

## Sunridge Shopping Center Port Elisabeth, Eastern SA

### Use of Wellan®2000 Ring to improve water quality.



To help solve the water quality problems at Sunridge Shopping Center Port Elisabeth in the Eastern Cape in South Afrika, Wellan®2000 rings were installed to improve the water Quality.

Their Major water quality problems were high EC, lime scale, Sodium and in some areas E.Coli-bacteria.

On receiving the latest water lab tests and sketches Wellan®2000 was able to commit that the Wellan®2000 Technology could significantly improve the water quality, especially EC, chlorine, lime scale, turbidity and salinity. We did advise that this is a gradual improvement process that takes time.

Having a schematic layout of the pipe work was very helpful to determine where the Wellan®2000 rings need to be installed to significantly improve the water quality in the water system.

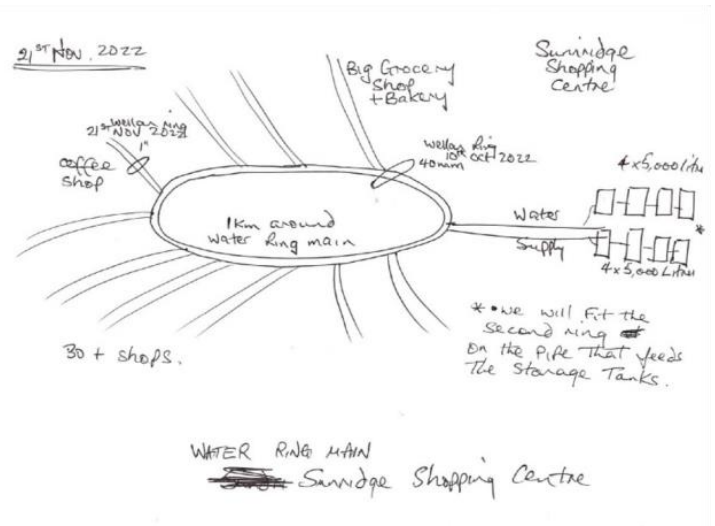
2 x 1.25 inches rings were installed. The first was installed in October 2022. In December 2022, a second one was installed on the supply line to the café because they complained that their water still tasted salty, all the other store owners said the water was much better. This ring was removed in February 2023 as no one could taste the salt in the water.

However, a 2nd ring was installed on the supply line from the borehole (well water) in March 2023.

The EC values have fallen from a high of 302 mS/m in November 2022 to a low of 163 mS/m in December 2023. The recommended value is 170 mS/m.

This value will also continue to fall. Sunridge

Shopping Center continues to report positive feedback from store owners whilst continuing the water testing.



## Summary of Sunridge shopping mall water tests – 6th Dec 2022:

Please note that the First Wellan®2000 ring was fitted on the 10th Oct 2022

Element	8 June 22	20 Oct 22	4 Nov 22	15 Dec 22
Sodium	608	446	1908	–
Chloride	864	900	847	–
Electrical Conductivity	293	298	302	–
Turbidity	3.6	0.79	0.21	–
Total Hardness	311	353	321	–
TDS	–	1490	–	–
Sulphate	92	101	92	–
Total Alkalinity	66	65	67	–
pH	6.0	6.78	7.1	–
Total Coliforms	52	2	–	–
Standard Plate Count	1000	153	221	–

Please note that some values are marked with “-” indicating that the information is not available or not provided for those specific dates.

Remarks:

- Sodium count will go up initially because the ring is clearing out any buildup.
- Chloride count will go up because they are dosing the water with
- This is also associated with leaching/corrosion.
- Electrical conductivity is linked to solids in the water, more solids higher Conductivity.
- Higher CaCo3 and Electrical conductivity will result in harder water.
- The Wellan@2000 ring will reduce the hardness and electrical conductivity due to solids being broken down to nano particles.
- The Turbidity will come down as the ring calms the water down.
- The Wellan@2000 ring will reduce bacteria count and hence reduce coliform count and Standard plate count.
- TDS count will go up initially as the Wellan@2000 ring dissolves the buildup of impurities.
- The TDS value is the abbreviation for Total Dissolved Solids. Along with the EC count It gives you a rough overview of the quality of your water, more specifically the number of dissolved substances in your water. For example: minerals, salts, metals, but also pollutants and impurities such as pesticides.

Following the improved results on the sodium count the client then wanted Wellan@2000 to focus on the improvement of the EC count.

## Ongoing results from the Water tests for E.C (Electrical conductivity):

The clients goal was to get the EC reading down to 170 mS/m or below.

Date	8th June 2022	20th Oct 2022	4th Nov 2022	27th Dec 2022	4th Jan 2023	Aug 2023	8th Dec 2023
EC Reading	293	298	302	224	197	167	163
(parts of the mall)							
EC Reading (Borehole)							165
1st ring fitted		10th Oct 2022					
2nd ring fitted			20th Dec 2022				

Remarks:

- Wellan@2000 advised that the EC readings would initially get worse after fitting of the Wellan@2000 ring while the technology started cleaning the water system. Once this was under control there was a continuous improvement in the EC readings due to the breakdown of the impurities in the water resulting in this improved EC reading.
- The Turbidity also improved, resulting in the water becoming clearer. The shop owners’ biggest complaint was the water tasted salty.
- After the ring had been fitted for a few days a lot of the shop owners stated that the water was tasting a lot better.
- The first ring was fitted on the main ring system on the 10th of Oct 2022.
- Given the quality of the Borehole water we also advised fitting a second Wellan@2000 ring to the pipe from the borehole water system.

## Conclusion:

Following the installation of the Wellan®2000 technology Sunridge Shopping Center has seen significant improvement in the quality of their water. The shop owners have commented positively on the taste and improvement in the condition of their dishwashers, washing machines and other water based equipment.

<https://www.wellan2000.com/case-study-sunridge-shopping-center-south-afrika/>

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