



Adopt Moreletaspruit/ Neem Moreletaspruit Aan Newsletter/Nuusbrief 26, January/Januarie 2021

Covid-19, Climate Change and Water Scarcity

A year ago most of us had only vaguely heard of a coronavirus in a distant country but by the end of March 2020 our lives were turned upside down by Covid-19. We were locked down, wearing masks, isolating and sanitising. We lost friends and relations to the virus. We learned about Zoom and Teams meetings, webinars and working at home while businesses struggled to keep afloat. One of the positives was that more people realised the value of nature and our green areas, as shown by the way they flocked to our nature reserves and



Left: path in indigenous forest and *right:* the importance of children being able to connect with Nature cannot be over-emphasised – both photos in Moreleta Kloof Nature Reserve.



nature areas once some of them were able to open to the public again.

We cannot allow Climate Change and Water Scarcity to creep up on us as Covid-19 did. While a vaccine may be developed against a virus, once Climate Change has progressed too far it may be impossible to turn it around. 2020 and 2016 are jointly the hottest years on record, 1.25°C higher than the pre-industrial period of 1850 – 1900 and dangerously close to the 1.5°C target set by the world's nations to avoid the worst impacts.

Lutske Newton of the CoT Sustainability Unit sent this update on the City's plans: "With the completion of the Climate Response Strategy in 2017, the City of Tshwane has been beavering away at the development of its Climate Action Plan known as the CAP. The goal of the CAP is for the City to be carbon neutral and climate resilient by 2050. The plan is founded on the Greenhouse Gas Emissions Inventory which tells us how much greenhouse gas we emit and from which sectors – this information then guides mitigation actions. It is also informed by the Climate Risk and Vulnerability Assessment which determines climate hazards, vulnerabilities and risks and what measures need to be put into place to mitigate those risks. On 2 March 2020, representatives of the

Friends Groups participated in a City workshop on climate change adaptation actions and this was the start of the formulation of these actions. This input has been translated into a climate actions database which is inclusive of both mitigation and adaptation actions. The CAP is currently being drafted and the actions will form a core part of the plan as will the resourcing requirements. The City is grateful for the support it has received for this process and will be engaging its stakeholders again once the draft plan is ready for external input. Suffice to say, the City of Tshwane is taking climate change very seriously and the plan will be a solid foundation for adapting to its impacts and reducing its contribution to climate change.”

Meanwhile, we can all play a role by protecting our precious green areas, relying less on fossil fuels, recycling and reducing waste, eating less meat, having smaller families and generally living more lightly on the Earth.

We also have to bear in mind that South Africa is a water-scarce country and it is predicted that by 2025 we will be an extremely water-scarce country. Gauteng is already under great stress in terms of water.

Now is the time to be aware of how much water we use, to take steps to reduce our water usage and to protect the water in our rivers and dams from pollution.

Water Pipeline Rehabilitation Project at Brookside Meander

An 800 mm bulk water pipeline which runs next to the Moreletaspruit downstream of Lynnwood Rd was exposed by flood waters which scoured away the bank year after year. This was reported in 2011 and again in 2015 but action was only taken in 2019 when it was treated as an emergency.



About 90 metres of exposed and sagging pipeline can be seen on the east bank of the Moreleta. The sedimentation in the river bed forced the stream towards the bank which was further weakened by a storm water outlet above the pipe.

Because it was an “emergency”, work was permitted to go ahead in terms of a NEMA Section 30A Directive issued by GDARD which was linked to the EMPr (Environmental Management Programme) signed by the CoT Project Manager and a Directive in terms of Section 19 (3) of the National Water Act issued by the National Department of Water and Sanitation. Work started at the end of January 2020.

Residents whose properties overlook this stretch of river watched with growing disquiet as it appeared that no attempt was made to limit the footprint of the operations, trees were destroyed, fuel was stored on site, and in general no respect was shown towards the environment or the river. When these residents received unsatisfactory answers to their concerns they formed the Brookside Meander Action Group (BMAG) in order to do their utmost to protect the river and environment from unnecessary damage. By then the

Covid-19 lockdown was in place, site visits were not allowed and CoT officials were not working in the normal way. We are very grateful to BMAG for keeping the Adopt Moreletaspruit Forum aware of what was happening along our river.



