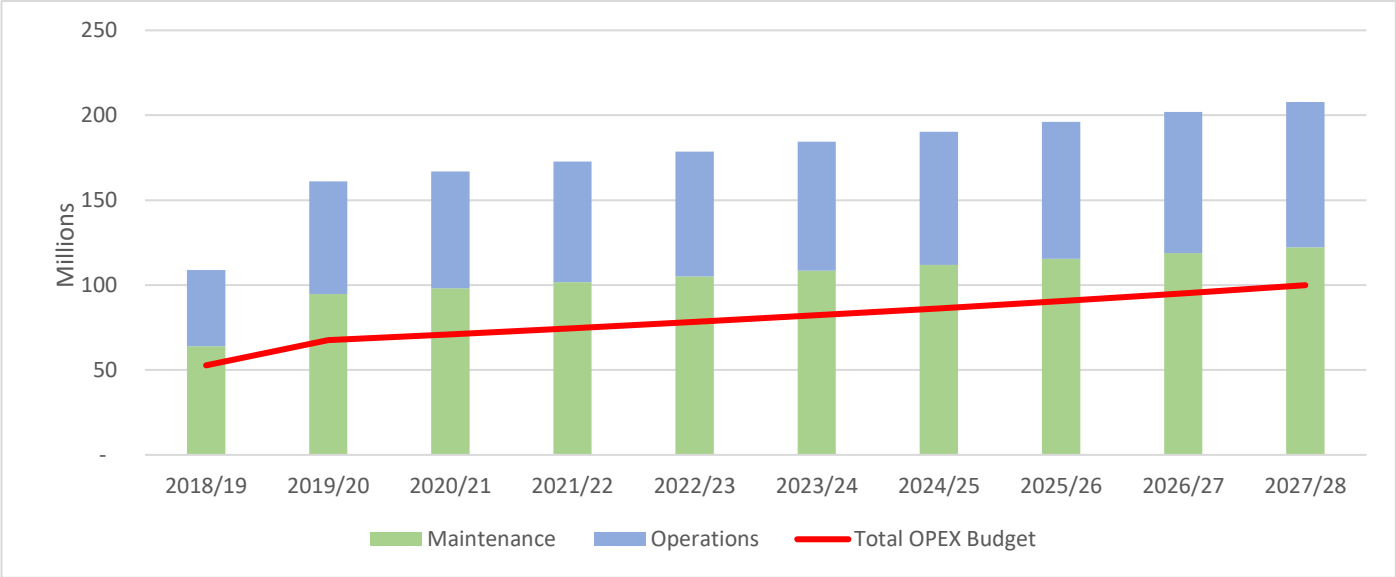
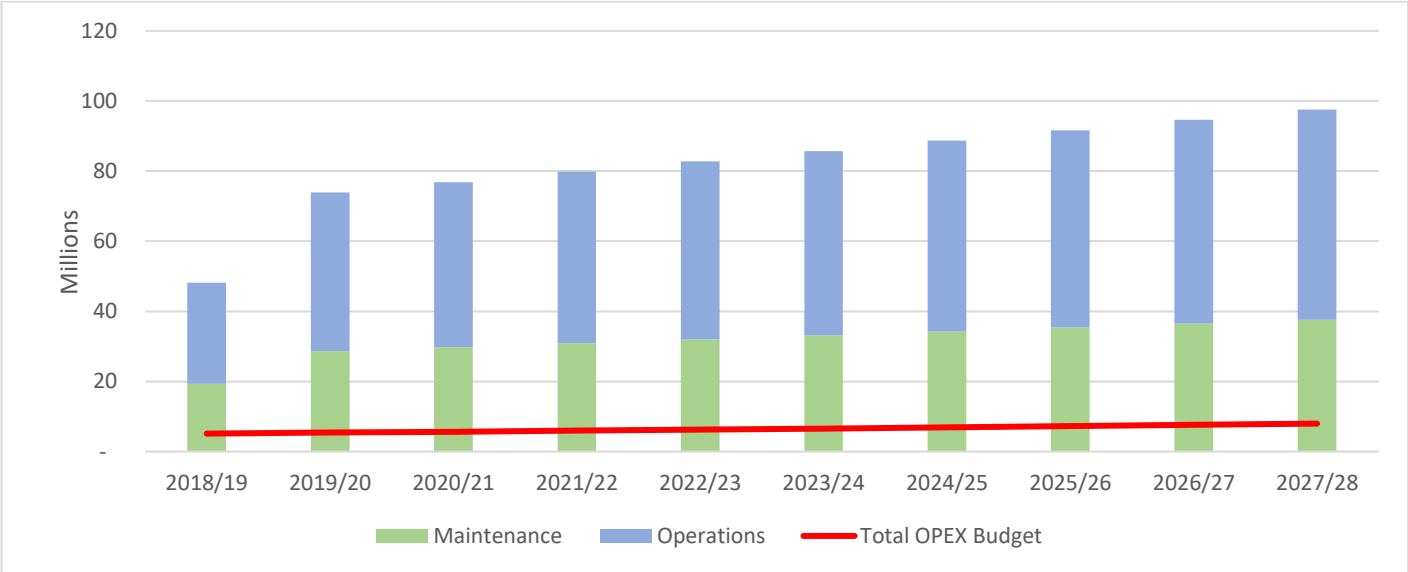


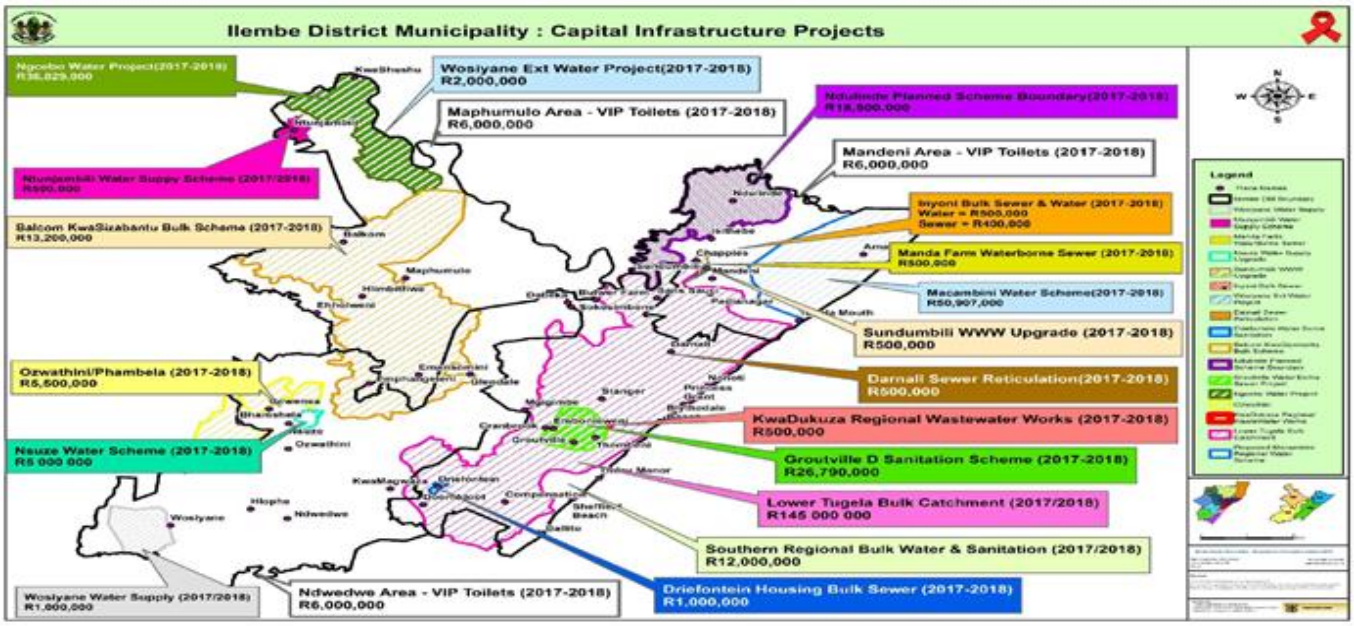
Figure 4-2: Sanitation O&M Needs



4	Operations management	"Operations"in the context of the figures above includes for the cost of all activities associated with planning, treatment, and management activities (estimated). A formal operations management system is in place for the concession in KwaDukuza.
5	Delivery packaging and scheduling	A delivery management strategy is an approach and plans to resource, procuring, packaging and scheduling of capital and operational activities, projects and programs. In terms of MFMA circular 77 from National Treasury's Standard for Infrastructure Procurement and Delivery Management (SIPDM), each municipality should have an infrastructure delivery management plan which is able to deliver value for money while minimizing the scope for corruption. The municipality should adopt an infrastructure delivery management strategy and plan that establishes: • a control framework for the planning, design and implementation of infrastructure projects and infrastructure procurement; address the following aspects: • institutional arrangements;

		• demand management; • acquisition management; • contract management; • logistics management; • disposal management; • reporting of supply chain management information; • regular assessment of supply chain management performance; and • risk management and internal control; and • state the minimum requirements for infrastructure procurement. The infrastructure delivery management strategy for the water and sanitation unit should address the following specific water and sanitation aspects: • Handling of operational and maintenance works – internal or external, e.g. testing of water, procurement of chemicals, maintenance on pipes, etc.; • Project management roles –internal vs external - contract management vs project management; • When to conduct projects internally vs out-sourcing; • Depots and store chain management; and • Contracts to be used in procurement projects, etc. Error! Reference source not found. shows the breakdown of the capital expenditure per a rea. The programs are broken down even more into smaller projects, and these are reflected in the SDBIP.

Figure 4-3: Capital Projects package



6	Life-cycle plan	The following are ***estimated based on the life-cycle assumptions*** previously noted. The total capital needed to eradicate the existing access backlog over the next 10 years based on the modelled CRC: • Water: R1 518 Million • Sanitation R784 Million The total capital needed for capital renewal infrastructure (including pipe replacement of AC pipes) over the next 10 years: • Water: R1 295 Million • Sanitation: R627 Million Total funding needed to perform maintenance over the 10 year period on infrastructure- existing plus the above stated additional infrastructure needs): • Water: R1 040 Million • Sanitation: R317 Million VIP toilets are constructed as part of the backlog eradication effort from the municipality but once it has been constructed the responsibility for the maintenance of the asset is transferred to the owner, however periodic emptying and associated repairs are the responsibility of the municipality. Total funding needs to perform operations (excluding bulk purchases) over the 10 year planning period on existing infrastructure and newly created infrastructure (again based on the assumption of addressing the needs indiacted above): • Water: R 728 Million • Sanitation: R502 Million Total capital needs for growth for the 10-year period due to new households • Water: R200 Million • Sanitation: R125 Million The estimated total available funding for water and sanitation over the next 10 years is: • CAPEX o Water R2 586 Million o Sanitation R811 Million • OPEX o Water R798 Million o Sanitation R64.7 Million

Figure 4-4: Water CAPEX Needs and Envisaged Available Budget over the 10 year planning period

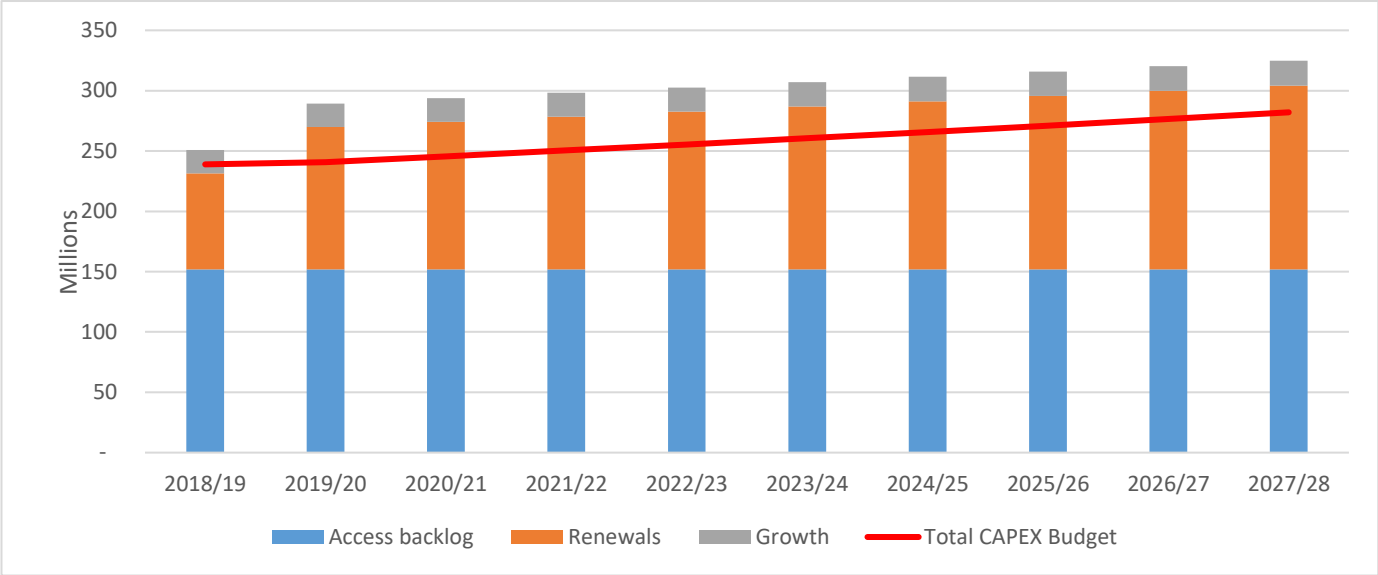


Table 4-1: Water CAPEX Needs and Budget

Water CAPEX	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Access backlog	151.85	151.85	151.85	151.85	151.85	151.85	151.85	151.85	151.85	151.85
Renewals	79.48	117.93	122.22	126.50	130.80	135.09	139.39	143.69	148.00	152.31
Growth	19.43	19.56	19.69	19.83	19.96	20.09	20.23	20.37	20.50	20.64
Total CAPEX Needs	**250.76**	**289.34**	**293.76**	**298.18**	**302.61**	**307.04**	**311.47**	**315.91**	**320.35**	**324.80**
Total CAPEX Budget	**238.91**	**240.71**	**245.53**	**250.44**	**255.44**	**260.55**	**265.76**	**271.08**	**276.50**	**282.03**

