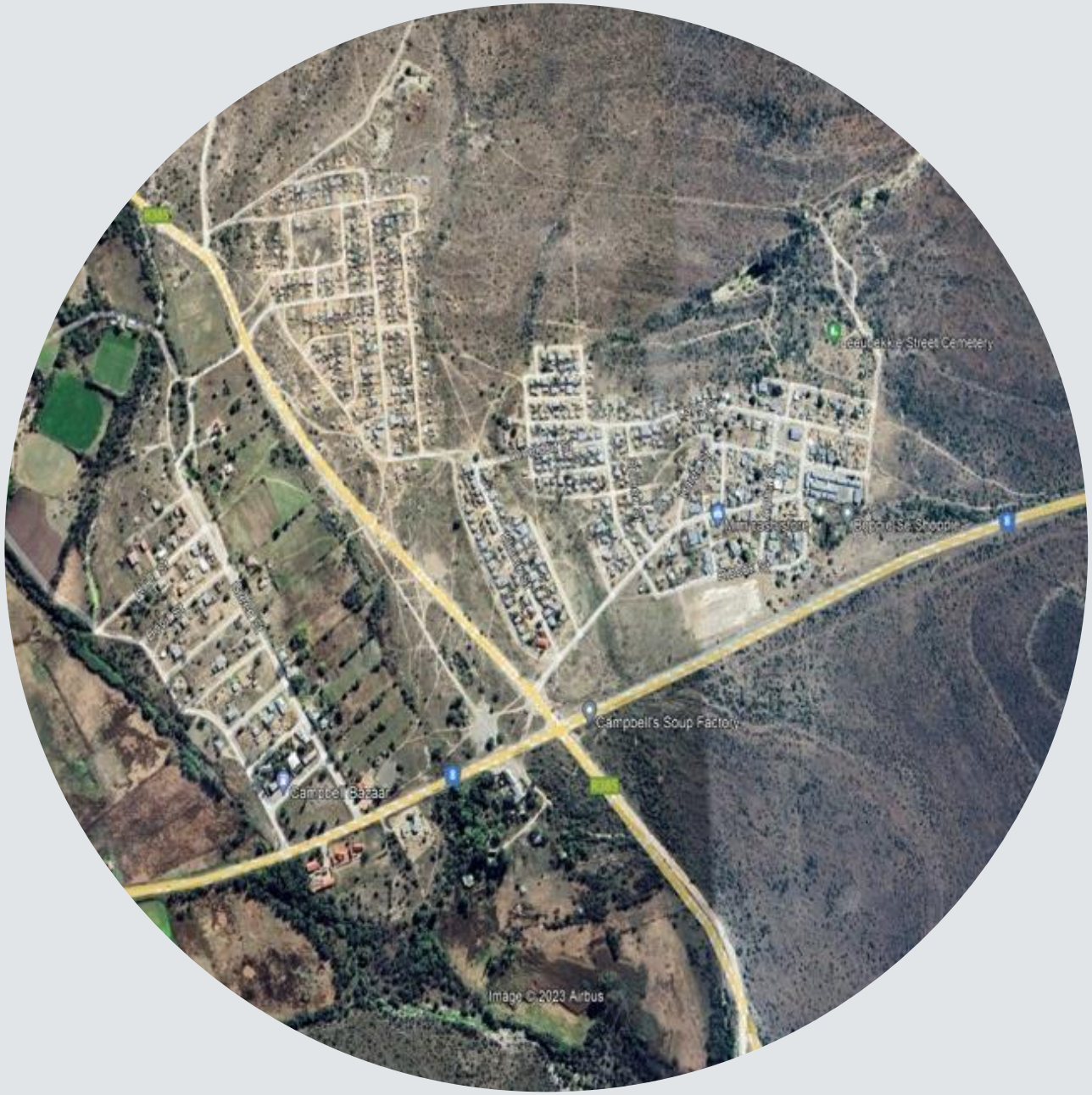
Campbell Eradication of Buckets

Siyancuma Municipality



LOCATION

- Northern Cape, Pixley Ka Seme District, Siyancuma Municipal Area
- Junction of N8 between Kimberley and Griekwastad & R385 between Postmasburg and Douglas

BACKGROUND

- Population of 1763
- Current Total Households of 605 plus ± 20 Agricultural plots
- Old Campbell Town 84 Households
- Old Settlement 325 Households
- New Informal Settlement 196 Households

SIYANCUMA
MUNICIPALITY

LEGEND
OLD TOWN (84 h/h)
NEW INFORMAL SETTLEMENT (196 h/h)
OLD FORMAL SETTLEMENT (325 h/h)