Above left: the pipeline was supported by sandbags and the river was moved about five metres to the west. Here rock was being dumped in former river bed. *Right:* the sandbagged pipeline on right of the vehicle is now covered by shotcrete and soil is being compacted over the dumped rock. Gabions left of the vehicle mark the new river bank.



More soil was used to cover the shotcrete-protected pipeline and fill in up to the gabions along the new river bank. There are questions as to the necessity of moving the river bed quite so far.

Without proper preparation, the disturbed areas were hydroseeded with indigenous grasses on 8 June. After complaints about all the very large stones and rocks which would prevent mowing, an excavator was sent to press the stones into the soil.



In August we were able to visit the site and found that the river now looked like a canal. Despite recommendations to have banks sloped at 1:3 or 1:4, the sides were made very steep and covered by 200 metres of gabions on the pipeline side and Geomesh (not planted with any vegetation) on the other. Thirty metres of gabions were installed on both sides at the downstream end where the pipeline crosses under the river.



During our visit on 9 August, we carried out a miniSASS test about 20 metres downstream of the project to determine whether it had had a negative impact on the river health. *Above left*: Louise Kritzinger collected the sample, *above right*: Jaco-Ben Roos, Philip Kesting, Louise and Carol Martin analysed it. The score was 4.5 which is “poor” on the miniSASS scoring system, but is actually normal for the Moreletaspruit.

After the first summer rains the Geomesh was in tatters and a section of gabions collapsed. And after the heavy rain and flood on 11 January 2021 all the Geomesh and most of the loose soil on the banks were washed away (*below left*). Gabions sagged in places and soil behind gabions was washed away at the downstream end (*below right*).



In the photos above it can be seen that the hydroseeded grass did grow despite the “rocky” start but so did many of the alien weeds which proliferate on disturbed ground. Repairs will be carried out in the dry season. The Water Use Licence has yet to be granted and the instructions in the Directive issued by GDARD have yet to be followed. The project succeeded in protecting the bulk water pipeline, but at great cost to the river and the environment. If there had been better communication between the various CoT departments and with the public, environmental damage might have been avoided. (Photos for this section on the Brookside Meander Project: the CLO, BMAG and Carol Martin)

SANBI is developing environmental training material for Municipal Engineers. It would be beneficial for those engineers who work on projects at rivers and environmentally sensitive areas to take advantage of such training.

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WESSA Friends Groups/Vriendegroepe

Between March and the end of August the Friends Groups were unable to hold group events because of the Covid-19 lockdown regulations. We are now back in Level 3.

Vriende van Faerie Glen NR het maandelikse aksies teen indringerplante gehou asook 'n voëlkykuitstappie en 'n boomuitstappie. Louise Kritzinger, die voorsitter, is passievol oor inheemse bome en plante en het in Desember 'n tuin met inheemse plante gevestig by die ingang van die Natuureservaat.



Links: Louise by die tuin buite die ingang. *Regs:* Louise en Vince van der Wiel besig om plante in die tuin binne die ingang te plant.

Vriende van Moreleta Kloof: Jeannie du Plessis en die “bossietannies en -ooms” het onvermoeid op indringerbome gewerk. Hulle het ook 'n boomuitstappie gebied.

Friends of Colbyn Ridge: this is a new group under the chairmanship of Jana Pieters and they started with a huge clean up in October. Five hundred bags of rubbish were collected and syringas and pompoms were removed. Further clean ups were organised in November and December.

Friends of Colbyn Valley had two pompom hacks in November.

Friends of Serene Valley had four work sessions to remove invasive alien vegetation.

Friends of Manghela is a new Friends Group, registered in December, and will work in the section where the Rademeyerspruit and Moreletaspruit meet between Rubenstein and Garsfontein Roads.

Birds and Happiness: A recent study showed that seeing birds made most people happy. We are therefore very fortunate as we have more than 300 bird species along the Moreletaspruit! *Right:* a White-bellied Sunbird on a wild dagga plant. Photo by Jeannie du Plessis.



Newsflash: Tshwane has been entered for the City Nature Challenge for 2021. It will take place from April 30 to May 3 so download the iNaturalist app and start practising!

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Facebook Group – Adopt-a-River Moreleta