Figure 4-5: Sanitation CAPEX Needs and Envisaged Available Budget over the 10 year planning period

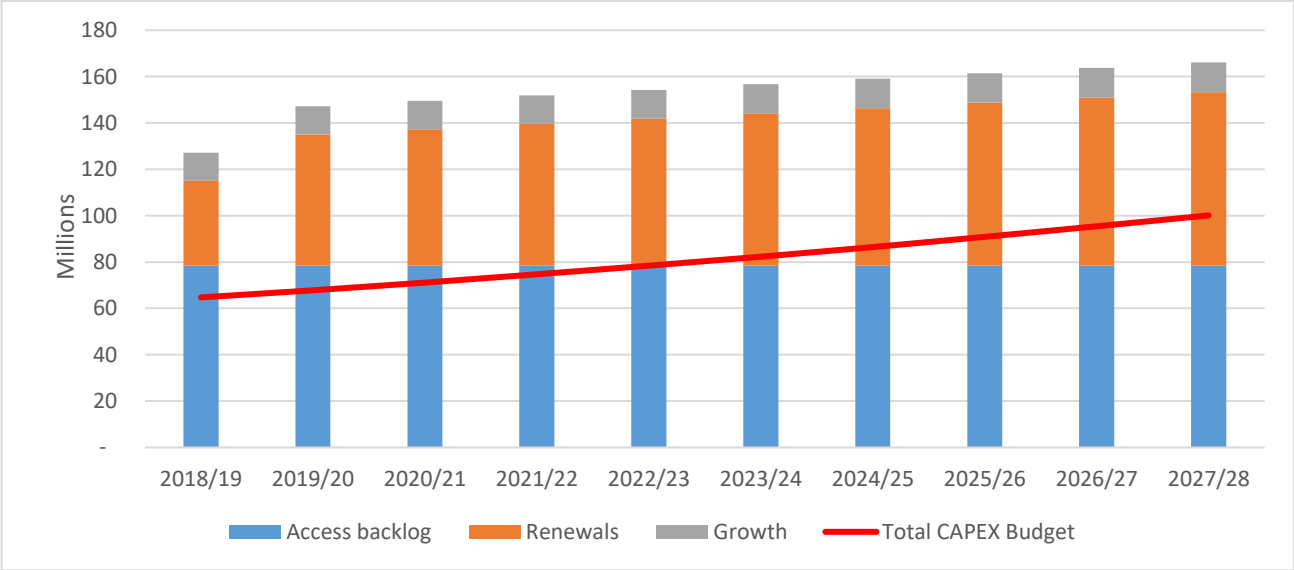


Table 4-2: Sanitation CAPEX Needs and Budget

Sanitation CAPEX	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Access backlog	78.48	78.48	78.48	78.48	78.48	78.48	78.48	78.48	78.48	78.48
Renewals	36.60	56.52	58.79	61.06	63.33	65.61	67.88	70.16	72.44	74.72
Growth	12.13	12.21	12.30	12.39	12.48	12.57	12.66	12.75	12.84	12.94
Total CAPEX Needs	**127.21**	**147.22**	**149.58**	**151.93**	**154.29**	**156.66**	**159.03**	**161.39**	**163.77**	**166.14**
Total CAPEX Budget	**64.73**	**67.76**	**71.15**	**74.70**	**78.44**	**82.36**	**86.48**	**90.80**	**95.34**	**100.11**

7	Chapter confidence	• :An asset register does exist however it is not mSCOA aligned. • Gaps within the asset register data need to be rectified for more accurate analysis. These gaps include the following • Lack of failure modes (criticality, utilisation, performance and cost of operation) • No below ground asset data provided • Costs were determined by analysing households within the municipality and their distributions across the municipality. Costs were compared to the current master plans and escalated where applicable to get a real present value. • High level lifecycle models had to be assumed as detailed and verified models have not been established.
8	Chapter summary	Based on the data compiled in the chapter the following spending recommendations are made: • Current levels of capital available to the water sector can reasonably be expected to be adequate to maintain existing standards, substantially (though not fully) address backlogs and accommodate growth. • The sanitation portfolio, however, needs additional capital to be made available to meet the infrastructure needs in terms of addressing backlogs and capital renewal. The operations and maintenance budget is also significantly below norms.

5 FINANCIAL PLAN

An overview of the financial objectives, historic financial performance, revenue forecast (where applicable) and funding strategy, and associated challenges, risks and opportunities.

1	Financial objectives and targets	IDM managed to meet 70% of its financial targets in terms of KPIs in 2017/18. Some objectives, directives and targets include: • Ensure availability and sustainable management of water and sanitation for all • The investment policy also notes that all reasonable steps should be taken to ensure money owed are collected as soon as possible after the due date • The municipality has commissioned an urban regeneration strategy to regenerate CBD areas. • Coastal development is promoted specifically through investment within defined nodes and specific to the functionality of such nodes, i.e., Mandeni, Tugela Mouth, Wangu and Isithebe Industrial Zone. • To ensure a sound revenue management strategy that is targeted at 85% collection rate. • Implementation of water schemes for the next 3 years to eradicate backlogs and the capital infrastructure projects within the iLembe region. • Reduction in water losses.
2	Financial performance	• The following highlights the financial performance for iLembe Municipality and the sector financial performance; • The most significant source of internal income is the income from the water and sanitation services. The current budgeted percentage of internal revenue is 30%. • Internal revenue generated has been used mainly for repairs and maintenance of the infrastructure and direct costs of providing the water and sanitation services. • The municipality is facing high water distribution losses due to illegal connections and water leaks. The current budget for water distribution losses is R8,7 million (32 790kl). • The repairs and maintenance as a percentage of water and sanitation (Carrying value) ratio, which measures the level of repairs and maintenance that ensures adequate maintenance of assets to prevent breakdowns and interruptions to service delivery for the financial year 2017/18 is 1% and 7% respectively. The amount currently spent by the municipality on repairs and maintenance on water services is R23 million instead of R128 million and R10 million on sanitation services instead of R12 millions in line with the norm of 8%. • The municipality is currently highly dependent on grant funding to fund its infrastructure development and maintenance. • The total CAPEX budget for water and sanitation is allocated into the creation of new asset, renewal and upgrading of infrastructure as per **Error! Reference source not found.** and **Error! Reference source not found.**et.

		• Water Services have budgeted an average of 73% each year for new capital infrastructure and 27% for replacements or renewal of infrastructure and no budgets have been allocated to the upgrading of infrastructure. • Sanitation services are budgeted on an average of 89% each year for new capital infrastructure and 1% for replacements or renewal of infrastructure and 15% to the upgrading of infrastructure. • A total of R909 million is available from the DORA Capex budget for the next 3 years (2019-2021), however, the MTREF budgetary needs for the water and sanitation sector amounts to R989 million resulting in a deficit for R80 million • • • Table 5-1: Total Grant available versus 3-year MTREF Capital Budget indicates that the municipality does not have sufficient funding to implement all the water and sanitation projects that are required to service the backlogs and cater for the new developments. This is attributed to the fact that the District is mostly rural and substantially relies on grants to fund the implementation of projects.

Figure 5-1: Water Network 3-year MTREF Capital Budget

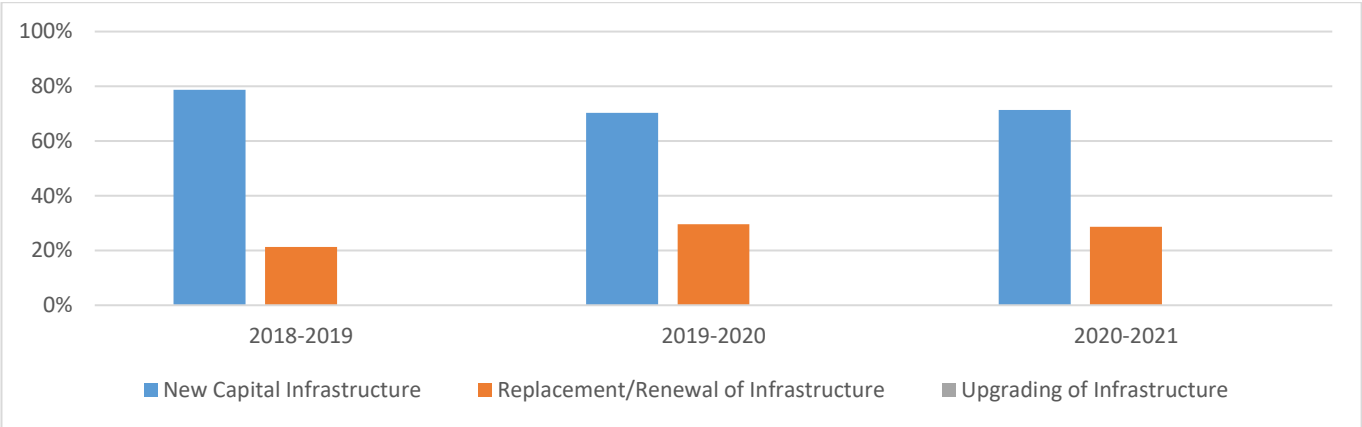


Figure 5-2: Sanitation Network 3-year MTREF Capital Budget

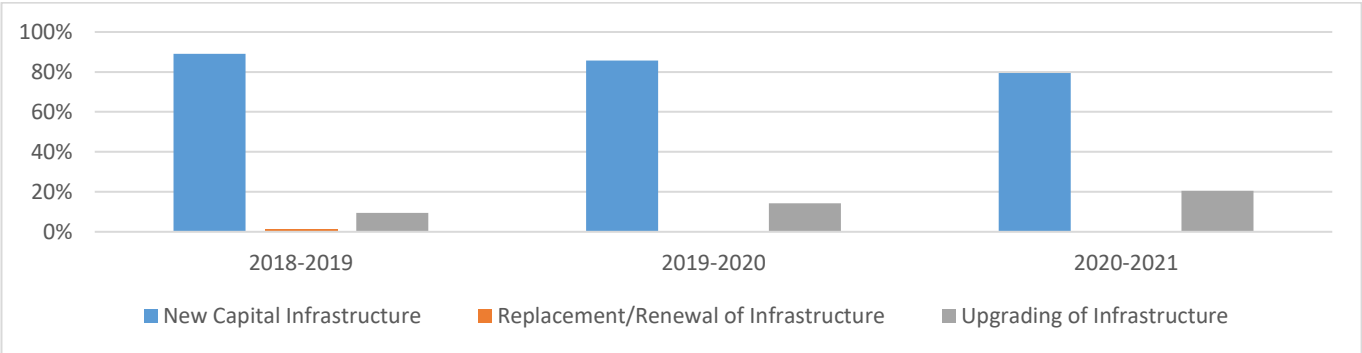


Table 5-1: Total Grant available versus 3-year MTREF Capital Budget

Grant availability	2018-2019	2019-2020	2021-2022
Total Water & Sanitation Capex needs	346.70	412.04	419.91
3 year MTREF	303.64	308.47	362.01
Total surplus or (deficit)	43.06	103.57	57.90

3	Municipal affordability	The municipality consumer debtors increased by 18% from 2015-2016 and further by 6% in the 2017-2018 financial year, resulting in a total increase of 24% and also the total bad debts increased by 50% in 2017-2018 indicating the affordability challenge for consumers. iLembe provides an indigent policy which entails the provision of free basic services, waiving of debt on the first-time applicants and provision of "free basic" water up to 10 kiloliters every month as the majority of residents cannot afford to pay. iLembe received an equity share grant of R134 million in 2017/18 (2016/17 R123 million) for the provision of free basic services. The municipality is faced with high unemployment rates and payment of tariffs is a problem. The municipality needs to consider other revenue enhancement opportunities and determine an appropriate level of tariffs that is affordable to consumers.
4	Funding strategy	The Municipality needs to establish a committee to implement its revenue collection strategy in order to improve the collection rate. Tit needs to explore other funding models for its water and sanitation infrastructure operational and capital budgets as it is apparent that the Municipality's traditional funding sources are not adequately servicing its operational and maintenance requirements as well as its growing infrastructure service delivery backlogs. The Municipality needs to address water distribution losses • Installing of bulk and zonal meters • Implement a leak detection program • Address illegal connections through enforcement of by-lws The Municipality should consider reallocating some of the capital budgets to the need for upgrading water infrastructure.
5	Chapter confidence	In general data reliability in this chapter is considered to be poor to moderate, although a lot of effort has been spent validating the accuracy of the information, much of this information has been gained from multiple sources with different grades of confidence and has not been independently verified. .
6	Chapter summary	The overall financial health of the municipality needs improvement in order to allocate budgets to capital and maintenance project and improve service delivery. IDM is faced with financial challenges which need to be addressed including

