

TO WHOM IT MAY CONCERN

SITUATION REPORT NO.3

Further to our previous reports we would like to inform all concern of the latest status of various activities in Rammulotsi and Viljoenskroon.

1. **Viljoenskroon water treatment works.** To summarise the progress, allow me to start from our raw water source and work through the full cycle.
 - a. Vaal river pump station. We still operate with the pump De Beers Group has provided to us on loan. The submersible pump was installed and commissioned on 8 June 2016.



The submersible pump delivers ± 80 litres/second and have made a huge impact on our natural reservoir at the Renoster river side. Based on the experience over the last view weeks we have various proposals to upgrade and install new pumps at the Vaal river pump station. It will not alone ensure adequate supplementary supply in future but also offer redundancy at all times. Final presentation to be made later this week.

- b. Renoster river. We have showed the situation we were in on 7 June 2016 before the new pump was commissioned. As mentioned before, the backwash blocked the free flow of water and we were literally without water on 7 June 2016 and all water purification got to a standstill. Further to this, the backwash into the river at the extraction point not only blocked the water but it keeps on building up the turbidity. This imply that the purification process worsens and become more difficult and expensive.



On 3 July 2016 the situation is very different and we are pleased with the progress and water levels in the Renoster river. In the first 14 days we have an increase of more than 400 mm in the water level.



As the water surface increase over the full distance from the weir to the first big rapid ± 2.94 km in length and with an average width of ± 32 metres, the increase in water level slows down. However, we are pleased to inform you that the water level still increase considering the fact that we now reached our maximum extraction of just over 6 million litres per day for purification purposes.

- c. Silt/Coffer dams. To limit further damage to the Renoster river and stop the release of the backwash into the river, DWS build two coffer dams so that we can release the backwash into the coffer dams instead of directly into the Renoster river. On 22 June 2016 we reported that the first two coffer dams were in full operation.



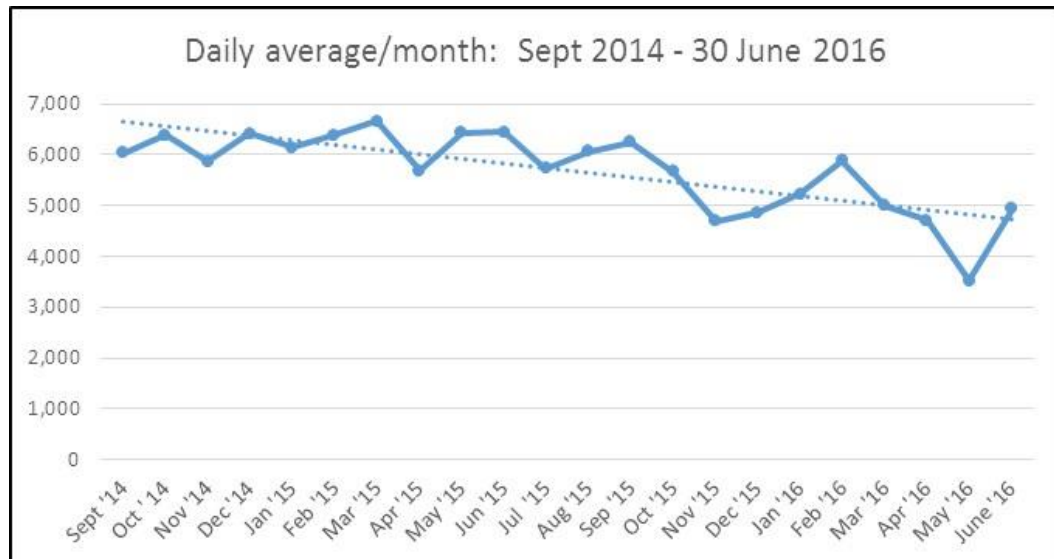
On 22 June 2016 we indicate the success and total impact on our WTP at the Renoster river. We also refer to the impact and improvement with the water quality of the Renoster river. We monitored the turbidity over time now and it is worth to report the improvement and success until now. This all by basic natural settling. The following turbidity minimum and maximum measurements at strategic points to take note off: -

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|------|--|---------------------|
| i. | Backwash released | : 127 – 172 NTU |
| ii. | Raw water in river at submersible pump | : 13.62 – 22.30 NTU |
| iii. | Raw water at centrifugal pump in river | : 13.45 – 21.10 NTU |
| iv. | Raw water at WTP intake | : 14.38 – 27.4 NTU |
| v. | Coffer dam release after settling | : 2.68 – 4.59 NTU |