R385
TO POSTMASBURG

NEW INFORMAL
SETTLEMENT
(196 h/h)

OLD FORMAL
SETTLEMENT
(325 h/h)

OLD TOWN
(84 h/h)

N8
TO KIMBERLEY

N8
TO GRIEKWASTAD/UPINGTON

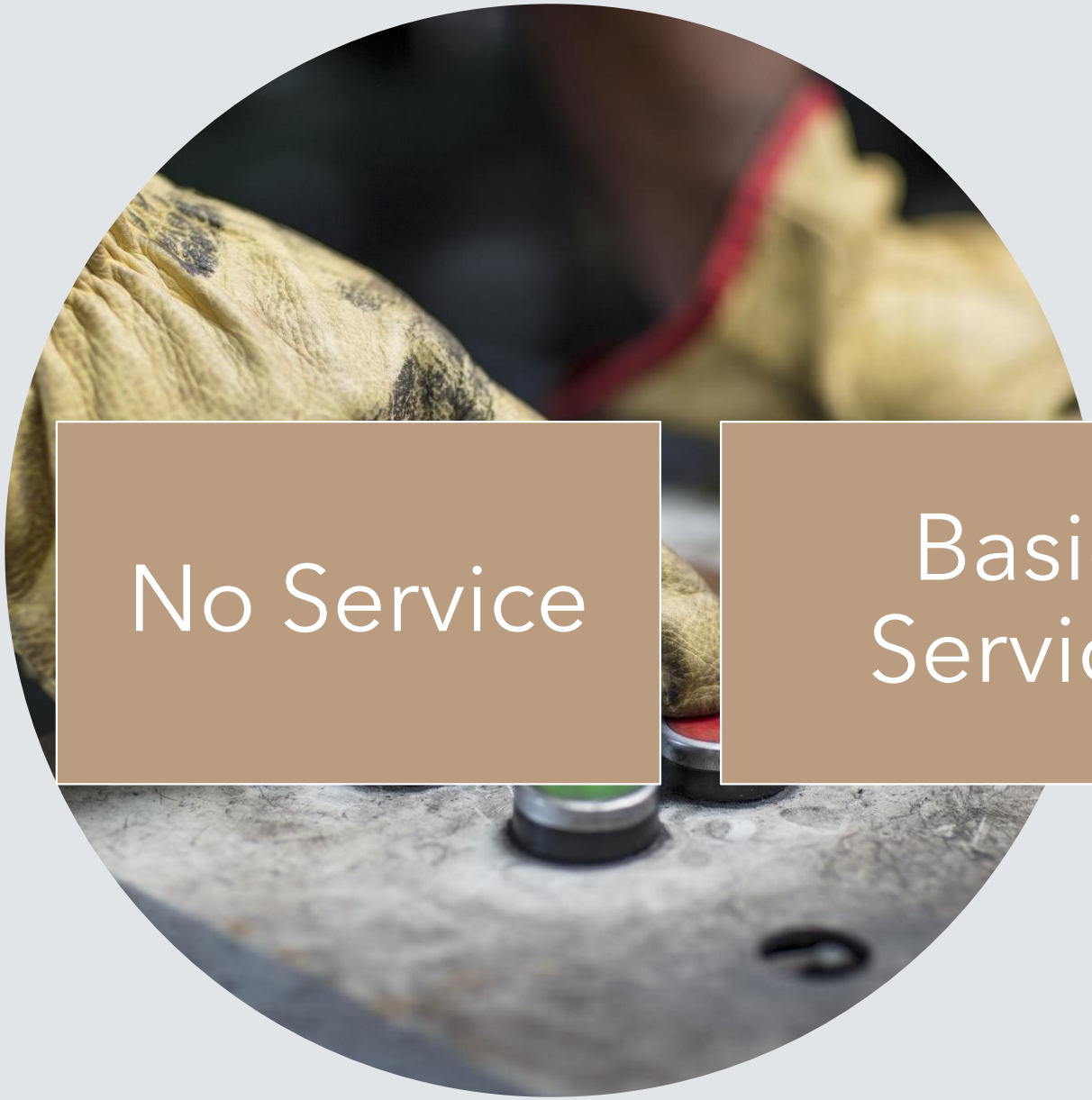
CAMPBELL

TO DOUGLAS
R385

CAMPBELL LAYOUT

BACKGROUND

- Predominantly Low-Income Households, Approximately 523 H/H (86%)
- Some Middle-Income Households , Approximately 80 H/H (14%)
- Current Indigent Households Registered 385 H/H (63,6%)