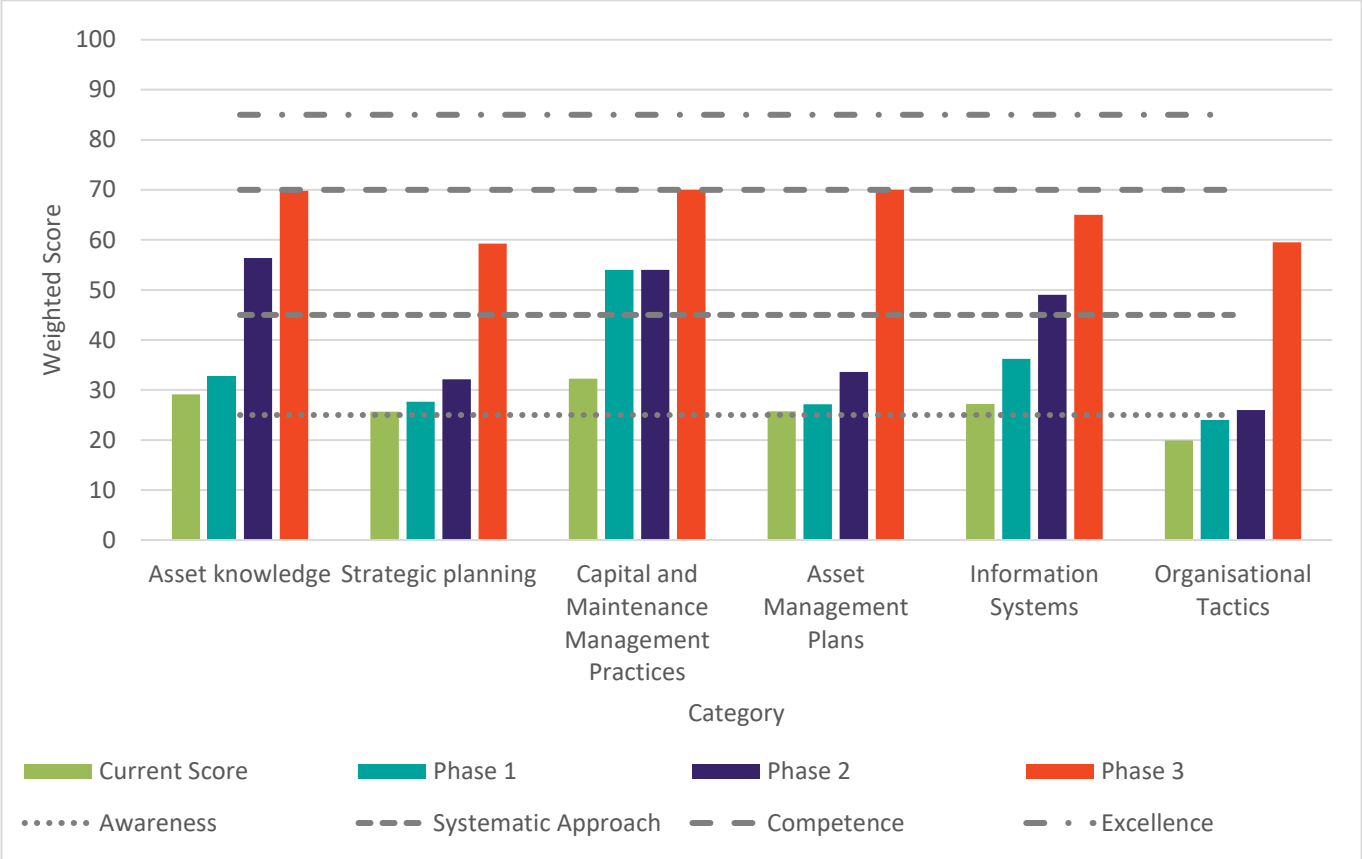
		• Grant dependence • Low liquidity ratio which will hinder them in applying for borrowing from a financial institution. • Inadequate debt and revenue collection to fund both capital and operational budget • Loss of revenue as a result of outsourcing of rights to supply water and sanitation in some areas of the District (Ballito, uMhlali etc.); • Difficulty to increase the revenue base as a large portion of the District is rural • Ageing infrastructure assets with inadequate investment plans for replacements • Minimal repairs & maintenance has been done on infrastructure assets due to funding constraints.

6 ASSET MANAGEMENT PRACTICES

An overview of existing asset management practice, improvement needs, priorities and proposed response plan.

1	Asset management practice context	A relatively low level of asset management practice maturity, especially in the field of physical asset management, exists amongst local municipalities (although it is steadily improving). The problem is added to by a tight budget and skills challenge; strong leadership (and leadership support) is vital to affect any AM practices improvements. IDM does not currently have a high level of asset management practice, there are elements that are implemented but these need to be combined into a formal asset management system to obtain the full value.
2	Ongoing practice improvement activities	IDM , as part of a development program, has undergone a practices improvement and will look to implementing an improvement plan from the outcomes of the assessment. The aim is to pursue a level of 'competence' across all the practice categories.
3	Current AM performance	Currently, the municipality has a level of practice of 'awareness' in three of the six practices categories (strategic planning, AM Plans, and organisational tactics). In the remaining categories (asset knowledge; information systems; and capital and maintenance management practices) the municipality was assessed to have practices at a weighted average between "aware" and having a "systematic approach". For full details see the Practice assessment document.
4	Priority improvement needs	The following priority improvement areas were identified and proposed to be included in an improvement plan phased over three years: • Enhancing the maintenance management process – this will directly benefit community members (year 1). • Enhancing the asset register – allow for cross-departmental integration as well as more easily mapping operational activities to strategic objectives (year 2). Enhancement of the management processes associated with projects – including a review of this preliminary AMP to include improved data (year 3). This improvement plan can be seen in **Error! Reference source not found.**.

Figure 6-1: Overview of the proposed improvement in AM Practice



5	Chapter confidence	The confidence in the practices assessment is a 75% accuracy, indicating some areas of estimation.
6	Chapter summary	• IDM has committed to improving its AM practices; • An assessment has pointed to improvments that can be made, in line with recognized good industry practice • An improvement plan has been prepared in conjunction with KLM and MLM as a combined participation in the Vuthela_ilembe LED Project

7 RISK MANAGEMENT PLAN

The sector's risk management objectives, a summary of the key risks identified throughout the plan and the proposed mitigation and control measures.

1	Risk management objectives	Effective risk management is imperative to the municipality's ability to fulfil its mandate, to meet the service delivery expectations of the public and the performance expectations within the municipality. The municipality has noted that realisation of the strategic plan depends on the municipality being able to take calculated risks in a way that does not jeopardise the direct interests of stakeholders. Sound management of risk enables the municipality to anticipate and respond to changes in the service delivery environment, as well as make informed decisions under conditions of uncertainty. The municipality subscribes to the fundamental principles that all resources will be applied economically to ensure: • The highest standards of service delivery; • A management system containing the appropriate elements aimed at minimising risks and costs in the interest of all stakeholders; • Education and training of all our staff to ensure continuous improvement in knowledge, skills and capabilities which facilitate consistent conformance to the stakeholder's expectations; and • Maintaining an environment, which promotes the right attitude and sensitivity towards internal and external stakeholder satisfaction. An entity-wide approach to risk management is adopted by the municipality, which means that every key risk in each part of the municipality is included in a structured and systematic process of risk management. It is expected that the risk management processes will become embedded into the municipality's systems and processes, ensuring that responses to risk remain current and dynamic. All risk management efforts will be focused on supporting the municipality's objectives. Equally, they must ensure compliance with relevant legislation and fulfil the expectations of employees, communities and other stakeholders in terms of corporate governance.
2	Historic risk management performance	• Past risk mitigation tactics have not always been effective in addressing identified risks. • A risk register exists which indicates the risks identified by the municipality.
3	Key risks	The following key risks have been identified and are noted in the municipality's official risk register: • Water losses • Inadequate water storage facilities • Poor water quality • Poor effluent quality • Periodic interruptions in supply
4	Key risk mitigation tactics	Each of the risks identified above have key mitigation tactics attached, as follows: • Water losses – Implementation of water demand management plans • Inadequate water storage facilities – Telemeter system monitoring storage levels

		• Poor water quality – Weekly and monthly drinking water testing • Poor effluent quality – Submission of monthly wastewater quality reports • Periodic interruptions in supply – Security personnel at certain plants
5	Chapter confidence	• There is a moderate level of confidence in the data used to prepare this chapter.
6	Chapter summary	• The municipality has a risk register. • Mitigation tactics have been identified and listed in the risk register. • The risk criteria should be aligned to the department's KPI's • Additional asset specific risks should also be added such as: • Asset condition • Asset performance • Data completeness and accuracy • Extracts from the risk register are attached as an annexure

8 PERFORMANCE PLAN

The sector's asset management performance objectives and forecast.

1	Performance objectives	Key Performance Indicators (KPIs) and benchmarks are management tools for monitoring and improving the performance of people, systems, processes within the municipality. The following KPIs are measured in the SDBIP: • Water backlog eradication • Sanitation backlog eradication • Blue drop assessment status • Green drop assessment status • Turn around time for reinstating water services • Turn around time for reinstating sanitation services • Siza water plan • Implementation of projects that requires manual labour • Operations and maintenance plans
2	Historic performance	The Municipal Scorecard consolidates service delivery targets set by Council/ Senior Management and provides an overall picture of performance for the municipality. Components of the Municipal Scorecard are one-year detailed plans but not three-year capital plans. The necessary components include: • Monthly projections of revenue to be collected for each source; Expected revenue to be collected NOT billed • Monthly projections of expenditure (operating and capital) and revenue for each vote • Quarterly projections of service delivery targets and performance indicators for each vote • Non-financial measurable performance objectives in the form of targets and indicators • The detailed capital project plan is broken down by ward over three years. **Table 8-1**: KPIs with annual targets depicts the KPI's with the targets as well as the achievement in the quarters in the baseline reference year 2017./18.

Table 8-1: KPIs with annual targets

KPI	Baseline	Annual Target	1st Quarter Target	2nd Quarter Target	3rd Quarter Target	4th Quarter Target
Water backlog eradication	2.58%	1.60%	0	0	0	1.6
Sanitation backlog eradication	0.46%	0.73%	0	0	0	0.73
Blue drop assessment status	12	12	3	6	9	12
Green drop assessment status	12	12	3	6	9	12
Turn around time for reinstating water services	100% within 48 hours	100% within 48 hours	100% within 48 hours	100% within 48 hours	100% within 48 hours	100% within 48 hours
Turn around time for reinstating sanitation services	100% within 48 hours	100% within 48 hours	100% within 48 hours	100% within 48 hours	100% within 48 hours	100% within 48 hours
Siza water plan	4 reports completed	4 reports	1	2	3	4
Implementation of projects that requires manual labour	1003	800	200	400	600	800
Operations and maintenance plans	O%M plan was aproved in Nov 2016	Delveloped a TOR and procurment od service provider by June 2018	o	o	o	Delveloped a TOR and procurment od service provider by June 2018

3	Chapter confidence	There is a moderate level of confidence in the chapter. The KPI's are measured in the annual SDBIP published by the municipality.
4	Chapter summary	

9 ANNEXURES

ANNEXURE A: GLOSSARY OF TERMS

Activity	An activity is a work undertaken on an asset or group of assets to achieve the desired outcome.
Asset	A physical component of a facility which has value, enables services to be provided and has an economic life of greater than 12 months. Note Accounting definition - An asset is a resource controlled by an entity because of past events and from which future economic benefits or service potential are updated to flow to the entity.
Asset hierarchy (IIMM)	A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function, asset type, or a combination of the two.
Asset life (ISO 55000)	The period from asset creation to asset end-of-life.
Asset management (LGIAMG)	The process of decision-making, planning and control over the acquisition, use, safeguarding and disposal of assets to maximise their service delivery potential and benefits, and to minimize their related risks and costs over their entire life.
Asset Management Information System (LGIAMG)	A combination of processes, data and software applied to provide outputs required for effective asset management.
Asset management objectives (IIMM)	Specific outcomes required from the implementation of the asset managementsystem.
Asset management plan	A documented plan developed for the management of one or a portfolio of assets that combines multi-disciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to provide a specified level of service. The plan specifies approaches, programmes, projects, activities, resources, responsibilities and timeframes across the lifecycle of the asset(s) planned for, or over a timeframe appropriate for robust lifecycle planning. A significant component of the plan is a long-term cash flow projection for the activities.
Asset management policy (PAS 55-1: 2004 BSI)	The overall intentions and direction of an organisation related to the assets and the framework for the control of asset-related processes and activities.
Asset management practices (IIMM)	The asset management processes and techniques that an entity undertakes, such as demand forecasting, developing and monitoring levels of service and risk management.
Asset management strategy (IIMM)	The high-level long-term approach to asset management including asset management action plans and objectives for managing the assets.
Asset management system (ISO 55000)	A management system whose function is to establish the asset management policy and objectives, as well as processes and organisational arrangements inclusive of structure, roles and responsibilities to achieve asset management objectives.
Asset management team	The team appointed by an organisation to review and monitor the corporate asset management improvement programme and ensure the development of integrated asset management systems and plans consistent with organisational goals and objectives.
Asset register (LGIAMG)	A record of asset information considered worthy of separate identification for both asset accounting and strategic management purposes including inventory, historical, condition and construction, technical and financial information about each. Note: The unit of account in an asset register is a component (see definition of a component).