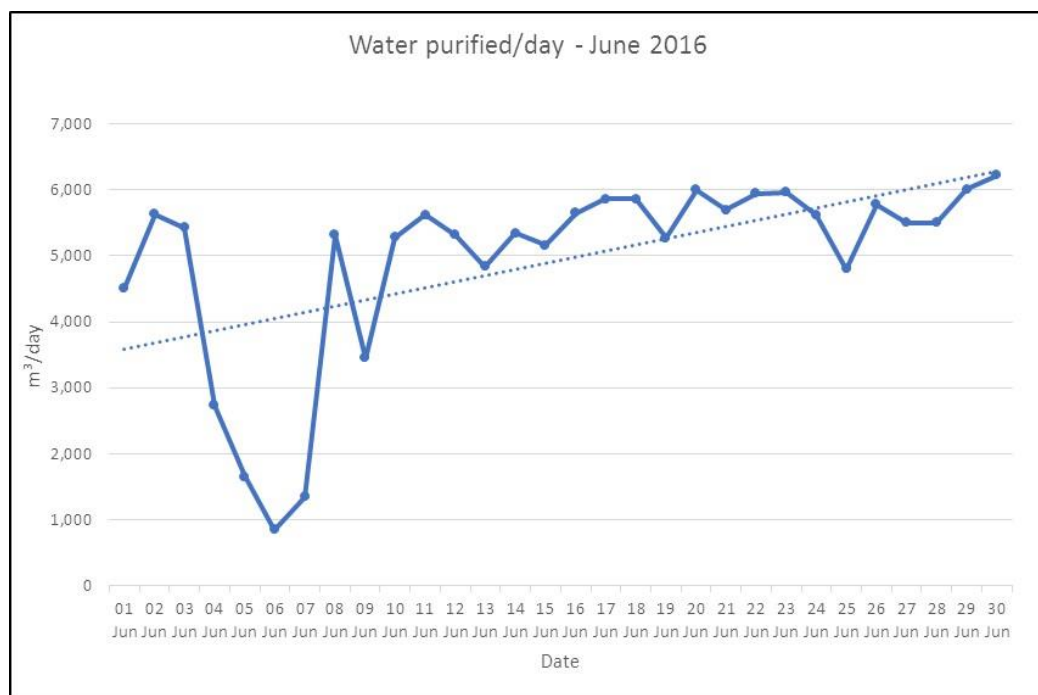
Considering the fact that we had a raw water intake turbidity of 64.7 NTU on 31 May 2016, the improvement of our water quality is significant. It implies that we may save on water purification cost due to the following:

- Less backwash required per shift which means saving in electricity.
- Less flocculants which also serve as cost saving in chemicals required.
- Saving on time for total purification process due to cleaner water to purified.
- Improvement in overall water quality to the community.

- d. Water purification and delivery. We are pleased to inform you that we are at the same maximum level reached since September 2014. Our maximum purification capacity is about 6,65 million litres per day. We also break the trend barrier been indicated in the graph hereunder. Please take note that the poor performance in June was due to nearly a week of no water supply and the Renoster river that was nearly without water at the time. However, with that included we still break the first trend barrier