STATUS QUO AND LEVEL OF SERVICES

No Service

Basic Service

Higher Level of Service

WATER

WATER SOURCES

Only Ground Water Sources (Fountains and Boreholes) Available

Several Public and Private Boreholes

4 Production Boreholes of which 1 is decommissioned

3 Natural Fountains of which only 1 is equipped

WATER SOURCES

- Campbell faces Water Scarcity and Water Shortages which impact the Level of Service
- The old production borehole BH01 yields 2,0l/s
- The two (2) recently equipped/commissioned production boreholes yields 0,61 l/s combined
- The fountain yields 0,8 l/s. Please note, all fountains are in the same ground water compartment
- The combined 3,41l/s total yield of ground water sources fall short of the estimated 5,5 l/s yield for current and future water demands up to 2030

Bulk Water Storage

- 2 x 18KL (36KL) Capacity Supply Reservoir
- 1 x 180KL Capacity Storage Reservoir
- Combined Storage capacity of 216KL
- Base on current population of 1 763 x 100 l/c/d x 2 days x 1.2 GAADD factor x 1.5 summer peak a minimum of 635 KL storage are needed immediately

Bulk Water Storage

- Besides the 419KL storage capacity shortfall both reservoir are also very old, in very poor condition with extreme water leakages
- Both reservoirs are beyond repair and in dire need of replacement and upgrade
- Severe water losses are experience because of the old porous sectional steel reservoirs which also overflows because of no pump nor reservoir water level controls
- Campbell already stricken by limited water sources also faces water storage capacity shortfalls and are hampered with water losses

Bulk Water Distribution and Internal Reticulation

- The fountain pump-feed the Supply Reservoir (36KL) which gravity-feed the storage reservoir by means of 200-100mm diameter link steel pipelines
- The link line also directly branches of into the old town area's internal network (84 h/h)
- The link line also gravity feeds the approximately 12 communal standpipes which supply water to the new informal settlement (196 h/h)

Bulk Water Distribution and Internal Reticulation

- The 3 boreholes pump-feed the Storage Reservoir (180KL) which are also gravity-fed (augmented) by means of 200-100mm diameter link steel pipeline from the supply reservoir
- The storage reservoir gravity feeds the old formal settlement (325 h/h) by means of a 100mm diameter steel pipeline

Internal Reticulation

- Old town (84h/h) are serviced by 50mm diameter steel pipe network with metered house/erf connections
- Some households also make use of private boreholes (to counter water shortages)
- Old formal Settlement (325h/h) are serviced by 50mm diameter steel pipe network with metered erf connections
- New Informal Settlement (196 h/h) do not have an internal water network nor erf connections
- Current level of service are 12 communal standpipes spread over the area.

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LEGEND
HOUSE CONNECTIONS
COMMUNAL STAND PIPES
YARD CONNECTIONS

R385
TO POSTMASBURG

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(196 h/h)

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R385

WATER : LEVEL OF SERVICE

SANITATION

Campbell has no Bulk Sewer Infrastructure

Municipality appointed PSP for planning & design of Oxidation Ponds and Outfall Sewer Line

Project in design Phase

Project (MIG) to run over two Financial Years July 2023 to June 2025

Old Town (84 h/h) mostly utilize septic/conservancy tanks. UDS's and buckets are also in use but to a lesser extent

Old Campbell formal Settlement (325 h/h) utilize UDS systems

UDS system are not always accepted and are mostly not functional

Most of the residents (325 h/h) reverted back to the bucket system

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LEGEND
PREDOMINANTLY SEPTIC TANKS
BUCKETS
PREDOMINANTLY UDS's

R385
TO POSTMASBURG

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R385

SANITATION : LEVEL OF SERVICE

New Informal Settlement (196 h/h) use bucket system

A pour flush system was introduced in an attempt to eradicate buckets

Pour Flush system currently on hold

Because of Water Shortages and no Bulk Sewer Infrastructure

CHALLENGES

CHALLENGES

- Water Scarcity, insufficient water sources
- Water demand greater than supply
- Insufficient Water Storage Capacity
- Water Storage Facilities Old and dilapidated

CHALLENGES

- Bulk Water Distribution by means of old steel pipelines. Frequent water disruption because of maintenance
- Internal Water Reticulations Networks old and sub-standard
- High Water Losses (leaks)
- Sub-standard Communal Standpipes

