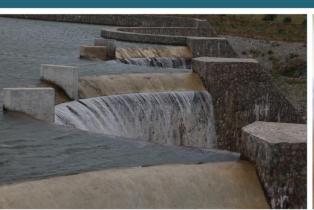




#### PORTFOLIO COMMITTEE ON WATER AND SANITATION

**Progress Report on the Giyani Bulk Water Project** 

12 September 2023







## **CONTENTS**

- Nandoni Water Services Scheme
- Water Services Projects
- Nandoni WTW Upgrade
- Nandoni-Nsami Pipeline Project
- Giyani WTW refurbishment and upgrade
- Giyani Water Services Project
- Reticulation to 55 Villages in Giyani





## NANDONI WATER SERVICES SCHEME



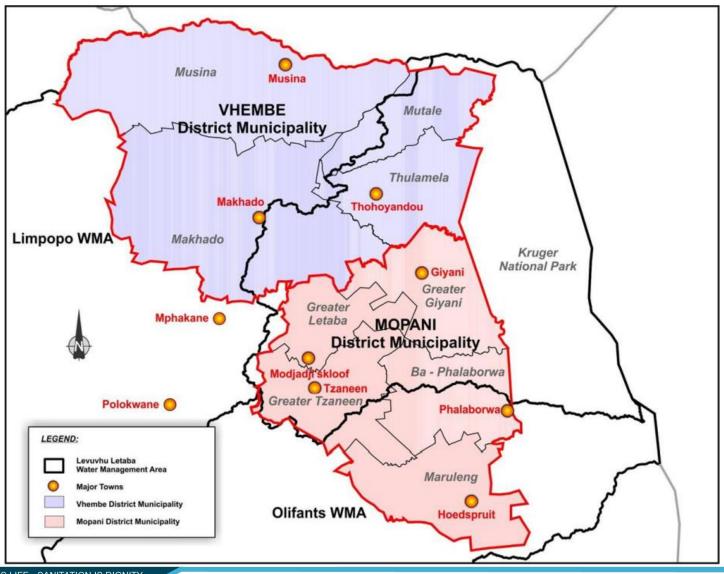


#### NANDONI WATER SERVICES SCHEME

- Nandoni Dam forms part of the Luvuhu catchment, with a primary objective to supply domestic water, provide for recreational activities and contributes greatly to the tourism industry.
- The construction of the dam was completed in **2004** and officially opened in **2005**, with the completion of the **60 MI/d** Nandoni Water Treatment Works in **2008**.
- The Nandoni dam is classified as a Category 3 large dam, with a dam wall height of 43 m.
- The total capacity of the dam is **164 million cubic meters** and the current volume is at **101%** (full).
- The dam currently supplies water to Vhembe District Municipality, and it is intended to supply Mopani District Municipality and the northern parts of Capricorn District Municipality, targeting an estimated population of **1 116 621**.