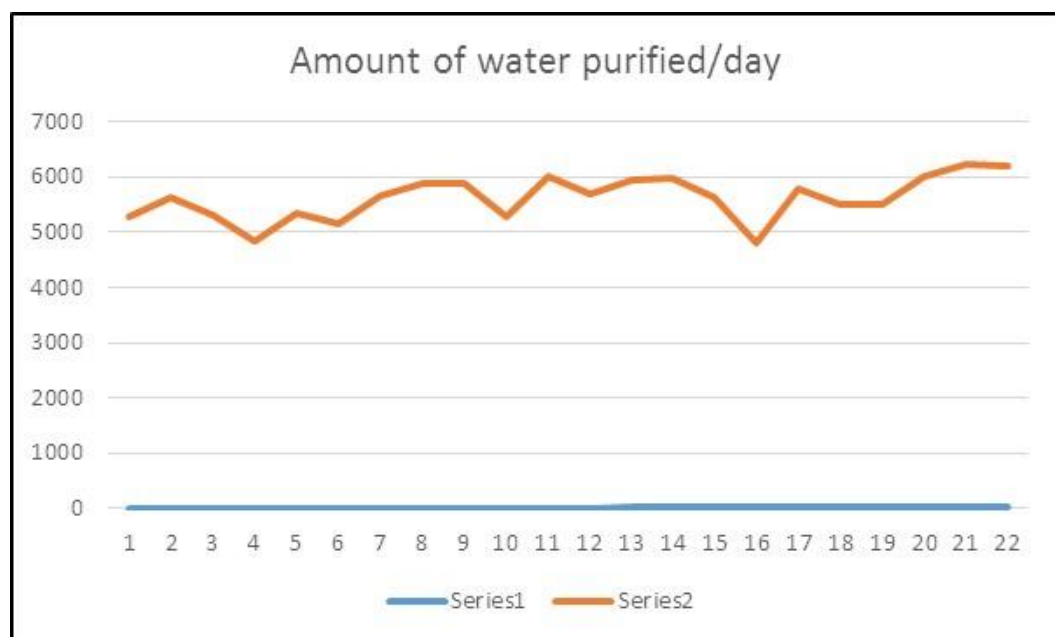


It is also noteworthy to have a look at the daily reports for purification during June 2016. The same improvement is also clearly visible.



From the graph above you will notice the difficult situation in the beginning of June 2016. You will also notice two incidents after the first week where we experience a lower delivery due to shift worker(s) that did not report to work and/or a lower pump figure to reasons yet to be determine with the operators on duty.

A personnel meeting is scheduled for tomorrow 12 July 2016 to discuss the importance of essential jobs or as sometime refer to work of strategic importance. To have a clearer picture without the skew results in the first week of June 2016 it is necessary to look at the last 22 days when water delivery normalised and stabilised. We trust that we can keep at this level and get as close as possible to the maximum our WTP can offer to deliver.



- e. Water restrictions. In our report dated 22 June 2016 we have reported about water restriction still in place. As mentioned on 22 June 2016, we still cannot fill the water reservoirs even with the increase in water supply.

We also noticed that people quickly forgot that water restrictions are still in place and keep on watering their gardens. Our only water supply is from the Vaal river at the present moment. DWS and Rand Water announced in June 2016 that the Vaal river capacity is 23% down from last year this time.

We urge all residents to use water sparingly even if there is water in the tap. The last 2-3 weeks there was no shutdowns. If we cannot manage to fill the reservoirs we have to implement water restriction by closing the supply for the published times (See report 22 June 2016) in order to build a backup of at least 2 days if the reservoirs are full.

The following picture taken on 3 July 2016 of the inside of reservoir C (the big reservoir to the West of the R501 to Potchefstroom). Except for the fact that the water level is still nearly at the bottom we can also see that the water reservoir is fairly clean and not seriously influenced with sedimentation. The water inflow also visible just left from the centre of the picture.



As requested on 22 June 2016, please relay the message through all channels and communicate to all concerned the importance of using water sparingly. No matter the improvement at the purification facilities or installing bigger pumps and machines, if there is no water we cannot supply. We are all aware of the dire situation in Kroonstad. We are privilege to have access to the Vaal river and we have to be responsible.

2. **Waste Water Management.** The rehabilitation of the first phase of our waste water treatment plant (WWTP) is also nearing completion. From the picture hereunder and taken on 6 December 2015 most of the units at WWTP were not operational. The intervention by DWS was welcomed by all and the improvement is visible.

Mr Arnold Richter from Envirocure was called in by Kroonstad and with the natural bacteria even the odour is greatly reduced within the last 7 days. The liquidity of the sludge improved and we trust to improve the quality of the water released into the wetland to acceptable standards.



From the above picture and the closer view in the next picture clearly indicate the improvement in liquidity of the sludge which now start flowing with the aerators in full operations. This is due to the new machines and also the natural bacteria from Envirocure which live on the organic material from the sewer.



The aim in the near future is to ensure “clean” water released into the wetland and also the redevelopment of the wetland and the proclaimed nature reserve. The following picture shows the status of the wetland influenced by the water release from our WWTP.



Based on the success with the coffer dams at the Renoster river WTP we are sure we can meet the standards set by Department of Environmental Affairs with regards to wetland development and the release of sewer water into our wetland. Hereunder what we envisage to ensure a clean and safe environment.



We also investigate further use of the “clean” water from our WWTP, be it for agricultural purposes or just pure irrigation of sport grounds. We trust to have a clear indication of the amount of water that eventually reached the WWTP. Considering the fact that we deliver between 5,6 – 6,6 million litres of clean water to our communities it is estimated that between 60 – 80% of that water will reach the WWTP. We trust to have all flow meters at the WWTP in full operation in due course to confirm the actual figures. We cannot waste water. We have to do everything possible to maximise the use of all water we have to our disposal.

As mentioned on 22 June 2016, we will continue with further repair work in the weeks to come and will keep you all informed. 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