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Progress Report - 22 June 2016

## TO WHOM IT MAY CONCERN

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

We issued the first progress report in this format 7 days ago. The rehabilitation and repair work at Viljoenskroon water facilities started on 31 May 2016 and we are satisfied with the progress but more so with the results and success of the intervention. Again, our greatest appreciation for the assistance from the Department of Water & Sanitation (DWS) and De Beers Group who were instrumental to the success. As they say, a picture is worth a thousand words. By saying this, I will rather try to use pictures to show the progress and success made when people are committed and take hands to make a difference. The following to take note off: -

1. Backwash blockage and the new coffer dams. As mentioned previously we have damaged the Renoster river in such a way that we nearly blocked the free flow of water with the backwash from the purification plant. (see picture 1). 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.



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



To limit further damage to the Renoster 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. By end of today the first two coffer dams were in full operation (see picture 2).



Picture 2

To visualise the total impact it is worth to compare the before and after pictures of our water works facility to get a full picture of the impact of the work been done in just more than 2 weeks' time (see pictures 3 and 4)



Picture 3 taken on 12 February 2016





Picture 4 taken on 22 June 2016.

The impact and success with the implementation and commissioning of the cofferdams can only be realised when we measure the results. On visual inspection this morning the clarity of the overflow water into the Renoster river from the cofferdam was clearly visible (see picture 5 and 6).



Picture 5 taken on 31 May 2016 of the backwash released





Picture 6 taken on 22 June 2016. The backwash water released after settling in the cofferdam is nearly clean and clear.

To fully understand the impact, we measured the turbidity of the water released from the cofferdam and it is cleaner than the water we extract from the Renoster river. On 22 June 2016 we measured a turbidity of only 6.11 NTU for the backwash water released from the cofferdam (see picture 7).



Picture 7

You will remember in our report dated 15 June 2016 we refer to the improvement of the water quality of the raw water in the Renoster river. 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. As mentioned, 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.

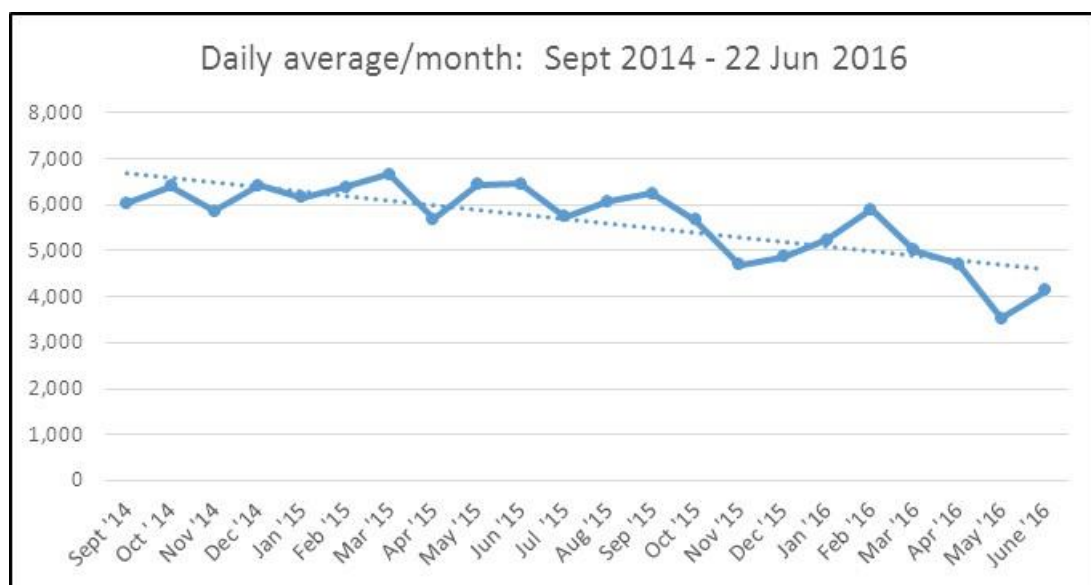
With all this said we envisage to recycle the water from the cofferdams in future instead of releasing it into the river as it is just >5 NTU higher than purified water. We will also investigate the possibility and cost effectiveness of building a “settling-dam” in the open space just in front of the water purification plant to pump the raw water first into the settling dam. If feasible and we can manage the natural cleaning of raw water in a similar way as with the backwash and describe above, we hope to minimise the purification cost of water at our purification plant.