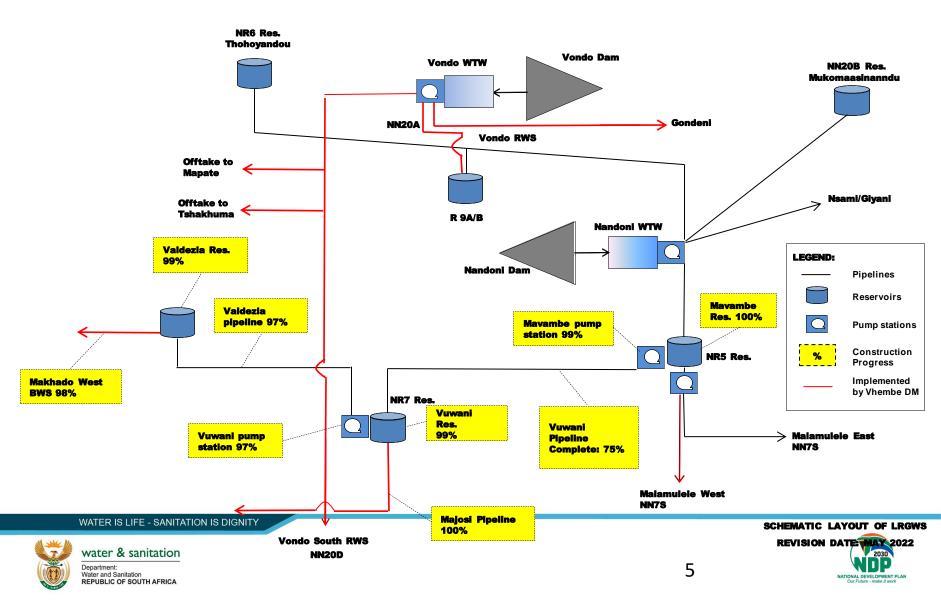
## **NANDONI WSS - SUPPLY AREA**







#### **NANDONI SCHEME LAYOUT & INFRASTRUCTURE**



#### NANDONI WTW UPGRADE

- The current 60 MI/d WTW was completed in 2008 and currently feeds the completed NR6, NN20B and NR5 pipelines.
- The WTW is operating at **58 Ml/d** and currently supplying **72** out of **207** villages. **43** villages in Vhembe DM of the **72** villages are receiving water on rationing.
- The current demand for the 207 villages is 98.8 MI/d
- The upgrade from 60 MI/d to 120 MI/d will feed the bulk water pipeline projects that DWS is implementing to extend the supply from Nandoni WTW to Malamulele, Vuwani, Elim, Makhado & Sinthumule Kutama areas
- The upgrade of the WTW project is under planning and construction is planned to commence in January 2024 and anticipated to be completed in December 2025
- The cost of the project will be known after the completion of the Implementation Readiness Study and RBIG will be used to fund the project under Schedule 6B.
- The further upgrade of **180 MI/d** Nandoni WTW will follow after the completion of the **120 MI/d** upgrade in **2026**





#### **ACTIVITES COMPLETED TO DATE- NANDONI WTW UPGRADE**

Details of Activity	Completion Date
PSP Appointed	• 06 June 2023
Introductory Meeting with DWS, DBSA & PSP	• 09 June 2023
Site reconnaissance (raw & product water sampling)	• 13 & 14 June 2023
Engagement / Progress Session with DWS, DBSA & PSP	• 27 June 2023
<ul> <li>Site inspections (process control, operations &amp; bulk electrical supply)</li> </ul>	• 28 & 29 June 2023
Geotechnical investigation	• 04 & 05 July 2023
Access granted for PSP onto e-WULAS	• 10 July 2023
<ul> <li>Detailed site inspections for implementation of designs (pump stations, intake, OHS inspection, etc.)</li> </ul>	• 11 & 12 July 2023
Meeting to formalise scope of work with Lepelle NW	• 14 July 2023
Preliminary Design Report, cost estimate & presentation	• 21 July 2023





## KEY MILESTONES TO BE ACHIEVED- NANDONI WTW UPGRADE

DETAILS OF MILESTONES	COMPLETION DATE
Detail design report	• 29 September 2023
Tender document available for bidders	• 27 October 2023
Tender closing	• 24 November 2023
Contract award	• 13 December 2023
Water Use License renewed / amended	• 19 January 2024
Site establishment	<ul> <li>26 January 2024</li> </ul>





## STATUS OF WATER PROVISION FROM NANDONI DAM

Pipelines	Water required (MI/d)	Supply area- planned	Number of settlements served	Comments
NN20B: Nandoni to Mukomaasinanndu 10,1 km pipeline	1.8 Ml/d	11	11	3 settlements receive 24 hours at high levels and 8 at RDP however less than 24 hours
NR5: Nandoni to Mavambe 6,5km pipeline and 26.5 km to Musawni pipeline	25 Ml/d	53	40	13 settlements receive 24 hours, 40 at RDP, however less than 24 hours, 13 of 40 settlements are benefiting from boreholes only less than 24 hours
NR6: Nandoni to Thohoyandou 18,8 km pipeline	34 Ml/d	21 (incl. CBD and Univen)	21 (incl. CBD and Univen)	13 settlements receive 24 hours at high level while 8 receive at RDP however less than 24 hours
NR7: Mavambe through Vuwani to Makhado 92km pipeline	21 Ml/d	67	0	Under construction
Nandoni to Nsami 49 km pipeline	17 Ml/d	55 (including Malamulele CBD)	0	Under construction: Increase water security to 55 villages in Giyani & 13 villages in Malamulele including Malamulele CBD
Total	98,8 MI/d	207	72	