Asset system (ISO 55000)	Set of assets that interact or are interrelated.
Asset type (ISO 55000)	Grouping of assets having common characteristics that distinguish those assets as a group or class.
Audit (ISO 55000)	Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.
Capacity (IIMM)	Maximum output that can be produced or delivered using the existing network or infrastructure.
Capital (the financial concept of)	Net assets of an organisation.
Capital (physical concept thereof)	The productive capacity of an organisation as measured in depreciated replacement cost.
Capital expenditure (CAPEX)	Expenditure used to create new assets, increase the capacity of existing assets beyond their original design capacity or service potential, or to returns the service potential of the asset or expected useful life of the asset to that which it had originally. CAPEX increases the value of an asset.
Capital upgrading	Enhances the service potential of the asset or the economic benefits that can be obtained from the use of the asset and may also increase the life of the asset beyond that initially expected.
Carrying amount	The amount at which an asset is recognised after deducting any accumulated depreciation and accumulated impairment losses.
Cash flow	The stream of costs and/or benefits over time resulting from a project investment or ownership of an asset.
Class of assets (GRAP)	It is a grouping of assets of a similar nature or function in an entity's operations that is shown as a single item for disclosure in the financial statements.
Competence (ISO 55000)	The ability to apply knowledge and skills to achieve intended results.
Component (IIMM)	A component (Note 1) is a specific part of a complex item (Note 2) that has an independent physical or functional identity and specific attributes such as different life expectancy, maintenance and renewal requirements and regimes, risk or criticality. Note 1: A component is separately recognised and measured (valued) in the the organisation'sasset registers as a unique asset record, in accordance with the requirements of GRAP 17 to componentise assets. Note 2: A complex item is one that can be disaggregated into significant components. Infrastructure and buildings are considered complex items.
Comprehensive Municipal Infrastructure Plan	A plan that provides a holistic overview of existing service performance, a vision of future performance scenarios, the risks, priorities, funding and tariff implications, as a strategic input to the Integrated Development Planning process.
Condition (IIMM)	The physical state of the asset.
Condition assessment or condition monitoring (IIMM)	The inspection, assessment, measurement and interpretation of the resultant data, to indicate the condition of a specific component to determine the need for some preventive or remedial action.
Conformity (ISO 55 000)	Fulfilment of a requirement.
Continual improvement (ISO 55 000)	Recurring activity to enhance performance.
Corrective maintenance	Maintenance carried out after a failure has occurred and intended to restore an item to a state in which it can perform its required function. Corrective maintenance can be planned or unplanned.
Critical assets (IIMM)	Those assets that are likely to result in a more significant financial, environmental and social cost in terms of impact on organizational objectives and service delivery.

Current replacement cost (IIMM	The cost the entity would incur to acquire the asset on the reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum it would cost, to replace the existing asset with a new modern equivalent asset (not a second hand one) with the same economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.
Decommissioning (IIMM)	Actions required to take an asset out of service.
Deferred maintenance	The portion of planned maintenance work necessary to maintain the service potential of an asset that has not been undertaken in the period in which such work was scheduled to be undertaken.
Demand management	The active intervention in the market to influence demand for services and assets with forecast consequences, usually to avoid or defer CAPEX expenditure. Demand management is based on the notion that as needs are satisfied expectations rise automatically and almost every action taken to satisfy demand will stimulate further demand.
Depreciable amount (GRAP)	The cost of an asset, or other amount substituted for cost, less its residual value.
Depreciated replacement cost (IIMM)	The replacement cost of an asset less accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired economic benefits of the asset.
Depreciation (GRAP)	Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.
Disposal (IIMM)	Actions necessary to decommission and dispose of assets that are no longer required.
Economic life (IIMM)	The period from the acquisition of the asset to the time when the asset, while physically able to provide a service, ceases to be the lowest cost alternative to satisfy a level of service. The economic life is at the maximum when equal to the physical life, however, obsolescence will often ensure that the economic life is less than the physical life.
Expected useful life	The extent of life of an asset over which it can be expected to meet the required performance given its operational environment (including parameters such as climate, soil conditions, topography, utilisation, and operations and maintenance regime), and over which it will be productively used.
Facility (IIMM)	A complex comprising many assets (e.g. a hospital, water treatment plant, recreation complex, etc.) which represents a single management unit for financial, operational, maintenance or other purposes.
Failure Modes, Effects and Criticality Analysis (IIMM)	A systematic, logical risk-based maintenance approach aimed at maximising the reliability of plant and equipment assets.
Fixed asset	A tangible item of either property, plant or equipment that is of material value and is held by a city for use in the production or supply of goods or services, for rental to others, or for administrative purposes, and which is expected to be used during more than one reporting period (financial year). A fixed asset can be either movable or immovable and the city must reasonably expect to derive economic benefits from it or use it in service delivery for a period extending beyond one financial year.
Geographic Information System	The software provides a means of spatially viewing, searching, manipulating, and analyzing an electronic database.
Integrated Development Plan	A five-year plan which local government is required to compile to determine the development needs of the city. The projects within the IDP is also linked to the city's budget.
Impairment loss (GRAP)	An impairment loss of a cash-generating asset is the amount by which the carrying amount of an asset exceeds its recoverable amount.
Incident (ISO 55000)	Unplanned event or occurrence resulting in damage or other loss.
Infrastructure assets (LGIAMG)	Stationary systems forming a network and serving whole communities, where the system as a whole is intended to be maintained indefinitely at a particular level of service potential by the continuing replacement and refurbishment of its components.
Level of service (IIMM)	Levels of service statements describe the outputs or objectives an organisation or activity intends to deliver to customers.
Life (LGIAMG)	A measure of the anticipated life of an asset or component, such as time, number of cycles, distance intervals etc.
Lifecycle (IIMM)	The time interval that commences with the identification of the need for an asset and terminates with the decommissioning of the asset or any liabilities thereafter.

Lifecycle asset management	Encompasses all asset management strategies and practices associated with an asset or group of assets that results in the lowest lifecycle cost necessary to achieve stated service requirements within acceptable risk parameters.
Lifecycle cost (IIMM)	The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, renewal and disposal costs.
Maintenance	All actions, planned and unplanned, intended to ensure that an asset performs a required function to a specific performance standard(s) over its expected useful life by keeping it in as near as practicable to its original condition, including regular recurring activities to keep the asset operating, but specifically excluding renewal. Note: Maintenance also specifically excludes restoring the condition or performance of an asset following a recognised impairment event, which would be classified as either renewal or upgrading, depending on the circumstances.
Maintenance of capital	Expenditure to ensure that the productive or operating capacity of the asset base is maintained over time. The value vested in capital assets is maintained when the organisation has at least as much capital at the end of the period as it had at the beginning thereof.
Maintenance expenditure	Recurrent expenditure as required to ensure that the asset achieves its intended useful life. Maintenance is funded through the organisation's operating budget, and such expenditure is expensed in the organisation's statement of financial performance.
Maintenance plan (LGIAMG)	Describes the planned and unplanned maintenance actions for an asset, facility or portfolio of assets, with intended delivery methods and schedules, budget requirements and responsible parties.
Maintenance objectives (IIMM)	Objectives for what maintenance must achieve to ensure the assets are in the right condition to meet the needs of the organisation. Maintenance performance measures and targets are the means of assessing whether the maintenance objectives are being met.
Maintenance standards (LGIAMG)	The standards set for the maintenance service, usually contained in preventive maintenance schedules, operation and maintenance manuals, codes of practice, estimating criteria, statutory regulations and mandatory requirements, in accordance with maintenance quality objectives.
Maintenance strategy (IIMM)	Identifies the tactics and tools that will be used to deliver the maintenance plan, as well as defining the maintenance roles and responsibilities.
Material (GRAP)	Omissions or misstatements of items are material if they could, individually or collectively, influence the decisions or assessments of users made based on the financial statements. Materiality depends on the nature or size of the omission or misstatement judged in the surrounding circumstances. The size of the information item, or a combination of both, could be the determining factor.
Modern equivalent asset (IIMM)	The most cost-efficient asset currently available that will provide equivalent functionality to the asset that will be replaced (or are currently being valued using the DRC methodology).
Monitoring (ISO 55000)	Determining the status of a system, a process or an activity.
Objective (adjusted from ISO 55000)	Result to be achieved at the strategic, tactical or operational level. Objectives can be set in a variety of domains or outcome areas (e.g. economic, social or environmental outcomes), or can relate to elements of the organisation (e.g. corporate or units in the organisation), or can relate to processes, services, products, programmes and projects.
Obsolescence (optimised decision-making guidelines)	The asset can no longer be maintained or suffers a loss in value due to a decrease in the usefulness of the asset, caused by technological change, or changes in people's behavioural patterns or tastes, or environmental changes.
Operating expenditure (OPEX)	Expenditure is necessary to provide services such as water purchases and water distribution including costs related to staff costs, administration costs, consumables, maintenance and repairs and feasibility studies.
Operation	The active process of utilising an asset which will consume resources such as manpower, energy, chemicals and materials. Operation costs are part of the lifecycle costs of an asset.
Optimised decision-making (IIMM)	Two definitions are: (1) A formal process to identify and prioritise all potential solutions with consideration of financial viability, social and environmental responsibility and cultural outcomes and (2) an optimisation process for considering and prioritising all options to rectify existing or potential performance failure of assets. The process encompasses NPV analysis and risk assessment.
Performance (ISO 55 000)	Measurable result of either quantitative or qualitative nature that can relate to the management of activities, processes, products or services, systems or organisations.

Performance measure (IIMM)	A qualitative or quantitative measure used to measure actual performance against a standard or other target. Performance measures are used to indicate how the organisation is doing in relation to delivering levels of service.
Performance monitoring (LGIAMG)	Continuous or periodic quantitative and qualitative assessments of the actual performance compared with specific objectives, targets or standards.
Planned Maintenance	Planned maintenance activities fall into the following categories: Corrective maintenance – (reactive or planned), necessary to ensure the reliability or sustain the design life of an asset. Preventative – maintenance (interval- or condition-based), that can be initiated without routine or continuous checking (e.g. using the information contained in maintenance manuals or manufacturers' recommendations). Predictive – condition monitoring activities used to predict failure.
Policy (adjusted from ISO 55 000)	Intentions and direction of an entity as formally expressed in a documented statement approved by top management and communicated throughout the entity.
Predictive action (ISO 55 000)	Action to monitor the condition of an asset and predict the need for preventative or corrective action. Also referred to condition monitoring or performance monitoring.
Preventative action (ISO 55 000)	Action to eliminate the cause of a potential nonconformity or other undesirable potential situation.
Preventative maintenance	Maintenance carried out at pre-determined intervals, or corresponding to prescribed criteria, and intended to reduce the probability of failure or the performance degradation of an item. Preventative maintenance is planned or carried out on an opportunity.
Property, plant and equipment (GRAP)	Property, plant and equipment are tangible items that are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes and are expected to be used during more than one reporting period.
Recoverable amount (GRAP)	The higher of an assets fair value fewer costs to selling and its value in use.
Rehabilitation	Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate some modification. Generally, involves repairing the asset using available techniques and standards to deliver its original level of service (e.g. relining bulk raw water pipelines) without resorting to significant upgrading or replacement.
Reliability-centred maintenance (IIMM)	A process for optimising maintenance based on the reliability characteristics of the asset.
Renewal	Expenditure on an existing asset which returns the service potential of the asset or expected useful life of the asset to that which it had originally. Note 1: Renewal can include works to replace existing assets or facilities with assets or facilities of equivalent capacity or performance capability. Note 2: Expenditure on renewals is funded through the organisation's capital budget, and such expenditure is recognised in the organisation's statement of financial position.
Repair	Action to restore an item to its previous condition after failure or damage.
Replacement	The complete replacement of an asset that has reached the end of its life, to provide a similar, or agreed on alternative, level of service.
Remaining useful life (IIMM)	The time remaining until an asset ceases to provide the required service level or economic usefulness.
Residual value (GRAP)	It is the estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset was already of the age and in the condition expected at the end of its useful life.
Revenue	An increase in economic benefits during an accounting period through enhancement of an asset or through a decrease in a liability.
Risk (IIMM)	The effect of uncertainty on objectives. Risk events are events which may compromise the delivery of the entity's strategic objectives.
Risk controls (IIMM)	Measures to manage or mitigate identified risks.
Risk exposure (IIMM)	The level of risk to which an entity is exposed to. Risk exposure is a function of the probability of occurrence times the impact of that occurrence.

Risk management (IIMM)	The application of a formal process that identifies the exposure of an entity to service performance risk and determines appropriate responses.
Routine maintenance (IIMM)	Day to day operational activities to keep the asset operating (e.g. replacement of light bulbs, cleaning of drains, repairing leaks, etc.) and which form part of the annual operating budget, including preventative and periodic maintenance.
Strategic plan	Strategic planning involves making decisions about the long-term goals and strategies of an organisation. Strategic plans have a strong external focus, cover major portions of the organisation and identify major targets, actions and resource allocations relating to the long-term survival, value and growth of the organisation.
Unplanned maintenance (IIMM)	Corrective work required that is reactive in nature (not scheduled or preventative – triggered by failure, inspection results or reports), the intention is to restore an asset to working condition, so it can continue to deliver the required service or to maintain its level of security and integrity.
Upgrading	The replacement of an asset or addition /replacement of an asset component which materially improves the original service potential of the asset.
Useful life (GRAP)	The useful life of an asset is the period over which an asset is expected to be available for use by an entity or the number of production or similar units expected to be obtained from the asset by an entity.
Valuation	Estimated asset value, which may depend on the purpose for which the valuation is required (e.g. Replacement value for determining maintenance levels or market value for lifecycle costing).
Value in use (GRAP)	The present value of the asset's remaining service potential of a non-cash-generating asset or the present value of the estimated future cash flows expected to be derived from the continuing use of an asset and from its disposal at the end of its useful life of a cash-generating asset.

