

15 June 2016

**TO WHOM IT MAY CONCERN**

**PROGRESS WITH REHABILITATION OF THE VILJOENSKROON WATER SUPPLY SYSTEM**

We have informed you over the last few weeks about the repair and rehabilitation of Viljoenskroon water purification system. The Department of Water and Sanitation (DWS) and De Beers are working with us to ensure a long term and sustainable solution. It is with great pleasure to inform you that the progress so far has a huge impact on our water supply and we are not finished yet. The following to take note off: -

1. Backwash blockage and the new coffer dams. You will remember the nearly total blockage of the sludge/silt due to backwash from the water purification plant that we have pumped into the Renoster river over many years now (see picture 1).



Picture 1. Silt build-up in the Renoster river next to our extraction point.

To limit further damage to the river and stop the release of the backwash into the river DWS started to build coffer dams so that we can release the backwash into the coffer dams instead of directly into the Renoster river. We rerouted the backwash pipeline on 14 June 2016 into the first coffer dam. Another coffer dam will be constructed next to the first one. The backwash will then be rerouted into the second coffer dam which will

be on a higher level than the first one. The idea is then to release the backwash into the second coffer dam on the higher level to allow enough time for heavy particles to settle down and allow the cleaner-water to spill over into the next dam. This process will repeat itself in the next dam and eventually fairly clean water will be released into the Renoster river. Most of the silt will stay in the coffer/or silt dams as well as some of the unwanted heavy chemicals.

On 15 June 2016 the following picture (picture 2) was taken to show the effect of the backwash into coffer dam No 1.



Picture 2

The water quality of our raw water in the Renoster river already improved significantly. On 1 May 2016 we measured a turbidity of 64,7 NTU. On 15/16 June 2017 we already measured a turbidity of just over 17 NTU. This is partly due to more “clean” water from the Vaal river but also the fact that we have stopped releasing our own backwash into our river.

## 2. Water level of the Renoster River.

Since 8 June 2016 we informed you about the pump De Beers installed at the Vaal river pump station to assist us with the shortage of water. This action buys valuable time for us to work on a long term solution but also a sustainable solution for the foreseeable future. The water level of the Renoster river rises with more than 400 mm over the full distance from the weir to the first rapid, a total distance of 2,9 km. This in only 7 days from the date and time the new pump was switched on at the Vaal river.

- The present rate of inflow from the Vaal River to the Renoster River is  $\pm 80,5$  litres/second (290 m<sup>3</sup>/hour or 6,955 Mega litres per day).
- From the daily reports, extraction over the last seven days was only 38,2 litres/second (137,5 m<sup>3</sup>/hour or 3,299 Mega litres/day)
- Maximum demand is 72 litres/second (259 m<sup>3</sup>/hour or 6,22 Mega litres/day)



The last seven days' performance imply that we delivered  $\pm 3,656$  Mega litres /day more than what we have extract. This allow for the build-up of a positive reserve in the Renoster River and the change in the level to  $> 400$  mm in 7 days.

With the positive water level, the silt build-up is nearly submersed (see picture 3).



Picture 3.

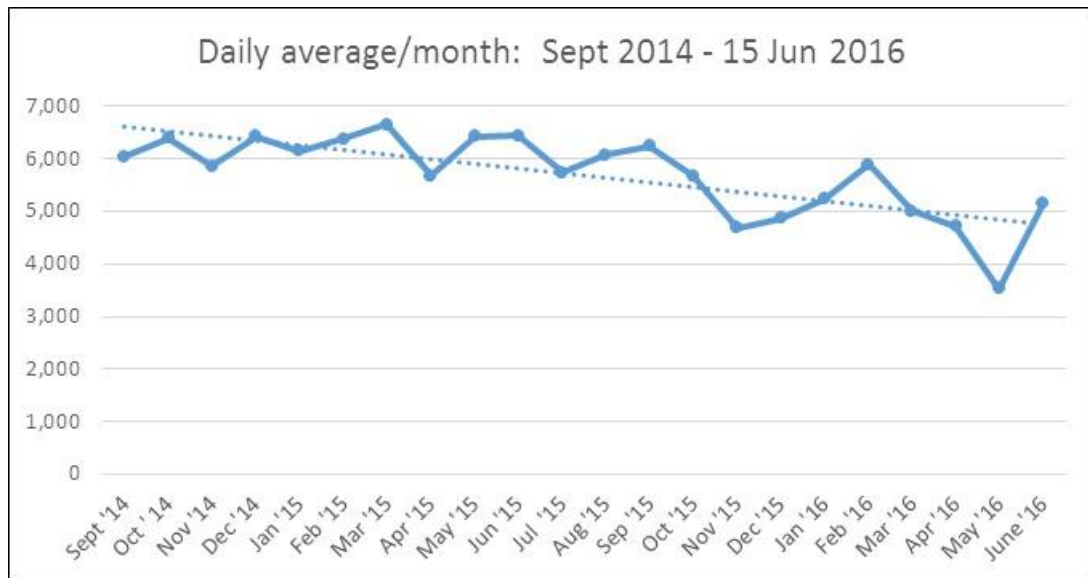
We have done some tests with a PowerVac machine to extract the silt and it proves to be successful. The rehabilitation will continue to ensure we clean the river close to its original state.

3. Water delivery.

Since 8 June 2016 we have informed all concerned about the progress with water delivery but also remind you all about the water restrictions still in place. It is important to communicate with our community to use water sparingly. It is the prerogative of the Municipality to limit water supply to town if and when necessary to protect and build up the water reserves.

With the repair and rehabilitation in process, we trust that we can supply in the demand without any further breaks. We manage to slowly build up some reserves in our reservoirs and overcome the back lock due to the number of days we were without water. The pressure in our grid (pipelines) is also improving.

From the daily reports received from the water purification facility, the increase in water supply is noticeable (see picture 4). We trust that the supply will still grow in the next few days as we complete further repair work at the water purification facilities. Our aim is to get close to the first target of 5,899 Mega litres/day.



Picture 4.

4. Security at our facilities.

After the cable theft and damage to our reservoir transformer on 27 May 2016, the Municipality deployed 2 security guards 24/7. Mr Pieter Southwood and his team have cleaned the terrain from unwanted trees and vegetation. Mr Boet Wienand offered assistance with the necessary herbicides to take care of unwanted vegetation that not alone offer shelter to criminals but also pose a certain danger to the water reservoirs and structures. Further work still in progress.

We will continue with further repair work in the weeks to come and keep you all informed. The support from Department of Water and Sanitation, De Beers and our Municipality is of great help and much appreciated. In order to ensure peace and stability within our community we urge all concerned not to politicise water and food security to our communities. The willingness and co-operation from our Municipal Manager, Mr MS Mqwathi and his directors are appreciated and we trust that we can set new standards in building much needed relationships within.

Let us all take hands and seek for unique solutions within our capability and within the framework to our disposal. We trust the above is some proof of co-operation and what can be done. As said before, if you may ask what the future may hold for us, I would use the words of Peter Drucker by saying: - "the best way to predict the future is to create it". Please do not hesitate to contact us should you have any questions.

Yours sincerely

**Nico Palm**

For and on behalf of

**RAMMULOTSI/VILJOENSKROON COMMUNITY FORUM AND BUSINESS CHAMBER**