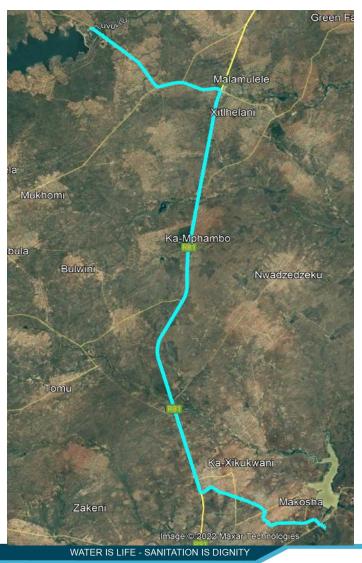


## **NANDONI-NSAMI PIPELINE PROJECT**





#### NANDONI TO NSAMI PROJECT OVERVIEW



- The project consists broadly of:
  - Bulk Pipeline 1 (raw water): Nandoni to Giyani(Xikukwane): 40,5km 500mm dia uPVC & GRP pipe;
  - Bulk Pipeline 2(clear water): Nandoni to Greater Malamulele: 26.5km 800mm + 355mm + 200mm dia oPVC and GRP pipe;
  - Associated chambers, road and stream crossings;
  - Pump stations at Nandoni to supply the pipelines.
  - Overall project cost: R864million
  - Overall expenditure: R675 million
  - Project timelines: Feb 2016 September 2023 (final completion)





#### AGREED APPROACH TO EXPEDITE COMPLETION





- Convert Nandoni-Nsami system to transfer raw water to Giyani:
  - Expand existing raw water pump station Nandoni to cater for Nsami/Giyani pipelin.
  - Discharge into existing Middle-Letaba canal (40km from Nandoni) - saves 9km pipeline & avoids Risinga View conflict over servitutes
  - Luvuvhu River & stream crossings temporary connections through HDPE pipes to test the system functionality- whilst permanent river crossing structures (concrete encased steel) are constructed
- Utilize existing new infrastructure to support Mavambe bulk main:
  - Modify existing Mavambe pump station at Nandoni
  - Use existing Mavambe line crossing at Luvuvhu River
  - Detour Malamulele pipe via Mavambe reservoirs to take over role of problematic Mavambe supply pipeline
  - Conclude adaptive planning with Vhembe DM to integrate bulk and reticulation to affected villages within Malamulele East (Muswane, Mphambo, etc.)





#### **PROJECT PROGRESS**

- The overall progress to date is 95,7%
- The 40 km pipeline is completed
- Temporary connections on river crossings are done to functionalize the system functionality achieved on the 05<sup>th</sup> April 2023
- Installation of raw water pumps and construction of permenant steel river crossings finalized at the end of August 2023
- The contractor is currently filling the pipeline and attending to snags for final completion of the project.
- Adaptive planning process for Malamulele system is in progress -
  - ✓ LNW through their PSP are finalizing IRS for approval- to have clear scope and unlock RBIG funding to complete bulk infrastructure
  - ✓ Vhembe DM have appointed PSP to finalize planning for complementary infrastructure (off-takes, storage tanks & reticulation) to the affected villages in Malamulele East (incl. Muswane & Mphambo)





#### **REASONS FOR DELAYS**

- Scope of works change Final conceptual design changed from potable to raw
  water supply and construction of the 800 to 500 mm (varying diameter) 40.5 km long
  pipeline from Nandoni to Nsami. The 26 km long pipeline from Nandoni to
  Malamulele with air, scour and isolation valve chambers supplies potable water.
- Intermittent access denied to contractor by Chief Ramovha from October 2016 till
   15th August 2022 for construction of pipeline.
- Access restrictions in Risinga View and Xikukwane Community stopped the project from November 2016 to April 2022.
- Delays in procuring long lead special materials and items and finalization of designs, penalization of contractor.
- February 2023 floods chambers and pipeline trenches not workable during floods for 17 days