ANNEXURE B: CONDITION GRADING SCALE

Table 9-1: Generic condition grades

Generic Condition Grades			
Grade	**Description**	**Detailed Description**	**Indicative RUL**
1	**Very good**	Sound structure well maintained. Only normal maintenance required.	71 - 100% EUL
2	**Good**	Serves needs but minor deterioration (< 5%). Minor maintenance required.	46 - 70% EUL
3	**Fair**	Marginal, clearly evident deterioration (10-20%). Significant maintenance required.	26 - 45 % EUL
4	**Poor**	Significant deterioration of the structure and/or appearance and impairment of functionality (20-40%). Significant renewal/upgrade required.	11 - 25% EUL
5	**Very poor**	Unsound, failed needs reconstruction/ replacement (> 50% needs replacement)	0 - 10% EUL

ANNEXURE C: SDBIP KPI'S

Table 9-2: SDBIP KPI's

NATIONAL KPA's	IDP REF NO.	IDP OBJECTIVE	DEPARTMENTAL OBJECTIVE	KEY PERFORMANCE AREA	KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	BASELINE	ANNUAL TARGET	BUDGET	ADJUSTED BUDGET	1ST QUARTER TARGET End Sept 2017	2ND QUARTER TARGET End Dec 2017	3RD QUARTER TARGET End March 2018	4TH QUARTER TARGET End June 2018
BASIC SERVICE DELIVERY	BS01/ BS02	To ensure access to potable water for domestic consumption and support local economic development and To ensure access to basic sanitation for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	Southern Regional Bulk water & sanitation scheme	**T8/181/2017 and T8/182/2017** a) Stage 4- Percentage completion by deadline b) Stage 5 - Percentage completion by deadline	Percentage	Stage 2 - 100% Stage 3- 100%	a) Stage 4 -100% by March (was June) 2018 b) Stage 5 - 100% by June 2018	R 5 263 158	R 14 034 988	25%	45%	a) 100% (was 75%) b) 80%	a) N/A (was 100%) b) 100%
					Expenditure	Rand Value	Expenditure - R 16,768	Expenditure - R 14, 035, 088 (was R 5,263,158)			R 1 315 790	R 2 631 579	R 11, 228, 070	R 14, 035, 088
					WATER PROJECTS									
BASIC SERVICE DELIVERY	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	To provide a sustainable Bulk water System - **Ngoebo /KwaDukuza Water Supply**	**Zone F L & M & AO - T8/160/2016** a) Number of new hh to be connected b) Stage 6 - Percentage completion by deadline	Percentage & Number	a) New Measure b) Stage 6 - 65%	a) 1 130 hh b) Stage 6 - 85% (was 100%) by June 2018	R 32 306 140	R 21 868 421	a) N/A b) 85%	a) N/A b)100%	a) N/A b) 70% (was N/A)	a) 1 130hh b) 85% (was N/A)
					Zone A - (T8/148/2016) a) Number of new hh to be connected b) Stage 6 - Percentage completion by deadline c) Stage 7 - Percentage completion by deadline		a) 834hh b) Stage 6 - 100% c) New Measure	a) 61 hh b) Stage 6 - 100% by December 2017 c) Stage 7 - 100% by March 2018			a) N/A b) 97% b) N/A	a) N/A b) 100% c) N/A	a) N/A b) N/A c) N/A (was 100%)	a) 61 hh b) N/A c) N/A
					Zone H - T8/163/2016 a) Number of new hh to be connected b) Stage 6 - Percentage completion by deadline c) Stage 7 - Percentage completion by deadline		a) 524hh b) Stage 6 - 99% c) New Measure	a) 519 hh b) Stage 6 - 100% by December 2017 c) Stage 7 - 100% by March 2018			a) N/A b) 95% b) N/A	a) N/A b) 100% c) N/A	a) N/A b) N/A c) 100%	a) 519 hh b) N/A c) N/A
					Zone Z & AA- T8/121/2013 Stage 7 - Percentage completion by deadline		523hh Stage 6 - 100%	Stage 7 - 100% by September 2017			100%	N/A	N/A	N/A
					Zone B&D, AH, AK, AF & Luthuli a) Stage 4 -Percentage completion by deadline		Stage 1 - 100% Stage 2 - 100% Stage 3 - 100%	Stage 4 - 100% by June (was March) 2018			50%	75%	85% (was 100%)	100% (was N/A)
					Expenditure	Rand Value	Expenditure - R 48,431,414	Expenditure - R 21, 868, 421 (was R 32,306,140)			R 8 076 535	R 16 153 070	R 16, 401, 316	R 21, 868, 421
	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	**Lower Tugela Bulk Water Supply**	**OT 11 - 2,6 Ml Mgigimbe Reservoir & Mbonisweni Pump Station - T8/132/2016** Stage 7 - Percentage completion by deadline	Percentage	Stage 6 - 98%	Stage 6 - 100% by June 2018	R 4 473 684	R 1, 315, 789	100%	N/A	N/A	100%
					Expenditure	Rand Value	Expenditure - R 7,993,802	Expenditure - R 1, 315, 789 (was R 4,473,684)			R 4 473 684	N/A	N/A	R1,315,789
					6Ml Bodasing Reservoir – OT 06 - T8/170/2016 Stage 7 - Percentage completion by deadline	Percentage	Stage 6 - 100%	Stage 7 - 100% by September 2017	R 5 263 158	R 1, 754, 386	100%	N/A	N/A	N/A
					Expenditure	Rand Value	Expenditure - R 11, 962, 862	Expenditure - R 1, 754, 386 (was R 5,263,158)			R 5 263 158	N/A	N/A	R 1,754,386
					OT 9 - Palm Lakes **Palm Lakes - Pipeline & Resevoir Phase 1 - T8/162/2016** a) Stage 6 - Percentage completion by deadline b) Stage 7 - Percentage completion by deadline	Percentage	a) Stage 6 - 97% b) New Measure	a) Stage 6 - 100% by September 2017 b) Stage 7 - 100% by December 2017	R 9 649 123	R 6, 701, 754	a)100% b) N/A	a) N/A b) 100%	a) N/A b) N/A	a) N/A b) N/A
					Expenditure	Rand Value	Expenditure - R14,844,286	Expenditure - R 6, 701, 754 (was R 9,649,123)			R 4 824 562	R 9 649 123	N/A	R 6, 701, 754
					Sakhamakhanya - T8/143/2016 - OT3 - Phase 1 **300 dia pipe line Umgeni Water to St. Christopher + temp pump station, 6 ML Resevoir at St. Christopher, 2.6 ML Nyathikazi Res Near Darnall, Pipeline to Nyathikazi, Temporary Pumpstation** a) Stage 6 - Percentage completion by deadline b) Stage 7 - Percentage completion by deadline	Percentage	a) Stage 6 - 100% b) New Measure	a) Stage 6 - 100% - by September 2017 b) Stage 7 - 100% by December 2017	R 10 526 316	R 3, 508, 772	a) 100% b) N/A	a) N/A b) 100%	a) N/A b) N/A	a) N/A b) N/A
					Expenditure	Rand Value	Expenditure - R 21,922,234	Expenditure - R 3, 508, 772 (was R 10,526,316)			R 5 263 158	R 10 526 316	N/A	R 3, 508, 772

NATIONAL KPA's	IDP REF NO.	IDP OBJECTIVE	DEPARTMENTAL OBJECTIVE	KEY PERFORMANCE AREA	KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	BASELINE	ANNUAL TARGET	BUDGET	ADJUSTED BUDGET	1ST QUARTER TARGET End Sept 2017	2ND QUARTER TARGET End Dec 2017	3RD QUARTER TARGET End March 2018	4TH QUARTER TARGET End June 2018
BASIC SERVICE DELIVERY					**OT 6 - Sithole Phase 1 - Pipeline & Reservoir TS/171/2016** a) Stage 6 - Percentage completion by deadline b) Stage 7 - Percentage completion by deadline	Percentage	a) Stage 6 - 91% b) New Measure	a) Stage 6 - 100% - by September 2017 b) Stage 7 - 100% by December 2017	R 12 280 702	R 7, 017, 544	a) 100% b) N/A	a) N/A b) 100%	a) N/A b) N/A	a) N/A b) N/A
	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will rebder water services	**Lower Tugela Bulk Water Supply**	**Expenditure**	Rand Value	Expenditure - R 13,819,741	Expenditure - R 7, 017, 544 (was R 12,280,702)			R 6 140 351	R 12 280 702	N/A	R 7, 017, 544
					UW Slyaphambili - OT 6- Phase 2 - TS/161/2016 600 Dia pipe from UW to Lindelani, Pumping station OT6 at Lindelani, 6ML Resevoir at Lindelani Stage 6 - Percentage completion by deadline	Percentage	Stage 6 -77%	Stage 6 - 100% by March 2018 (was September 2017)	R 27 192 982	R 19, 736, 842	100%	N/A	100% (was N/A)	N/A
					Expenditure	Rand Value	Expenditure - R 13,381,603	Expenditure - R 19, 736, 842 (was R 27,192,982)			R 13 596 491	R 27 192 982	R 19, 736, 842	N/A
					Construction of 500mm dia x 2800m long PVC pipeline and 6 Ml Resevoir at Slyaphambili - OT 08 - TS/155/2016 Stage 6 -Percentage completion by deadline	Percentage	Stage 6 - 92%	Stage 6 - 100% by June 2018 (was September 2017)	R 7 017 544	R 2, 192, 982	100%	N/A	N/A	100% (was N/A)
					Expenditure	Rand Value	Part of Expenditure - R 13,381,603	Expenditure - R 2, 192, 982 (was R 7,017, 544)			R 3 508 772	R 7 017 544	N/A	R 2, 192, 982
					2.5Ml Reservoir at Driefontein - OT 12 - Phase 1 - TS/168/2016 Stage 6 - Percentage completion by deadline	Percentage	Stage 6 - 90%	Stage 6 - 100% - by June 2018 (was December 2017)	R 10 526 316	R 4, 385, 986	70%	100%	N/A	100% (was N/A)
					Expenditure	Rand Value	Expenditure - R 6,740,246	Expenditure - R 4, 385, 965 (was R 10, 526, 316)			R 3 508 772	R 7 017 544	N/A	R 4, 385, 965
					OT 1B, 1C & 4 - Bulwer Farm, Mdlebeni, San Souci & Zinkwazi Reservoir - TS/188/2017 - TS/188/2017 a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by September 2017 b) Stage 2 - 100% by December 2017 c) Stage 3 - 100% by March 2018 d) Stage 4 - 100% by June 2018 e) Stage 5 - 100% by June 2018	R 11, 842, 105	R 24 122 807	a) 100% b) N/A c) N/A d) N/A	a) N/A b) 100% c) N/A d) N/A	a) N/A b) N/A c) N/A (was 100%) d) N/A e) 80%	a) N/A b) N/A c) N/A d) N/A (was 100%) e) 100%
					OT 5 Hyde Park development 300mm dia pipeline & 5ML Reservoir TS/188/2017 - TS/188/2017 a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by September 2017 b) Stage 2 - 100% by December 2017 c) Stage 3 - 100% by March 2018 d) Stage 4 - 100% by June 2018 e) Stage 5 - 100% by June 2018			a) 100% b) N/A c) N/A d) N/A	a) N/A b) 100% c) N/A d) N/A	a) N/A b) N/A c) N/A (was 100%) d) N/A e) 80%	a) N/A b) N/A c) N/A d) N/A (was 100%) e) 100%
					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R24, 122, 807 (was R 11, 842, 105)			R -	R -	R 18, 092, 105	R 24, 122, 807
					OT 7 - Blythedale 400mm dia pipeline & 6ML Reservoir - TS/187/2017 a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by September 2017 b) Stage 2 - 100% by December 2017 c) Stage 3 - 100% by March 2018 d) Stage 4 - 100% by June 2018 e) Stage 5 - 100% by June 2018	R 24, 912, 281	R 32 884 737	a) 100% b) N/A c) N/A d) N/A	a) N/A b) 100% c) N/A d) N/A	a) N/A b) N/A c) N/A (was 100%) d) N/A e) 80%	a) N/A b) N/A c) N/A d) N/A (was 100%) e) 100%
	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	**Lower Tugela Bulk Water Supply**	**OT 8E - Stanger Manor 316mm dia pipeline- TS/186/2017** a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by September 2017 b) Stage 2 - 100% by December 2017 c) Stage 3 - 100% by March 2018 d) Stage 4 - 100% by June 2018 e) Stage 5 - 100% by June 2018			a) 100% b) N/A c) N/A d) N/A	a) N/A b) 100% c) N/A d) N/A	a) N/A b) N/A c) N/A (was 100%) d) N/A e) 80%	a) N/A b) N/A c) N/A d) N/A (was 100%) e) 100%

