

REPORT TO SUBCOUNCIL

1. **ITEM NUMBER**: To be inserted by secretariat

2. SUBJECT [LSU - P2820]

STORMWATER MANAGEMENT : WINTER PREPARATION MAINTENANCE PLAN AND PROGRESS REPORT

ONDERWERP

INSTANDHOUDINGSPLAN EN VORDERINGSVERSLAG OOR WINTERVOORBEREIDING

ISIHLOKO

ULAWULO LWAMANZI ESITSHI: ISICWANGCISO ESINGOKULUNGISELELA UBUSIKA NENGXELO ENGENKQUBELA

3. PURPOSE

To inform the Subcouncil 10 on the progress of the Stormwater Winter Preparation Plan in the area covered by the Urban Mobility Directorate - Roads Infrastructure Management Department, **District Seven (7).**

4. FOR DECISION BY

This report is submitted for information and noting.

5. EXECUTIVE SUMMARY

The Stormwater Winter Preparation Plan is implemented annually to limit potential flooding and to maintain the functionality of road stormwater drainage systems.

This report deals with the stormwater maintenance undertaken by the Urban Mobility Directorate - Roads Infrastructure Management Department, District Seven (7). The district office covers the area south of Govan Mbeki Road, west of the N2 Free Way, north of Baden Powell Drive and east of Weltevreden Road / Duinefotein Road as well as Old Crossroads, portion east of New Eisleben up to the N2 Free Way.

It should be noted that the maintenance of bulk stormwater systems like rivers, canals, etc. is managed by the Catchment, Stormwater and River Management section within the Water and Waste Directorate as from the 1 March 2020. The maintenance of these systems is therefore not discussed in this report.

6. **RECOMMENDATIONS**

It is recommended that this report be submitted for information and noting by Subcouncil 10.

AANBEVELINGS

Daar word aanbeveel dat hierdie verslag ter inligting en kennisname voorgelê word aan subraad 10.

IZINDULULO

Kundululwe ukuba le ngxelo mayingeniswe ukuze kufunyanwe ulwazi nokuqwalaselwa liBhungana10.

7. DISCUSSION/CONTENTS

Due to the climate adaptation approach the RIM department has taken, the winter preparation program have started much earlier.

All tenders for the mechanical and labour intensive methods are in place and the mechanical tenders that expire in June 2023, has replacements that needs to be loaded into SAP.

From the period July 2022 to date, we have continued our cleaning operations as to eradicate any backlog that existed. Our greatest challenge remains the dumping of material into the stormwater infrastructure that leads to blockages. Throughout the year, we encourage communities not to dump into the stormwater infrastructure.

The RIM depots will respond to all emergencies that arise during rain events, and if needed, will activate the service providers to assist.

All RIM depots will file a Flood Incident report with the Stormwater Operation section for further analysis. This will guide our action and interventions.

The Head: Special Operation- Stormwater section is coordinating a Winter Preparation team within RIM, consisting off all RIM role-players. This seeks to standardise our approach to winter preparation and our initiatives.

Coordination will continue between RIM and other stakeholder departments to achieve our goal for winter preparation.

<u>Urban Mobility: Road Infrastructure Management Winter Preparation Plan</u> **2023**

The City of Cape Town normally get its peak rainfall during May and September. This period often shifts and as part of our climate adaptation approach, there is a need to start with winter preparation earlier to accommodate for this shift.

The Road Infrastructure Management branch is responsible for the cleaning and maintenance of the pipelines, culverts and associated structures. The rivers, canals and major ponds are cleaned and maintained by the Catchment, Stormwater and River management of the Water and Sanitation department.

The winter preparation plan consist of three sections, being:

- 1. Proactive cleaning of infrastructure to prevent flooding as far as possible,
- 2. Reactive cleaning through the emergency complaints handling and unblocking of stormwater infrastructure during times of flooding.
- 3. Coordination of works and analysis of storm event in conjunction with the CSRM branch.