## **GIYANI WTW REFURBISHMENT AND UPGRADE**





#### **GIYANI WTW REFURBISHMENT AND UPGRADE**

#### Phase 1 - Refurbishment

- The Contractor for refurbishment of existing 30 MI/d was appointed in December 2022 at R42 million
- The overall progress is at 61%
- The contractor started with critical items such as repairs on sedimentation and filtration systems
- 4 sedimentation tank's concrete refurbished and 2 are stripped of mechanical components for repairs
- 5 of 16 sand filters are completed, 11 are at various stages of refurbishment process
- The refurbishment of components is done in portions to avoid total shut-down The plant is currently operating at 17 Ml/d due to the project and water is rationed as a result
- The project is anticipated to be completed in 12 months (by December 2023)

#### Phase 2 - Upgrading

 The upgrade the WTW from 30 MI/d to 40 MI/d is at planning stage. IRS is anticipated to be completed December 2023 and construction to commence in April 2024 for a duration 24 months



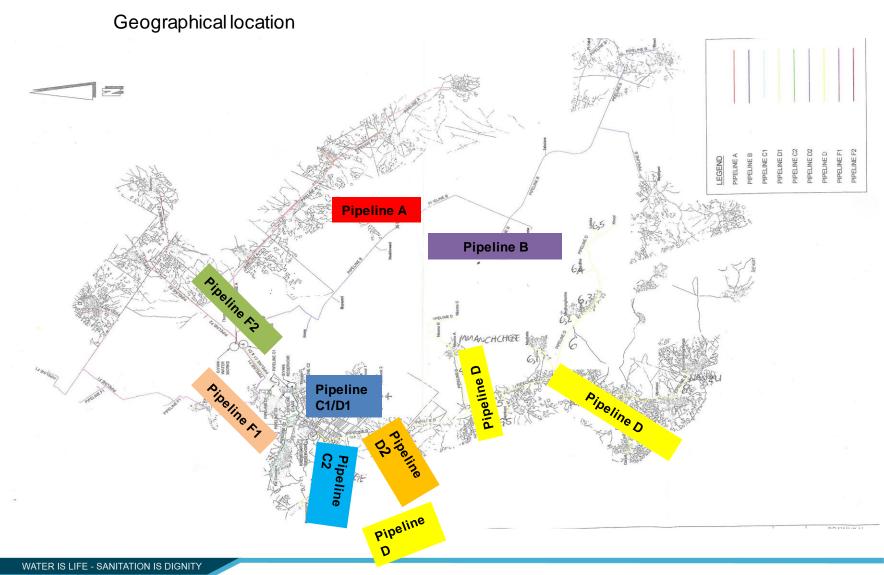


## **GIYANI WATER SERVICES PROJECT**





## **Schematic Layout of Giyani pipelines**







#### **GIYANI WATER SERVICES PROJECT**

- The construction commenced in August 2014
- The project consists broadly of:
  - Repair and maintenance of existing water and sanitation infrastructures (O&M) completed & closed
  - Revitalization of 154 boreholes and installation of package plants- 128 done but most are extremely vandalised and not operational – 86 were operational & 68 nonoperational as per last assessment done in March 2021
  - Construction of 1,5Ml/d Wastewater Treatment Works (Package plant) completed and handed over to Mopani DM for O&M
  - Laying of about 325km of pipelines (sectioned into 8) to distribute water to 55 villages
     still under construction
- Overall project cost estimate: R3,5 billion
- Overall expenditure: R3,4 billion
- Initial PSP/contractor (turnkey) was terminated
- DWS construction unit deployed as main contractor to complete the scope- mainly the bulk pipelines to 55 villages- which are still under construction