NATIONAL KPA's	IDP REF NO.	IDP OBJECTIVE	DEPARTMENTAL OBJECTIVE	KEY PERFORMANCE AREA	KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	BASELINE	ANNUAL TARGET	BUDGET	ADJUSTED BUDGET	1ST QUARTER TARGET End Sept 2017	2ND QUARTER TARGET End Dec 2017	3RD QUARTER TARGET End March 2018	4TH QUARTER TARGET End June 2018
BASIC SERVICE DELIVERY					**OT 8F - Shakaville & Stanger - 200mm dia pipeline - T8/186/2017** a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by September 2017 b) Stage 2 - 100% by December 2017 c) Stage 3 - 100% by March 2018 d) Stage 4 - 100% by June 2018 e) Stage 5 - 100% by June 2018			a) 100% b) N/A c) N/A d) N/A	a) N/A b) 100% c) N/A d) N/A	a) N/A b) N/A c) N/A (was 100%) d) N/A e) 80%	a) N/A b) N/A c) N/A d) N/A (was 100%) e) 100%
					OT 8F - Stanger Manor- 300mm dia pipeline a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by September 2017 b) Stage 2 - 100% by December 2017 c) Stage 3 - 100% by March 2018 d) Stage 4 - 100% by June 2018 e) Stage 5 - 100% by June 2018			a) 100% b) N/A c) N/A d) N/A	a) N/A b) 100% c) N/A d) N/A	a) N/A b) N/A c) N/A (was 100%) d) N/A e) 80%	a) N/A b) N/A c) N/A d) N/A (was 100%) e) 100%
					Groutville 2ML Reservoir **T8/185/2017 - T8/188/2017** a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by September 2017 b) Stage 2 - 100% by December 2017 c) Stage 3 - 100% by March 2018 d) Stage 4 - 100% by June 2018 e) Stage 5 - 100% by June 2018			a) 100% b) N/A c) N/A d) N/A	a) N/A b) 100% c) N/A d) N/A	a) N/A b) N/A c) N/A (was 100%) d) N/A e) 80%	a) N/A b) N/A c) N/A d) N/A (was 100%) e) 100%
					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R 32, 894, 737 (was R 24, 912, 281)			R 745, 614	R 1, 491, 228	R 24, 671, 053	R 32, 894, 737
					OT 13A - Ingelmere Estate, Helmsley, Murcia oane - 400mm dia pipeline & Reservoir a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure	a) Stage 1 - 100% by December 2017 b) Stage 2 - 100% by March 2018 c) Stage 3 - 100% by June 2018 d) Stage 4 - 25% by June 2018	R 3, 508, 772	R 22 622 369	a) N/A b) N/A c) N/A	a) 100% b) N/A c) N/A	a) N/A b) N/A (was 100%) c) 75% (was N/A) d) N/A	a)N/A b) N/A c) 100% d) 25%
					OT 13B - Ingelmere Estate - 300mm dia pipeline a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 3 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure c) New Measure d) New Measure	a) Stage 1 - 100% by December 2017 b) Stage 2 - 100% by March 2018 c) Stage 3 - 100% by June 2018 d) stage 4 - 25% by June 2018			a) N/A b) N/A c) N/A	a) 100% b) N/A c) N/A	a) N/A b) N/A (was 100%) c) 75% (was N/A) d) N/A	a)N/A b) N/A c) 100% d) 25%
					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R 22, 622, 369 (was R 3, 508, 772)			N/A	R 584 795	R 16, 969, 777	R 22, 622, 369
	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	Ozwathini/Phambela Water Supply (Maphumulo)	**Borehole equipping and linked to rising main - T8/177/2017** a) Stage 4 - Percentage completion by deadline b) Stage 5 - Percentage completion by deadline c) Stage 6 - Percentage completion by deadline	Percentage	Stage 1 - 100% Stage 2 - 100% Stage 3 - 100% a) Stage 4 - New measure b) Stage 5 - New Measure c) Stage 6 - New Measure	a) Stage 4 - 100% - by September 2017 b) Stage 5 - 100% by March 2018 (was December 2017) c) Stage 6 - 15% by June 2018	R 4 824 561	R 4,824,681	a) 100% b) N/A	a) N/A b) 100%	a) N/A b) 100% (was N/A) c) N/A	a) N/A b) N/A c) 15%
					Expenditure	Rand Value	Expenditure - R 663,288	Expenditure - R 4, 824, 681			R 2 412 281	R 4 824 561	N/A	N/A
	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	**Maoambini Water Supply Phase 2**	**Sundumbili Pipeline - Phase 1 - T8/160/2016** a) Stage 6 - Percentage completion by deadline b) Stage 7 - Percentage completion by deadline	Percentage	a) Stage 6 - Phase 1 - 90% b) Stage 7 - New Measure	a) Stage 6 - Phase 1 - 100% by December 2017 b) Stage 7 - 100% by June 2018	R 44 655 263	R 68 197 281	85%	100%	a) N/A b) N/A	a) N/A b) 100%
					Sundumbili Pipeline - Phase 2 - T8/167/2016 a) Stage 6 - Percentage completion by deadline b) Stage 7 - Percentage completion by deadline		a) Stage 6 - Phase 2 - 80% b) Stage 7 - New Measure	a) Stage 6 - Phase 2 - 100% by December 2017 b) Stage 7 - 100% by June 2018			85%	100%	a) N/A b) N/A	a) N/A b) 100%
					Sundumbili Rising Main and Mandeni Pump Station - T8/ 176/2017& T8/178/2017 a) Stage 4 - Percentage completion by deadline b) Stage 5 - Percentage completion by deadline c) Stage 6 - Percentage completion by deadline		Stage 3 - 100% a) Stage 4 - 100% b) Stage 5 - New Measure	a) Stage 4 - 100% by September 2017 b) Stage 5 - 100% by June 2018 (was December 2017) c) Stage 6 - 15% by June 2018			a) 100% b) N/A	a) N/A b) 100%	a) N/A b) N/A c) 10%	a) N/A b) 100% (was N/A) c) 15%
					Makhwinini area - Phase 4 a)Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline		a) New Measure b) New Measure	a) Stage 1 - 100% by June 2018 b) Stage 2 - 100% by June 2018 Stage 3 - 100% by March 2018 Stage 4 - 100% by June 2018 Stage 5 - 20% by June 2018			a) N/A b) N/A	a) N/A b) N/A	a) N/A b) N/A c) 100% d) 90% e) N/A	a) N/A (was 100%) b) N/A (was 100%) c) N/A d) 100% e) 25%

NATIONAL KPA's	IDP REF NO.	IDP OBJECTIVE	DEPARTMENTAL OBJECTIVE	KEY PERFORMANCE AREA	KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	BASELINE	ANNUAL TARGET	BUDGET	ADJUSTED BUDGET	1ST QUARTER TARGET End Sept 2017	2ND QUARTER TARGET End Dec 2017	3RD QUARTER TARGET End March 2018	4TH QUARTER TARGET End June 2018
BASIC SERVICE DELIVERY					**Phase 6A - Retioulation** a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline		a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by June 2018 b) Stage 2 - 100% by June 2018 Stage 3 - 100% by March 2018 Stage 4 - 100% by June 2018 Stage 5 - 20% by June 2018			a) N/A b) N/A	a) N/A b) N/A	a) N/A b) N/A c) 100% d) 90% e) N/A	a) N/A (was 100%) b) N/A (was 100%) c) N/A d) 100% e) 25%
					Phase 6B - Retioulation a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline		a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by June 2018 b) Stage 2 - 100% by June 2018 Stage 3 - 100% by March 2018 Stage 4 - 100% by June 2018 Stage 5 - 20% by June 2018			a) N/A b) N/A	a) N/A b) N/A	a) N/A b) N/A c) 100% d) 90% e) N/A	a) N/A (was 100%) b) N/A (was 100%) c) N/A d) 100% e) 25%
					Phase 8A, 8B, 7A, 7B, 8A, 8B, - Retioulation a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline		a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by June 2018 b) Stage 2 - 100% by June 2018 Stage 3 - 100% by March 2018 Stage 4 - 100% by June 2018 Stage 5 - 20% by June 2018			a) N/A b) N/A	a) N/A b) N/A	a) N/A b) N/A c) 100% d) 90% e) N/A	a) N/A (was 100%) b) N/A (was 100%) c) N/A d) 100% e) 25%
					Phase 9 - Retioulation a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline		a) New Measure b) New Measure c) New Measure d) New Measure e) New Measure	a) Stage 1 - 100% by June 2018 b) Stage 2 - 100% by June 2018 Stage 3 - 100% by March 2018 Stage 4 - 100% by June 2018 Stage 5 - 20% by June 2018			a) N/A b) N/A	a) N/A b) N/A	a) N/A b) N/A c) 100% d) 90% e) N/A	a) N/A (was 100%) b) N/A (was 100%) c) N/A d) 100% e) 25%
					Expenditure	Rand Value	Expenditure - R 61,138,463	Expenditure - R 59, 197, 281 (was R 44,655,263)			R 14 885 088	R 29 770 175	R 44, 397, 360	R 59, 197, 281
	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	**Baloome/KwaSizaban tu Water Supply (Maphumulo Wards 6 & 8)**	**Zone A - TS/144/2016** Stage 7 - Percentage completion by deadline	Number & Percentage	366hh Stage 6 - 100%	Stage 7 - 100% by September 2017	R 11 578 947	R 12 360 878	100%	N/A	N/A	N/A
					Zone H - TS/148/2016 a) Number of new hh to be connected b) Stage 7 - Percentage completion by deadline		a) 570 hh b) Stage 6 - 100%	a) 110 hh Stage 7 - 100% by September 2017			a) N/A b)100%	a) N/A b) N/A	a) N/A b) N/A	a) 110 hh b) N/A
					Zone I & J - TS/161/2016 a) Number of new hh to be connected b) Stage 6 - Percentage completion by deadline c) Stage 7 - Percentage completion by deadline		a) New Measure b) Stage 6 -80% c) New Measure	a) 707 hh b) Stage 6 - 100% by June 2018 (was December 2017) c) Stage 7 - 100% by March 2018			a) N/A b) 96% c) N/A	a) N/A b)100% c) N/A	a) N/A b) 90% (was N/A) c) 100%	a) 707 hh b) 100% (was N/A) c) N/A
					Zone D - TS/162/2016 Stage 7 - Percentage completion by deadline		526hh Stage 6 - 100%	Stage 7 - 100% by September 2017			100%	N/A	N/A	N/A
					Expenditure	Rand Value	Expenditure - R 38,376,748	Expenditure - R 12, 350, 878 (was R11,578,947)			R 2 894 737	R 5 789 474	R 9, 263, 159	R 12, 350, 878
					Ntunjambili water supply scheme a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline	Percentage	a) New Measure b) New Measure	a) Stage 1 - 100% by June 2018 b) Stage 2 - 100% by June 2018	R 438 596	R 1, 938, 596	a) N/A b) N/A	a) N/A b) N/A	a) 50% (was N/A) b) 50% (was N/A)	a) 100% b) 100%
					Expenditure	Rand Value	New Measure	Expenditure - R 1, 938, 596 (was R438,596)			N/A	N/A	R 969, 298	R 1, 938, 596
	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	**Ndulinde Water Supply Scheme (Mandeni Ward 6 and 11)**	**Phase 2C - TS/100/2013** **Relaying of 8.4km x200mm dia ductile iron and commissioning of pumpstation and Reservoir** **Number of new hh with access to water** Stage 6 - Percentage completion by deadline	Number & Percentage	Stage 6 - 75%	Stage 6 - 100% by June 2018	R 16 228 070	R 10 984 812	N/A	N/A	N/A	100%
					Phase 4C - TS/100/2013 **Installation of 3.4 km of retioulation network** Stage 6 - Percentage completion by deadline		Stage 6 - 80%	Stage 6 - 100% by June 2018			N/A	N/A	N/A	100%
					Expenditure	Rand Value	Expenditure - R 7,303,878	Expenditure - R 10, 964, 912 (was R 16, 228, 070)			N/A	N/A	N/A	R 10, 964, 912

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	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	**Woolyane Extension-Water Supply - Bwaylmane Mollili, Ndaka, and Hoqweni, community water supply sheme (Woolyane)**	**Phase 1** Stage 4 - Percentage completion by deadline	Percentage	Stage 4 - 50%	Stage 4 - 100% by June 2018	R 1 754 386	R 3, 070, 175	61%	65%	80%	100%
					Expenditure	Rand Value	Expenditure - R 1,416,292	Expenditure - R 3, 070, 175 (was R 1,754,386)			R 438 597	R 877 193	R 2, 302, 631	R 3, 070, 175
					TOTAL HOUSEHOLD BENEFICIARIES TARGETED FOR NEW WATER PROVISION: 2 627 (was 3 066 hh)									
					TOTAL EXPENDITURE TARGETED: R 239, 468, 771 (was R 238, 978, 948)									
					SANITATION PROJECTS									
BASIC SERVICE DELIVERY	BS02	To ensure access to basic sanitation for domestic consumption and support local economic development	To provide sustainable infrastructure that will render sanitation services	**Ndwedwe T3/168/2016**	Number of new hh with access to VIP	Number	312 hh	380 hh by June 2018	R 5 263 158	R 6, 263, 158	N/A	N/A	N/A	380 hh
					Expenditure	Rand Value	Expenditure - R 2, 500, 160	Expenditure - R 5,263,158			N/A	N/A	N/A	R 5 263 158
				Mandeni T3/168/2016	Number of new hh with access to VIP	Number	187 hh	400hh (was 380 hh) by June 2018	R 5 263 158	R 8, 771, 930	N/A	N/A	N/A	400hh (was 380 hh)
					Expenditure	Rand Value	Expenditure - R 2,481,134.40	Expenditure - R 8, 771, 930 (was R 5,263,158)			N/A	N/A	N/A	R 8, 771, 930
				Maphumulo T3/167/2016	Number of new hh with access to VIP	Number	260 hh	380 hh by June 2018	R 5 263 158	R 8, 771, 930	N/A	N/A	N/A	380 hh
					Expenditure	Rand Value	Expenditure - R 2,381, 413	Expenditure - R 8, 771, 930 (was R 5,263,158)			N/A	N/A	N/A	R 8, 771, 930
	BS02	To ensure access to basic sanitation for domestic consumption and support local economic development	To provide sustainable infrastructure that will render sanitation services	**Groutville Waterborne Sanitation**	**Construction of bulk sewer in Chris Hani, Lloyds & Ntshawini Settlements 1No. 600m³/Day Package Wastewater Treatment Plant and Gledhow Village Pumping Station - T3/179/2017 T3/180/2017** **a) Stage 2 - Percentage completion by deadline** **b) Stage 3 - Percentage completion by deadline** **c) Stage 4 - Percentage completion by deadline** **d) Stage 5 - Percentage completion by deadline** **e) Stage 6 - Percentage completion by deadline**		Stage 1-100% a) Stage 2 - New Measure b) Stage 3 - New Measure c) Stage 4 - New Measure d) Stage 5 - New Measure e) Stage 6 - New Measure	a) Stage 2 - 100% by September 2017 b) Stage 3 - 100% by March 2018 c) Stage 4 - 100% by March 2018 d) Stage 5 - 100% by March 2018 e) Stage 6 - 20% by June 2018	R 26,131,579	R 11 620 806	a) 100% b) N/A	a) N/A b) 50%	a) N/A b) N/A (was 100%) c) 100% d) 100% e) N/A	a) N/A b) N/A c) N/A d) N/A e) 20%
					The construction of a sewer main from Njekane to KwaDukuza - T3/80/2014 (T3/184/2016) Stage 7 - Percentage completion by deadline		Stage 6 - 100%	Stage 7 - 100% by September 2017			100%	N/A	N/A	N/A
					Gledhow sewer line - T3/129/2014 Stage 7 - Percentage completion by deadline		Stage 6 - 100%	Stage 7 - 100% by September 2017			100%	N/A	N/A	N/A
					Main sewer Pumpcation to KwaDukuza waste water works - T3/88/2012 Stage 7 - Completion certificate issued by deadline		Stage 6 - 100%	Stage 7 - 100% by September 2017			100%	N/A	N/A	N/A
					Expenditure	Rand Value	Expenditure - R 21,808,875	Expenditure - R 11, 620, 806 (was R 26,131,579)			R 6 532 895	R 13 065 790	R 8, 715, 605	R 11, 620, 806
	BS02	To ensure access to basic sanitation for domestic consumption and support local economic development	To provide sustainable infrastructure that will render sanitation services	**Mandafarm Waterborne Sewer - at Mandeni**	a) Stage 1 - Percentage completion by deadline b) Stage 2 - Percentage completion by deadline	Percentage	Stage 1 - 100% a) Stage 1 - New Measure b) Stage 2 - New Measure	a) Stage 1 - 100% by June 2018 b) Stage 2 - 100% by June 2018	R 438 596	R 526, 316	a) 30% b) 30%	a) 40% b) 40%	a) N/A (was 60%) b) 80% (was 60%)	a) N/A (was 100%) b) 100%
					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R 526, 316 (was R 438,596)			R 109 649	R 219 298	R 336, 842	R 526, 316
				Darnal WWW Upgrade	a) Stage 2 - Percentage completion by deadline b) Stage 3 - Percentage completion by deadline c) Stage 4 - Percentage completion by deadline	Percentage	Stage 1 - 100% Stage 2 - New Measure Stage 3 - New Measure Stage 4 - New Measure	a) Stage 2 - 100% by June 2018 b) Stage 3 - 100% by March 2018 c) Stage 4 - 100% by June 2018	R 438 596	R 2, 192, 982	N/A	N/A	a) N/A b) 100% c) 40%	a) N/A (was 100%) b) N/A c) 100%