Proactive Cleaning

The critical part of our proactive cleaning program, is the coordination between activities that has a knock on effect on the downstream operation in the stormwater network. The start of the system, the gullies, needs to be prioritised first which follows through to the connections and then the pipes. This allows for dislodged debris to be pushed to the bottom of the system that eventually land up in the rivers and canals where it is removed by the CSRM branch. This approach eliminates reworking and is more cost effective and efficient.

Gully Cleaning

This cleaning activity is on an ongoing basis until the end of the financial year.

Pipe Cleaning

Pipe cleaning, due to its nature, is generally cleaned by mechanical means. This is done via a high pressure jet machine or a combination jet machine / vacuum unit. This is also the most effective way to unblock pipes of all sizes, however, as part of our preparation plan, pipes are cleaned with a duct cleaning machine (DC machine) or bucket machine.

The mechanism for this activity is our term tender: Maintenance of Stormwater Infrastructure by Mechanical Methods, 201S/2020/21 and 120S/2019/20, which

expires on 30 June 2023. The replacement tender, 240S/2021/22 is in the finalising of award stage with no appeals.

Pond Cleaning

Ponds are programmed to be cleaned once a year for hydraulic functionality and if budget allows, once for aesthetics. With the amount of dumping in water courses, this has become a constant request and is very taxing on our budget.

Currently we are utilising labour intensive methods to clean our ponds as this is the best method to access some ponds, especially after the CoViD-19 land invasions.

We have a mechanism to execute this type of work through our term tender for the maintenance of stormwater infrastructure by labour intensive methods, 075S/2019/20, which expires on 2026-06-30.

Reactive Cleaning

Once complaints are received from the public, or other stakeholder, the RIM Depots will respond to these for immediate action, bearing in mind that during a rain event, the severity of the flood incident takes preference. During winter months, every depot has a standby crew ready for emergencies and when a warning is received from the South African Weather services, additional teams will be added to the standby crews.

Every depot is equipped with the necessary tools and should a capacity constraint arise, we have the option of calling upon our service providers to assist in terms of the tender conditions.

During the rainy period, the District will open a purchase order for a predetermined amount of hours for service providers to assist seamless during emergencies.

We are currently reworking our Tetra Radio mapping to improve the communication chain and talk groups within the depots. This will assist in more efficient communication during rain events.

After a rain event, all depots will file a Flood incident report (form attached) with the Head Special Operation – Stormwater section, for analysis purposes and to inform future analysis. This report will also inform what action will be need post the rain event.

High risk areas

High-risk areas are prone to flooding and includes the following:

- a) Flat areas where water is more likely to build up.
- b) Low lying areas where no overland stormwater escape routes exist.
- c) Where houses / properties are lower than road level. Typically where driveways have been incorrectly constructed allowing water to enter the

property.

- d) Where internal stormwater from properties are not drained towards roads and / or municipal stormwater system.
- e) Where systems are abused through illegal dumping causing blockages in the systems.
- f) Pond inlet/outlet structures blocked by informal shacks/dwellings.

7.2. **Progress summary**

A summary of each activity is listed with completed and planned / scheduled maintenance.

Risks of delays on planned maintenance are contributed by

- a) Delays experienced through EPWP Local Labour verification for cleaning of catch pits and ponds.
- b) Local Labour employed but then leave work after a day or two, affecting daily production. New names would then be requested to fill teams.
- c) Ongoing threads, intimidation, robberies, etc. which leads to stoppages and delays.
- d) Decanting of grey water and other solids which is a health risk to labour force cleaning catch pits and ponds?

7.3. Constitutional and Policy Implications

None

7.4. Sustainability implications

Does the activity in this report have any sustainability	No ⊠	Yes
implications for the City?		

7.5. <u>Legal Implications</u>

None

7.6. Staff Implications

Does	your	report	impact	on	staff	resources	or	result	in	any	additional
staffin	ig reso	ources	being re	qui	red?						

No	\boxtimes
Yes	

7.7. Other Services Consulted

None

7.8. POPIA Compliance

It is confirmed that this report has been checked and considered for POPIA Compliance.