## **PROJECT BENEFICIARIES & PIPELINES (1)**

#### The project will benefit 47 086 in the following villages under Giyani LM:

Villag e No.	Bulk Pipeline	Village Name	Village No.	Bulk Pipeline	Village Name
1		Thomo	18	P	Siyandhani/ KaSiandana
	∢	Khakhala	19	Ĕ	Shamavunga
	Ž	Gawula/ KaGaula	20	PIPELINE	Nkomo Units A, B and C
	PIPELINEA	Mahlati/ Mahlathi	21		Hlopekani
	<u> </u>	Ndindani	22	C	Unit D,E,F
	_	Hlomela	23		Units E and F
		Homu 14 A/ Homu	24		Kremetart
		Mapayeni/ Kamapayeni	25	무	Maswanganyi/ KaMaswanganyi
9		Nwakhuwani	26	Ĕ	Bode & Dzingidzingi
	Ω	Vuhehli	27	PIPELINE	Sikhunyani/ KaSikhunyane
	) 무	Nsavulani/ Kasabulane	28	m D	Ngove/ KaNgove
	PIPELINE	Phalaubeni/ Phalakubeni	29	O	Nkomo / KaNkomo B
	<u>B</u>	Mbaula	30		Nkomo A
	₫.	Makhuvha/ KaMakhuva	31		Nkomo C
		Mushiyani/ KaMushiyani	32		Bambeni
		Xikhumba/ KaXikhumba	33		Maphata
		Xawela			





## **PROJECT BENEFICIARIES & PIPELINES (2)**

Item No.	Bulk Pipelin e	Village Name	Item No.	Bulk Pipeline	Village Name
45		Makosha/ KaMakoxa	34		Mghonghoma/ KaMunghonghoma
46	_	KaMakoxa B9/ Risinga view	35		Loloka(Guwela)
	E F1	Siyandani	36		Mnghonghoma
48	PIPELINE	Mavalani/ KaMavalani	37	PI	Kheyi/ KaKheyi
	PE	Mbatlo	38	PIPELINE	Gidya(Loloka)
	룹	Xivulani/ Shivulani	39	Ĭ	Guwela
		Nwadzekudzeku/Kanw adzekudzeku	40	D	Mageva
		Mninginisi(Block 3)	41		Ndhambi/ kaDzumeri
	PIPELINE F2	Maswanganyi	42		Daniel/ Rababelela
	ÉL F2	Mhlava Willem	43		Mphagani/ KaMpakani
	표	Muyexe	44		Namenwarhanga





## **PROJECT BENEFICIARIES & PIPELINES (2)**

Item No.	Bulk Pipelin e	Village Name	Item No.	Bulk Pipeline	Village Name
45		Makosha/ KaMakoxa	34		Mghonghoma/ KaMunghonghoma
46	<del>-</del>	KaMakoxa B9/ Risinga view	35		Loloka(Guwela)
47	Щ	Siyandani	36		Mnghonghoma
48	PIPELINE	Mavalani/ KaMavalani	37	PI	Kheyi/ KaKheyi
	PE	Mbatlo	38	PIPELINE	Gidya(Loloka)
	₫	Xivulani/ Shivulani	39	Z	Guwela
		Nwadzekudzeku/Kanw adzekudzeku	40	D	Mageva
		Mninginisi(Block 3)	41		Ndhambi/ kaDzumeri
	ELINE F2	Maswanganyi	42		Daniel/ Rababelela
54	Щ F2	Mhlava Willem	43		Mphagani/ KaMpakani
55	ЫР	Muyexe	44		Namenwarhanga





#### **GIYANI WATER SERVICES PROJECT PROGRESS - BULK PIPELINES**

- Overall, 64% progress
- Completion date revised from December 2023 to June 2024 due to delays in procurement, poor performance and termination of sub-contractors.
- Pipelines are functionalized as and when completed to benefit the community as indicated below:
  - o Pipelines C1: supplying Giyani town,
  - o Pipeline F2: supplying Thomo, Miniginisi, Mhlava Welem and Muyexe
  - Pipeline A: supplying Khakhala, Gawula, Mahlathi, Ndindani and lastly Hlomela through standpipe as the reservoir is still to be constructed
  - o Pipeline B: supplying Homu 14a, Homu 14b, Mapayini, Vuhehli
  - Pipeline F1: Xikukwane
- Water is supplied to the community on rationing pending completion of refurbishment and upgrade of Giyani WTW which is under construction