2. Water level of the Renoster River.

In the report dated 15 June 2016 we mentioned that the Renoster river level has risen with more than 400 mm. As the river surface area grows we noted a smaller rise in the water level, however, it is still rising. We still receive more water than what we extract.

3. Water delivery.

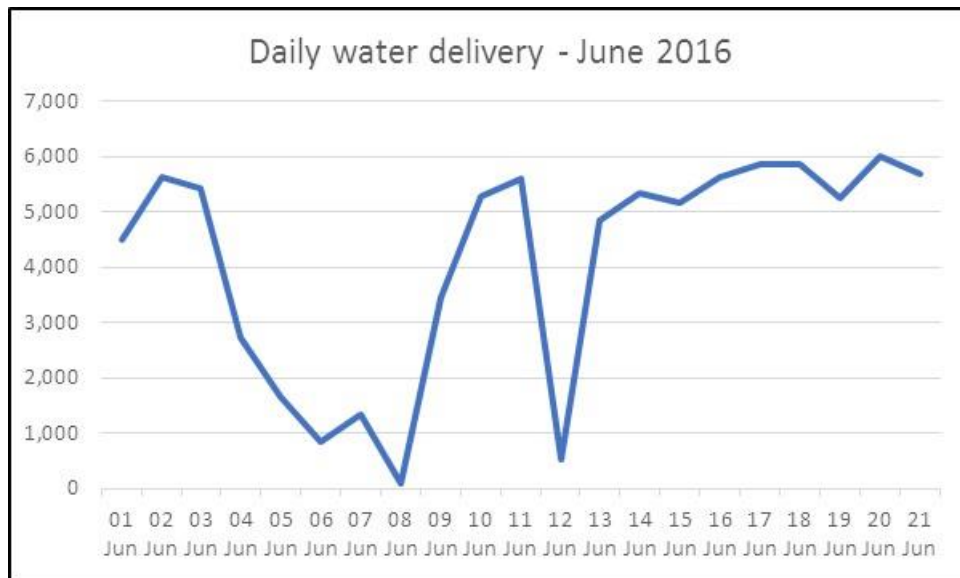
Over the last 7 days our water delivery for June 2016 increase from an average of 3,633 Mega litres/day to 4,134 Mega litres/day (see picture 8.)



Picture 8

Please take note that the average is negatively influenced by the water shortage and poor delivery in the beginning of June 2016. However, as indicated in picture 9 we have recovered fairly well and already managed to reach 6 Mega litres on 20 June 2016 (see picture 9). We trust to improve delivery and reach an average of 6,22 Mega litres/day.





Picture 9

#### 4. Water restrictions

We noticed that 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 last week 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 few days 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.

## FREE STATE WATER RESTRICTIONS



Location	Restriction	Source	Date Published
Moghaka Municipality	Water restrictions at different times in various communities Residents will be fined R2 000 if they water their gardens	<a href="#">Read it here</a>	16-Nov-2015
Steynsrus	Water unavailable from 20:00 to 06:00 Monday to Sunday		
Matwangtlwang	Water unavailable from 20:00 to 06:00 Monday to Sunday		
Viljoenskroon	Water unavailable from 18:00 to 04:00 Sunday to Friday		
Rammulotsi	Water unavailable from 18:00 to 04:00 Sunday to Friday		
Kroonstad	Water unavailable from 20:00 to 04:00 Sunday to Friday		
Maokeng	Water unavailable from 20:00 to 04:00 Sunday to Friday		

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. We also refer to the attached water restrictions published and distributed to all on 2 May 2016.

As mentioned last week, 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

A handwritten signature in blue ink, appearing to read 'Nico Palm', with a stylized flourish at the end.

**Nico Palm**

For and on behalf of

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