FOR FURTHER DETAILS CONTACT:

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DIRECTORATE	Urban Mobility – Road Infrastructure Management
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SIGNATURE : HEAD MORNE DE WET	20/02/2023
SIGNATURE : AREA MANAGER MR ODWA GABUZA	20/02/2023
SIGNATURE: DIRECTOR MR HILTON SCHOLTZ	21/02/2023
SIGNATURE: EXECUTIVE DIRECTOR: URBAN MOBILITY MRS DALENE CAMPBELL	

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8	10	94	Buphumuleni	Catchpits	All streets	70	Sandy/Litter	Labour		24 Apr 23	5	8 Feb 23	3	100%											
9	10	94	Eyethu	Catchpits	All streets	400	Sandy/Litter	Labour	Sile F, G, H, I & J	23 Nov 22	10	12 Dec 22	15	15%											
10	10	94	Graceland	Catchpils	All streets	70	Sandy/Litter	Labour		27 Mar 23	5														
12	10	98	Harare	Catchpits	All streets	250	Sandy/Litter	Labour	Block A, B, C, D & E	20 Mar 23	25														
14	10	98	litha Park	Catchpits	All streets	420	Sandy/Litter	Labour	Block A, B & C	21 Nov 22	20	13 Feb 22	7	15%											
15	10	94	Khaya	Catchpits	All streets	380	Sandy/Litter	Labour	Sile A, B, C, D & E	3 Oct 22	40	10 Oct 22	45	100%											
17	10	Mul	lfi Kuyasa	Catchpits	All streets	210	Sandy/Litter	Labour	Block A & B	1 Mar 23	20														
21	10	Mul	lfi Mandela Park	Catchpils	All streets	350	Sandy/Litter	Labour	Block A & B	27 Mar 23	20														
41	10	Mul	Umbrabulo Ifi Triangle [Lower]	Catchpils	All streets	240	Sandy/Litter		Block 1A & B (Below Lansdowne)	29 Aug 22	20	10 Oct 22	12	50%											
42	10	96	Umbrabulo Triangle [Upper]	Catchpils	All streets	145	Sandy/Litter		Block A & B (Above Lansdowne)	3 Oct 22	15														

	RBAN MOBILITY - ROADS INFRASTRUCTURE MANAGEMENT - DISTRICT 7 Last Updated - 02 23 2023 22:13:36															Star	rt date for week 1	is Friday, 0	L July 2022										
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4	10	9	14	Khaya	Unlined channel	Kusasa Road	100	Grassy/litter	Labour	Kusasa Road c/o Nflalo Road	12 Dec 22	5	29 Nov 22	5	100	096													

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6	10	94	Khaya	Dry pond	Kusasa Road	8700	Reeds/Litter	Labour	Kusasa Road c/o Ntialo Road Pond	21 Nov 22	15																
32	10	95	Umbrabulo Triangle [Lower]	Dry pond	Japtha K c/o Fukutha Road	5500	Reeds/Litter	Labour	Fukutha Road Pond [Cycle 1]	3 Apr 23	15	1 Dec 22	13	1009	Z												
33	10	95	Umbrabulo Triangle [Lower]	Dry pond	Japtha K c/o Fukutha Road	5500	Reeds/Litter	Labour	Fukutha Road Pond [Cycle 2]	22 May 23	10																
34	10	96	Umbrabulo Triangle [Upper] Umbrabulo	Dry pond	Malume Crescent	3500	Reeds/Litter	Labour	Ntufu Pond 1	16 Jan 23	17	6 Feb 23	10	509	K.												
35	10	96	Triangle	Dry pond	Mkhoba Street	9000	Reeds/Litter	Labour	Ntutu Pond 2	30 Jan 23	25	6 Feb 23	10	409	c.												
36	10	96	Disport	Dry pond	Malandalahla Crescent	7500	Reeds/Litter	Labour	Ntutu Pond 3	20 Feb 23	30	6 Feb 23	10	309	c c												
37	10	96	Umbrabulo Triangle [Upper]	Dry pond	Mhlophe Crescent	5500	Reeds/Litter	Labour	Ntufu Pond 4	13 Mar 23	17	6 Feb 23	10	509	c.												