#### **RISKS AND MITIGATION**

IDENTIFIED RISK			MITIGATION
1. Non-performance contractors	of	sub-	<ul> <li>✓ Termination of sub-contractors (October Integrated) due to non-performance was finalized</li> <li>✓ Scope of works re-evaluated and IA is in progress of appointing capable contractor to complete the remaining works.</li> </ul>
2. Poor performance Construction North (CN)	of	DWS	<ul> <li>✓ Plant hire contract finalized to support CN and expedite works on site.</li> <li>✓ DWS attending to procurement challenges that affect their performance, e.g., lack of diesel, materials, etc.</li> </ul>
3. Project stoppage business forums	by	local	<ul> <li>✓ Multi-Stakeholder Task Team (MSTT) in place to address issues raised by the stakeholders to avoid project stoppages.</li> <li>✓ MSTT meets on monthly basis to resolve project issues.</li> </ul>



## **RETICULATION TO 55 VILLAGES IN GIYANI**





## **Approved Business Plans for Reticulation in 55 Villages**

	LOCAL MUNICIPALITY	PROJECT NAME	PROJECT COST (R)	PROJECT DURATION (WEEKS)	TARGETED HOUSEHOLDS
1		Thomo reticulation and refurbishment of the existing reticulation	47 438 089.17	64	701
2		Thomo Storage, Yard connections and Storage Refurbishment	8 106 148.46	20	701
3		Ka-Mninginisi Block 2 Reticulation	40 670 901.15	64	787
4		Mhlaba Willem Reticulation	18 296 377.23	37	399
5		Muyexe 4.33km Reticulation and Storage	27 339 010.27	64	1324
6		Muyexe 20.33km Reticulation	23 444 670.36	64	1324
7		Khakhala Reticulation	36 672 024.26	64	699
8		Gawula Reticulation	38 029 173.19	64	643
9		Mahlathi Reticulation	42 968 441.59	64	865
10		Ndindani Reticulation	33 962 331.45	64	680
11		Homu 14A Reticulation	40 852 820.67	64	746
12		Homu 14B Reticulation	44 706 665.24	64	811
13		Nwakhuwani Reticulation	8 140 726.89	20	158
14		Mapayeni Reticulation	44 184 921.30	64	1682
15		Mapayeni Storage Reservoirs and Metered Yard Connections	32 591 365.13	64	1682
16	Greater Giyani	Vuhehli Reticulation	16 711 613.67	32	625
17	LM	Risinga View 16.992km Reticulation, Yard Connections and 700kl Storage	43 488 303.46	64	1807
18		Risinga View 20km Reticulation and 1000kl Storage	34 676 812.50	64	1807





## **Approved Business Plans for Reticulation in 55 Villages**

19	Risinga View 17.35km Reticulation And 2x1000kl Storage	48 646 613.19	64	1807
20	Makoxa Reticulation and 500 Yard Connections	40 920 348.40	64	2078
21	Makoxa Storage and 1578 Yard connections	36 086 465.25	64	2078
22	Xikukwani 28.112km Reticulation and 750kl Storage	40 969 231.56	64	1218
23	Xikukwani 20.056km Reticulation, 1218 Yard connections and 750kl Storage	43 910 025.11	64	1218
24	Xikukwani 20.049km Reticulation, Refurbishment and 1633Yard Connections		64	1218
25	Bode Reticulation	40 156 099.51	64	784
26	Dzingidzingi Reticulation	28 776 635.43	64	990
27	Skhunyani Reticulation and Yard Connections	35 778 009.36	64	993
28	Skhunyani Reticulation, Yard Connections and Storage	20 509 545.59	64	993
29	Bambeni Reticulation	24 201 350.66	37	632
30	Mageva Reticulation and Yard Connections	46 032 242.80	64	2386
31	Mageva Reticulation and Storage	25 661 308.99	64	2386
32	Maswanganyi Reticulation and Yard Connections	42 280 776.20	64	745
33	Maswanganyi Reticulation and Storage	32 935 552.65	64	745
34	Maphata Reticulation	36 707 439.87	64	589
35	Ngove 63mm Reticulation	44 173 665.66	64	2017
36	Ngove 75 & 90mm Reticulation	30 921 565.96	64	2017
37	Ngove Yard Connections, Storage & Refurb of Reticulation	34 634 242.28	64	2017