NATIONAL KPA's	IDP REF NO.	IDP OBJECTIVE	DEPARTMENTAL OBJECTIVE	KEY PERFORMANCE AREA	KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	BASELINE	ANNUAL TARGET	BUDGET	ADJUSTED BUDGET	1ST QUARTER TARGET End Sept 2017	2ND QUARTER TARGET End Dec 2017	3RD QUARTER TARGET End March 2018	4TH QUARTER TARGET End June 2018
BASIC SERVICE DELIVERY					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R 2, 192, 982 (was R 438,596)			N/A	N/A	N/A	R 2, 192, 982
	BS02	To ensure access to basic sanitation for domestic consumption and support local economic development	To provide sustainable infrastructure that will render sanitation services	**Driefontein Water Borne Sewer**	Stage 2 - Percentage completion by deadline	Percentage	Stage 1 - 100% Stage 2 - New Measure	Stage 2 - 100% by June 2018	R 438 596	R 421, 053	N/A	N/A	N/A	N/A (was 100%)
					Expenditure	Rand Value	Expenditure - R 11, 345	Expenditure - R 421, 053 (was R 438,596)			N/A	N/A	N/A	R 421, 053
				Mdiebeni Water Borne Sewer	Stage 3 - Percentage completion by deadline	Percentage	Stage 2 - 100%	Stage 3 - 100% by June 2018	R 438 596	R -	25%	50%	75%	100%
					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R0 (was R 438,596)			R 109 649	R 219 298	N/A	N/A
				Sundumbili WWTW Upgrade	Stage 4 - Percentage completion by deadline	Percentage	Stage 2 - 100% Stage 3 - 100%	Stage 4 - 100% by June 2018	R 438 596	R 679, 825	N/A	N/A	N/A	100%
					Expenditure	Rand Value	Expenditure - R 337,610	Expenditure - R 679, 825 (was R 438,596)			R 109 649	R 219 298	N/A	R 679, 825
				KwaDukuza Regional WWW	Stage 1 - Percentage completion by deadline	Percentage	New Measure	Stage 1 - 100% by June 2018	R 877 193	R 877 193	N/A	N/A	N/A	100%
					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R 877,193			N/A	N/A	N/A	R 877 193
TOTAL HOUSEHOLD BENEFICIARIES TARGETED FOR NEW SANITATION PROVISION: 1 180 hh (was 1 140 hh) **TOTAL EXPENDITURE TARGETED: R 88, 126, 193 (was R 44,881,226)**														
REFURBISHMENT/REPLACEMENTS PROJECTS														
BASIC SERVICE DELIVERY	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	**Maintain and replace Ageing Infrastructure (MWSIG)**	**KwaChili/Shangase Water Supply Scheme** Stage 7 - Percentage completion by deadline	Percentage	Stage 6 - 98%	a) Stage 6 - 100% by March 2018 b) Stage 7 - 100% by September 2017	R 4 824 561	R -	100%	N/A	a) 100% b) N/A	a) N/A b) N/A
					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R0 (was R 4,824,561)			R 4 824 561	N/A	N/A	N/A
					AC Replacements: Phase 2 Townview and New Town - TS/163/2016 a) Stage 6 - Percentage completion by deadline b) Stage 7 - Percentage completion by deadline	Percentage	a) Stage 6 - 95% b) New Measure	a) Stage 6 - 100% by September 2017 b) Stage 7 - 100% by December 2017	R 23 609 649	R 28 070 176	a) 100% b) N/A	a) N/A b) 100%	a) N/A b) N/A	a) N/A b) N/A
					Fawsely Park to Highridge TS/165/2016 a) Stage 6 - Percentage completion by deadline		Stage 6 - 85%	Stage 6 - 100% by June 2018 (was September 2017)			100%	N/A	95% (was N/A)	100% (was N/A)
					Mvoti to Balancing Reservlors to Fawsely Park (Offtake 8) - TS/166/2016 Stage 7 - Percentage completion by deadline		Stage 6 - 100%	Stage 7 - 100% by September 2017			100%	N/A	N/A	N/A
					Maclbambicane a) Stage 1 - Percentage completion by deadline b) Stage 2- Percentage completion by deadline		a) Stage 1 - New Measure b) Stage 2 - New Measure	a) Stage 1 - 100% by June 2018 b) Stage 2 - 100% by June 2018			a) N/A b) N/A	a) N/A b) N/A	a) N/A b) N/A	a) N/A (was 100%) b) N/A (was 100%)
	BS01	To ensure access to potable water for domestic consumption and support local economic development	To provide sustainable infrastructure that will render water services	**Water conservation/Water Demand Management reports**	a) Number of reports prepared on Water conservation/Water Demand Management b) % reduction of unaccounted water (Real Losses)	Number & Percentage	a) 4 quarterly reports b) 31%	a) 4 reports b) 29.5% by June 2018 (1.5% reduction from baseline)			a) 1 b) N/A	a) 2 b) N/A	a) 3 b) N/A	a) 4 b) 29.5%
					Expenditure	Rand Value	Expenditure - R 68,426,738	Expenditure - R 28, 070, 175 (was R 23,609,649)			R 5 902 412	R 11 804 825	R 21, 052, 631	R 28, 070, 175
					Amanda Farm Reticulation (TS/141/2014) Stage 7- Percentage completion by deadline	Percentage	Stage 6 - 100%	Stage 7 - 100% by December 2017	R 789 474	R 482, 456	N/A	100%	N/A	N/A
					Expenditure	Rand Value	Part of Expenditure - R 68,426,738	Expenditure - R 482, 456 (was R 789,474)			N/A	R 789 474	N/A	R 482, 456

NATIONAL KPA's	IDP REF NO.	IDP OBJECTIVE	DEPARTMENTAL OBJECTIVE	KEY PERFORMANCE AREA	KEY PERFORMANCE INDICATOR	UNIT OF MEASURE	BASELINE	ANNUAL TARGET	BUDGET	ADJUSTED BUDGET	1ST QUARTER TARGET End Sept 2017	2ND QUARTER TARGET End Dec 2017	3RD QUARTER TARGET End March 2018	4TH QUARTER TARGET End June 2018
BASIC SERVICE DELIVERY				Ndwedwe Retioulation Refurbishment	Ncuze;Chibini; Glendale;Waterfall; Esidumbini; Matholamnyama; Luthuli & Siminya Soheme - T3/183/ 2017 & T3/184/2017 a) Stage 1 - Percentage completion by deadline b) Stage 2- Percentage completion by deadline c) Stage 3 - Percentage completion by deadline d) Stage 4 - Percentage completion by deadline e) Stage 5 - Percentage completion by deadline	Percentage	a) Stage 1 - New Measure b) Stage 2 - New Measure c) Stage 3 - New Measure d) Stage 4 - New Measure e) Stage 5 - New Measure	a) Stage 1 - 100% by September 2017 b) Stage 2 - 100% by September 2017 c) Stage 3 - 100% by December 2017 d) Stage 4 - 100% by March 2018 e) Stage 5 - 100% by June 2018	R 22 368 421	R 16 535 087	a) 100% b) 100% c) N/A d) N/A e) N/A	a) N/A b) N/A c) 100% d) N/A e) N/A	a) N/A b) N/A c) N/A d) N/A (was 100%) e) N/A	a) N/A b) N/A c) N/A d) N/A e) 100%
					Expenditure	Rand Value	Expenditure - R 0	Expenditure - R 16, 535, 087 (was R 22,368,421)			R 5 592 105	R 11 184 211	N/A	R 16, 535, 087

DESCRIPTION OF STAGES 1 TO 7
Stage1 - (Planning,studies, investigations & assessments) completed by deadline
Stage 2 - Inception completed by deadline
Stage 3 - Concept & viability (Preliminary Design) completed by deadline
Stage 4 -Design development (Detailed Design)
Stage 6 - Documentation & Procurement
Stage 6 - Contract Admin (Construction)
Stage 7 - Close out

ANNEXURE D: RISK REGISTER

Section D - Risk Analysis and Risk Assessment

iLembe District Municipality Operational Risk Register 2018/19

Technical Services

RISK ANALYSIS

Risk Context:	**Basic Service Delivery**
Risk Name:	**Infrastructure: Water Provision**
Risk Description:	Water losses
Root Cause:	Ageing of infrastructure.
	Vandalism.
	Reservoir overflows.
	Mains breaks and Meter connections leaks.
Consequences:	Intermittent service delivery.
	Financial loss due to high maintenance costs.
	Tarnished image of the municipality.

RISK ASSESSMENT

Impact Rating:	60	Major
Likelihood Rating:	100%	Certain
Inherent Risk Rating:	60	Major
Control Effectiveness (Current)	45%	Satisfactory
Residual Risk (Current)	33	Moderate
Control Effectiveness (Desired)	70%	Good
Residual Risk (Desired)	18	Minor
Residual Risk Gap	14	Minor

Current Controls

- Implementation Water Conservation and Demand Management Plan.
  Implementation Water Conservation and Demand Management Plan.
- Infrastructure Replacement Plan is in place
- Improving Security Personnel at Certain Plants. (pump stations and Treatment wor
  Improving Security Personnel at Certain Plants. (pump stations and Treatment works).
- Implementation of Municipal By-laws.
- Telemetry system.

Action Plans & Accountability

Task Name *Description* *Risk Owner* *Action Owner*	Status	Start Date	Due Date
Conduct Awareness Campaigns to community to report leaks, pipeburst etc. *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	Ongoing	2018-07-01	2019-06-30
Install telemetry system throughout. *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider*	In Progress	2018-07-01	2019-06-30

Start Date: 2018-07-01 *Due Date: 2019-06-30*			
u Implementation of regional water schemes. *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30
u Source Funding (grants) *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-31*	In Progress	2018-07-01	2019-05-31
u Improve security system at plants. *Risk Owner: Municipal Manager* *Action Owner: Director Corporate Governance* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30
u Implementation of the Water Conservation and Demand Management Plan *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30

Section D - Risk Analysis and Risk Assessment

iLembe District Municipality Operational Risk Register 2018/19

Technical Services

RISK ANALYSIS

Risk Context:	**Basic Service Delivery**
Risk Name:	**Infrastructure: Water Storage**
Risk Description:	Inadequate water storage facilities (48 hours.)
Root Cause:	None compliance with Standard Operating Procedures.
	Financial/ Budgetary Constraints.
	Population growth and demand increase.
	Lack of co-ordination and development planning within the district.
	Ageing infrastructure.
	Illegal connections.
	Failure to bill customers.
	Unauthorised consumption of water.
	Overflow of reservoir.
	Administrative interference regarding the implementation of Credit Control Policy.
Consequences:	Intermittent service delivery.
	Failure to collect revenue due to Municipality.
	High maintenance expenditure.
	Tainted image of the municipality.
	Community protests.
	Overflows (Costly).
	Lack of water.

RISK ASSESSMENT

Impact Rating:	100	Critical
Likelihood Rating:	80%	Likely
Inherent Risk Rating:	80	Critical
Control Effectiveness (Current)	70%	Good
Residual Risk (Current)	24	Moderate
Control Effectiveness (Desired)	90%	Very Good
Residual Risk (Desired)	7	Insignificant
Residual Risk Gap	16	Minor

Current Controls

- Implementation of projects in Water Conservation and Water Demand Management Pla
  Implementation of projects in Water Conservation and Water Demand Management Plan (Monthly water balancing).
- Implementation of Water and Sanitation Master Plan.
- Implementation of the Operations & Maintenance Plan.
- Telemetry system monitors storage levels.

Action Plans & Accountability

Task Name *Description* *Risk Owner* *Action Owner*	Status	Start Date	Due Date
Continuously replacing old water pipes	In Progress	2018-07-01	2019-06-30

using grant funded by WSIG,DWS. *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-30*			
u Continuous installation of Telemetry system on new schemes to monitor storage *Continuous installation of Telemetry system on new schemes to monitor storage levels.* *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30
u Continuous installation of the intelligent meters. *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30
u Awareness campaigns to communities about water shortage. *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	Ongoing	2018-07-01	2019-06-30

Section D - Risk Analysis and Risk Assessment

iLembe District Municipality Operational Risk Register 2018/19

Technical Services

RISK ANALYSIS

Risk Context:	Basic Service Delivery
Risk Name:	Water Quality: Drinking water quality
Risk Description:	Poor quality water.
Root Cause:	Lack of skills (process controller skills not in line with classification of plants). Lack of internal laboratory equipment on site. Insufficient sampling points(Inadequate drinking water quality monitoring) to monitor the quality of water in the district as per SANS 241-1:2015. Poor raw water quality from source. Infrastructure inadequate to deal with poor raw water quality (e.g. Darnall, borehole, Esidumbini and Ethembeni).
Consequences:	Outbreak of water borne diseases to the Community. 'Community Protests. Tarnished image of the municipality. Penalties by regulator (DWS). Non compliance with National Water Quality Standards. Unlikely to achieve Blue Drop Status.