CHALLENGES

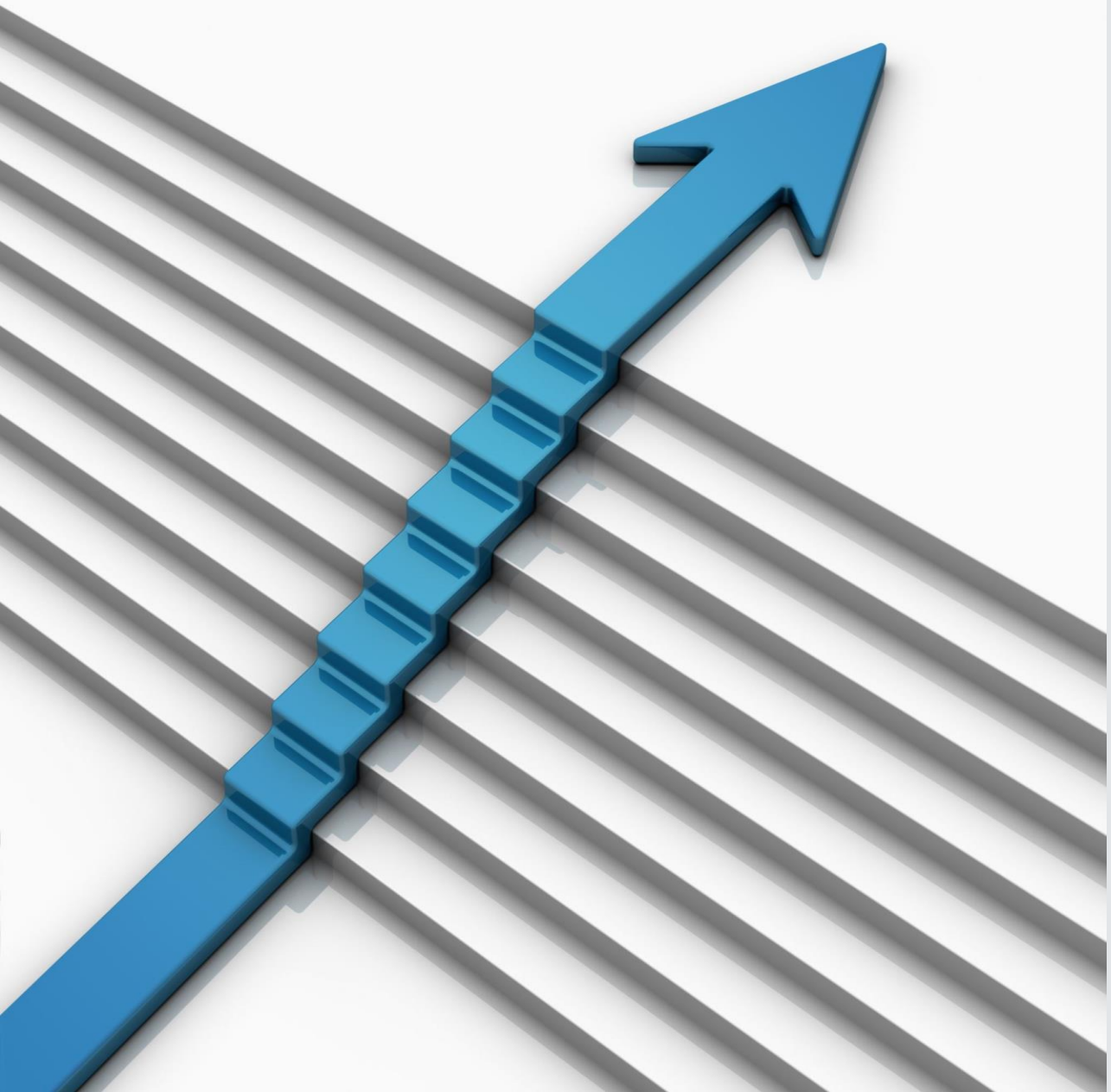
- No Bulk Sewer Infrastructure
- UDS and pour flush systems failed/not accepted
- Buckets still in use
- Unable to eradicate buckets

Objectives/Way Forward

Upgrade Bulk Water Supply

PSP appointed. Project (WSIG) in planning Phase

Technical Report/Business Plan submit for approval by end September 2023



Pipe Replacement Programme for old Internal Water Networks

New Internal Water Network for informal settlement, with yard connections

PSP appointed. Technical Report/Business Plan (MIG/BEP) submission for approval by end October 2023

Provide Bulk Sewer Infrastructure

PSP appointed. Project (MIG) in design phase

Project (MIG) to run over two Financial Years July 2023 to June 2025

Provide Waterborne Sewer Reticulation and yard connections for all 605 households to eradicate buckets

PSP appointed. Project (MIG/BEP) in planning phase

Project (BEP/MIG) to run over multiple Financial Years, November 2023 to June 2026

Thank You

Questions?