#### PROGRESS ON RETICULATION PROJECTS

- In August 2022, the Giyani reticulation programme was initiated to complete the water service value chain (source to tap) in Giyani
- The reticulation program will extend the supply from bulk pipelines (currently under implementation through Giyani Water Service project) to household level.
- Estimated total cost at completion is R1.3 billion
- Programme for reticulation of 24 villages as Phase 1 has started 37 contractors are appointed for the project through WSIG funding under Schedule 6B
- Progress for the 37 contractors is at different stages with advanced progress at Bambeni village which is at 96%
- The average progress for all 37 contracts is 38% and financial progress at 25%.
- Completion dates vary depending on the date that the contractor was appointed and started with the works - the projects will be completed progressively per village starting from December 2023 to July 2024.
- These reticulation projects are expected to be completed within 12 months from the day of starting works
- Programme for reticulation of 31 villages as Phase 2 is recommended for approval and will be implemented in the 2024/25 financial year 43 contracts





## **SUMMARY PROGRESS PER VILLAGE**

Item No	Village Name	Start Date	End Date	Project Duration	Time Lapsed	Physical Progress Previously Reported	Progress To date	Financial Progress
1	Bambeni Reticulation	13-Dec-22	19-Jan-24	1 12	74%	96%	96%	74%
2	Homu 14A Reticulation	13-Dec-22	19-Jan-24		74%	79%	79%	72%
3	Ngove Reticulation Contract B	16-Jan-23	31-Jan-24	1 12	65%	74%	75%	45%
4	Makosha Reticulation Contract A	09-Mar-23	09-Mar-24	1 12	51%	66%	67%	45%
5	Bode Reticulation Contract B	09-Mar-23	09-Mar-24	1 12	51%	22%	22%	14%
6	Sikhunyani Reticulation Contract B	09-Mar-23	09-Nov-23	8	76%	36%	36%	23%
7	Masw anganyi Reticulation Contract A	09-Mar-23	09-Mar-24	1 12	51%	24%	24%	6%
8	Nw akhuwani Reticulation	13-Apr-23	13-Sep-23		98%	55%	55%	32%
9	Risinga View Reticulation Contract A	13-Apr-23	13-Apr-24		41%	50%	52%	27%
10	Muyexe Reticulation Contract A	13-Apr-23	13-Apr-24		41%	30%	30%	18%
11	Xikukw ane Reticulation Contract C	13-Apr-23	13-Apr-24		41%	72%	78%	46%
12	Dzingidzingi Reticulation	13-Apr-23	13-Apr-24		41%	57%	70%	23%
13	Makosha Reticulation Contract B	13-Apr-23	13-Apr-24		41%	23%	23%	3%
14	Mhlava Willem Reticulation	13-Apr-23	13-Oct-23		82%	72%	72%	40%
15	Mninginisi Block 2 Reticulation	13-Apr-23	13-Apr-24	-	41%	39%	39%	18%
16	Gaw ula Reticulation	13-Apr-23	13-Apr-24		41%	29%	29%	9%
17	Vuhehli Reticulation	24-Apr-23	25-Apr-23		76%	50%	52%	18%
18	Homu 14 B	24-Apr-23	24-Apr-24		38%	61%	61%	70%
19	Muyexe Reticulation Contract B	24-Apr-23	24-Apr-24	1 12	57%	39%	39%	18%
20	Mageva Reticulation Contract A	04-May-23	04-May-24		35%	58%	60%	21%
21	Mahlathi Reticulation	04-May-23	04-May-24	1 12	35%	23%	39%	10%
22	Mapayeni Contract A	04-May-23	04-May-24	1 12	35%	26%	26%	12%
23	Masw anganyi Contract B	04-May-23	04-May-24	1 12	35%	12%	12%	7%
24	Xikukw ani Contract A	04-May-23	04-May-24		35%	26%	26%	24%
25	Risinga View Contract B	21-Jun-23	21-Jun-24	1 12	22%	11%	14%	4%
26	Ndindani Reticulation	23-Jun-23	24-Jun-24		21%	26%	26%	18%
37	Mageva Reticulation Contract B	22-Jun-23	22-Jun-24		21%	32%	35%	14%
28	Khakhala Reticulation	23-Jun-23	23-Jun-24		21%	6%	10%	4%
28	Skhunyani Reticulation Contract A	22-Jun-23	22-Jun-24		21%	17%	17%	15%
30	Mapayeni Reticulation Contract B	21-Jun-23	21-Jun-24		22%	9%	17%	4%
31 32	Thomo reticulation Contract A	23-Jun-23 23-Jun-23	23-Jun-24		21% 42%	9% 19%	10% 19%	4% 9%
33	Thomo Reticulation Contract B Maphata Reticulation	23-Jun-23 22-Jun-23	23-Dec-24 22-Jun-24	-	42% 21%	10%	10%	9% 2%
34	Risinga View Reticulation Contract C	22-Jun-23 21-Jun-23	22-Jun-24 21-Jun-24		22%	6%	6%	4%
35	Xikukw ani Contract B	21-Jun-23	21-Jun-24		0%	0%	0%	%
36	Ngove A	31-Jul-23	31-Jul-24		0%	0%	0%	%
37	Ngove C	31-Jul-23	31-Jul-24		0%	0%	0%	%
Ο,	TOTAL PROJECT PROGR		31 Jul-2-	1 12				
	I O I AL PROJECTI PROGR	(E33			40%	37,5%	38%	25%