RISK ASSESSMENT

Impact Rating:	100	Critical
Likelihood Rating:	80%	Likely
Inherent Risk Rating:	80	Critical
Control Effectiveness (Current)	45%	Satisfactory
Residual Risk (Current)	44	Major
Control Effectiveness (Desired)	70%	Good
Residual Risk (Desired)	24	Moderate
Residual Risk Gap	19	Minor

Current Controls

- Blue drop compliance items are budgeted for (inadequate)
  Blue drop compliance items are budgeted for (inadequate)
- Preparation and submission of monthly drinking water quality reports (to Water S
  Preparation and submission of monthly drinking water quality reports (to Water Services Provider Managers and Infrastructure and Technical Portfolio Committee ITPC unit).
- Training and Development (Process Controllers).
- Weekly and monthly drinking water testing.
- Capturing of data and compliance on the Blue systems.
- Capital & operational budget in place to address drinking water quality
  Capital & operational budget in place to address drinking water quality challenges (inadequate).

Action Plans & Accountability

Task Name *Description* *Risk Owner* *Action Owner*	Status	Start Date	Due Date
Increase Blue Drop budget to comply with SANS *Increase Blue Drop budget to comply with SANS 214-1:2016. (Water safety plans to be*	Not Started	2018-07-01	2019-05-31

	updated for 2017/18, Asset register and Additional sampling points, trainings of process controllers). *Risk Owner: Municipal Manager* *Action Owner: Manager Water Quality* *Start Date: 2019-06-31* *Due Date: 2018-06-31*			
u	Continuous training and development of personnel. Currently doing NQF *Continuous training and development of personnel. Currently doing NQF 2/3/4 Process Controller Trainings.* *Risk Owner: Municipal Manager* *Action Owner: Manager Water Quality* *Start Date: 2018-04-16* *Due Date: 2019-06-30*	In Progress	2018-04-16	2019-06-30
u	Develop water treatment works Standard Operating Procedures. *Risk Owner: Municipal Manager* *Action Owner: Manager Water Quality* *Start Date: 2018-07-01* *Due Date: 2019-03-31*	In Progress	2018-07-01	2019-03-31

Section D - Risk Analysis and Risk Assessment

iLembe District Municipality Operational Risk Register 2018/19

Technical Services

RISK ANALYSIS

Risk Context:	**Basic Service Delivery**
Risk Name:	**Water Quality: Waste water effluent quality**
Risk Description:	Poor effluent quality [Not meeting South African General Standards (SAGS)].
Root Cause:	Insuffiently trained process controllers. Ageing infrastructure (Treatment works, pump stations and pipelines). Lack of internal laboratory equipment on site to carry out testings. Lack of budget.
Consequences:	'Outbreak of water borne diseases to the Community. 'Community Protests. Tarnished image of the municipality. Penalties by regulator (DWS). Non compliance with National Waste Water Quality Standards. Polution to the water (Rivers). Unsatisfied Consumers. Unlikely to achieve Blue Drop Status. Loss of revenue (customers refusing to pay for water of substandard quality).

RISK ASSESSMENT

Impact Rating:	100	Critical
Likelihood Rating:	80%	Likely
Inherent Risk Rating:	80	Critical
Control Effectiveness (Current)	45%	Satisfactory
Residual Risk (Current)	44	Major
Control Effectiveness (Desired)	70%	Good
Residual Risk (Desired)	24	Moderate
Residual Risk Gap	19	Minor

Current Controls

- Internal and external (BN KIRK) effluent monitoring (Inadequate)
  Internal and external (BN KIRK) effluent monitoring (Inadequate).
- Compilation and submission of monthly waste water quality reports to WSP Manage
  Compilation and submission of monthly waste water quality reports to WSP Managers and to ITCP.

Action Plans & Accountability

Task Name *Description* *Risk Owner* *Action Owner*	Status	Start Date	Due Date
u Increase Green Drop budget to comply with SAGS. *Increase Green Drop budget to comply with SAGS. (Waste Water safety plans to be updated for 2017/18, Asset register and Additional sampling points, trainings of process controllers).* *Risk Owner: Municipal Manager* *Action Owner: Manager Water Quality*	Not Started	2018-07-01	2019-05-31

Start Date: 2018-07-01 *Due Date: 2019-06-31*			
u Continuous training and development of personnel. Currently doing NQF 2/3/4 Proc *Continuous training and development of personnel ,Currently doing NQF 2/3/4 Process Controller Trainings.* *Risk Owner: Municipal Manager* *Action Owner: Manager Water Quality* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30
u Increase O & M Budget for Operational and Capital works(Inadequate). *Risk Owner: Municipal Manager* *Action Owner: Manager Water Quality* *Start Date: 2018-07-01* *Due Date: 2019-06-31*	Not Started	2018-07-01	2019-05-31

Section D - Risk Analysis and Risk Assessment

iLembe District Municipality Operational Risk Register 2018/19

Technical Services

RISK ANALYSIS

Risk Context:	**Basic Service Delivery**
Risk Name:	**Water Services: Water and Sanitation Services**
Risk Description:	Periodic interruption in supply of water and sanitation services to the community.
Root Cause:	Ageing of infrastructure.
	Operational inefficiency, i.e. power supply/failure.
	Inadequate financial resources.
	Growth in demand (Limited bulk water resources).
	Ineffective Security infrastructure at certain plants. (Theft, Vandalism and Intimidation).
	Insufficient Tool (Water tankers, honey suckers, TLB Jetting machines).
Consequences:	Intermittent service delivery.
	Failure to collect revenue due to Municipality.
	High maintenance expenditure.
	Tainted image of the municipality.
	Community protests.
	Community's health can be impacted negatively due to raw sewerage and no water for long periods.

RISK ASSESSMENT

Impact Rating:	100	Critical
Likelihood Rating:	80%	Likely
Inherent Risk Rating:	80	Critical
Control Effectiveness (Current)	45%	Satisfactory
Residual Risk (Current)	44	Major
Control Effectiveness (Desired)	70%	Good
Residual Risk (Desired)	24	Moderate
Residual Risk Gap	19	Minor

Current Controls

- Water Conservation and Demand Management Plan.
- Security Personnel at Certain Plants.
- Water and sanitation master plan (covers a period up to 30 years).
  Water and sanitation master plan (covers a period up to 30 years).
- Municipal By-laws.
- Infrastructure Replacement Plan is in place
- Approved Operations and maintenance Plan.

Action Plans & Accountability

Task Name *Description* *Risk Owner* *Action Owner*	Status	Start Date	Due Date
Improve security system at plants (alarms and cameras). *Risk Owner: Municipal Manager* *Action Owner: Director Corporate Services* *Start Date: 2018-07-01*	In Progress	2018-07-01	2018-12-31

	Due Date: 2018-12-31			
u	Source Funding (grants). *Risk Owner: Municipal Manager* *Action Owner: Manager Technical Services* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30
u	Municipal By-Laws review *Risk Owner: Municipal Manager* *Action Owner: Manager Technical Services* *Start Date: 2018-07-01* *Due Date: 2019-01-31*	Not Started	2018-07-01	2019-01-31
u	Implementation of the Water Conservation and Demand Management Plan *Risk Owner: Municipal Manager* *Action Owner: Manager Technical Services* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30
u	Implementation of regional water schemes. *Implementation of regional water schemes. (Consolidations of all small schemes into a regional schemes)* *Risk Owner: Municipal Manager* *Action Owner: Manager Water Services Provider* *Start Date: 2018-07-01* *Due Date: 2019-06-30*	In Progress	2018-07-01	2019-06-30

ANNEXURE E: PROPOSED MSCOA PROJECTS FOR 10-YEAR PLANNING PERIOD

Projects and Programmes Years 1-5 (R'000)

Project/Programmes reference				Fund Segment		Projects segment					Function segment		Cash flow				
Programme (IDP/MTREF)	Project name	Project number	Ward allocation	mSCOA(2)	mSCOA(3)	CAPEX/OPEX	mSCOA(2)	New/Existing/Land (mSCOA (3))	Expenditure type (mSCOA (4))	Asset Class (mSCOA (5))	Function/Department	Core function/ Non-core Function	2018	2019	2020	2021	2022
ADJUSTED MTREF	Renewal of Infrastructure	001	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	Existing	Renewal	Water Supply Infrastructure	Water Management	Core Function	R 79,482	R 117,931	R 122,216	R 126,505	R 130,796
ADJUSTED MTREF	Renewal of Infrastructure	001	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	Existing	Renewal	Sanitation Infrastructure	Waste Water Management	Core Function	R 36,599	R 56,523	R 58,790	R 61,060	R 63,332
MTREF	Operational Expenditure	002	All	Revenue	General Revenue	Operational	Infrastructure	Existing	Upgrading	Water Supply Infrastructure	Water Management	Core Function	R 44,782	R 66,315	R 68,717	R 71,120	R 73,525
MTREF	Operational Expenditure	002	All	Revenue	General Revenue	Operational	Infrastructure	Existing	Upgrading	Sanitation Infrastructure	Waste Water Management	Core Function	R 28,795	R 45,272	R 47,103	R 48,936	R 50,770
Planned	Maintenance expenditure	003	All	Revenue	General Revenue	Operational	Maintenance	Infrastructure	Corrective Maintenance		Water Management	Core Function	R 63,974	R 94,736	R 98,167	R 101,600	R 105,036
Planned	Maintenance expenditure	003	All	Revenue	General Revenue	Operational	Maintenance	Infrastructure	Corrective Maintenance		Waste Water Management	Core Function	R 19,359	R 28,653	R 29,768	R 30,885	R 32,003
Planned	Capital for Growth	004	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	New	Water Supply Infrastructure		Water Management	Core Function	R 19,431	R 19,562	R 19,694	R 19,826	R 19,959
Planned	Capital for Growth	007	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	New	Sanitation Infrastructure		Waste Water Management	Core Function	R 12,128	R 12,215	R 12,303	R 12,391	R 12,480
Planned	Planned Access Backlog	005	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	New	Water Supply Infrastructure		Water Management	Core Function	R 151,850	R 151,850	R 151,850	R 151,850	R 151,850
Planned	Planned Access Backlog	008	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	New	Sanitation Infrastructure		Waste Water Management	Core Function	R 78,482	R 78,482	R 78,482	R 78,482	R 78,482
													R 534,884	**R 671,538**	**R 687,089**	**R 702,655**	**R 718,235**

Projects and Programmes Years 6-10 (R'000)

Project/Programmes reference				Fund Segment		Projects segment					Function segment		Cash flow				
Programme (IDP/MTREF)	Project name	Project number	Ward allocation	mSCOA(2)	mSCOA(3)	CAPEX/ OPEX	mSCOA(2)	New/Existing/Land (mSCOA (3))	Expenditure type (mSCOA (4))	Asset Class (mSCOA (5))	Function/Department	Core function/ Non-core Function	2023	2024	2025	2026	2027
ADJUSTED MTREF	Renewal of Infrastructure	001	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	Existing	Renewal	Water Supply Infrastructure	Water Management	Core Function	R 135,092	R 139,390	R 143,692	R 147,998	R 152,307
ADJUSTED MTREF	Renewal of Infrastructure	002	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	Existing	Renewal	Sanitation Infrastructure	Waste Water Management	Core Function	R 65,606	R 67,882	R 70,161	R 72,441	R 74,725
MTREF	Operational Expenditure	003	All	Revenue	General Revenue	Operational	Infrastructure	Existing	Upgrading	Water Supply Infrastructure	Water Management	Core Function	R 75,933	R 78,342	R 80,753	R 83,166	R 85,581
MTREF	Operational Expenditure	004	All	Revenue	General Revenue	Operational	Infrastructure	Existing	Upgrading	Sanitation Infrastructure	Waste Water Management	Core Function	R 52,605	R 54,442	R 56,281	R 58,121	R 59,962
Planned	Maintenance expenditure	005	All	Revenue	General Revenue	Operational	Maintenance	Infrastructure	Corrective Maintenance		Water Management	Core Function	R 108,475	R 111,917	R 115,361	R 118,808	R 122,258
Planned	Maintenance expenditure	006	All	Revenue	General Revenue	Operational	Maintenance	Infrastructure	Corrective Maintenance		Waste Water Management	Core Function	R 33,123	R 34,245	R 35,368	R 36,493	R 37,619
Planned	Capital for Growth	007	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	New	Water Supply Infrastructure		Water Management	Core Function	R 20,094	R 20,229	R 20,366	R 20,503	R 20,642
Planned	Capital for Growth	008	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	New	Sanitation Infrastructure		Waste Water Management	Core Function	R 12,570	R 12,661	R 12,752	R 12,844	R 12,937
Planned	Planned Access Backlog	009	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	New	Water Supply Infrastructure		Water Management	Core Function	R 151,850	R 151,850	R 151,850	R 151,850	R 151,850
Planned	Planned Access Backlog	010	All	Revenue	Sales of Goods and Rendering of Services	Capital	Infrastructure	New	Sanitation Infrastructure		Waste Water Management	Core Function	R 78,482	R 78,482	R 78,482	R 78,482	R 78,482
													R 733,831	**R 749,441**	**R 765,066**	**R 780,707**	**R 796,363**