## BENEFICIARIES, JOBS, STUDENTS & SMMES

ltem	Village Name	Benefitting Households	Jobs Created	Students	SHE Rep	SMMES						
1	Bambeni Reticulation	632	23	2	1	5						
2	Homu 14A Reticulation	746	30	2	1	7						
3	Ngove Reticulation Contract B	2017	28	2	1	7						
4	Makosha Reticulation Contract A	2078	26	0	0	1						
5	Bode Reticulation Contract B	784	20	2	0	0						
6	Sikhunyani Reticulation Contract B	993	15	0	0	0						
7	Maswanganyi Reticulation Contract A	745	20	0	0	0						
8	Nwakhuwani Reticulation	158	26	1	0	2						
9	Risinga View Reticulation Contract A	1807	10	0	0	3						
10	Muyexe Reticulation Contract A	862	16	0	0	4						
11	Xikukwane Reticulation Contract C	2851	20	2	0	9						
12	Dzingi-Dzingi Reticulation	990	29	2	1	0						
13	Makosha Reticulation Contract B	2078	06	0	0	0						
14	Mhlava Willem Reticulation	399	38	1	0	0						
15	Mninginisi Block 2 Reticulation	787	30	1	0	4						
16	Gawula Reticulation	643	10	2	0	4						
17	Vuhehli Reticulation	625	20	0	0	0						
18	Homu 14 B	811	44	2	0	0						
19	Muyexe Reticulation Contract B	862	30	2	0	0						
20	Mageva Reticulation Contract A	2388	44	2	0	3						
21	Mahlathi Reticulation	865	40	0	0	3						
22	Mapayeni Contract A	1685	25	0	0	2						
23	Maswanganyi Contract B	745	31	0	0	0						
24	Xikukwani Contract A	2851	25	0	0	0						
25	Risinga View Contract B	1807	38	0	0	0						
26	Ndindani Reticulation	680	45	0	0	10						
37	Mageva Reticulation Contract B	2386	0	0	0	7						
28	Khakhala Reticulation	699	0	0	0	0						
28	Skhunyani Reticulation Contract A	993	10	2	0	0						
30	Mapayeni Reticulation Contract B	1682	25	0	0	0						
31	Thomo reticulation Contract A	701	15	0	0	2						
32	Thomo Reticulation Contract B	701	25	0	0	0						
33	Maphata Reticulation	589	35	0	0	0						
34	Risinga View Reticulation Contract C	1807	15	0	0	0						
35	Xikukwani Contract B	TBC	0	0	0	0						
36	Ngove A & Ngove C	TBC	0	0	0	0						
	TOTALS	14 447	794	25	04	74						
	Water and Sanitation		Water and Sanitation									

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#### **RETICULATION OF GIYANI 55 VILLAGES PHASE 1 PHOTOS**







# THANK YOU



