

## How your construction-related business can thrive in water scarce times

*Contractors and suppliers of construction materials can reduce their reliance on potable municipal water by using treated effluent. In doing so, your business can become resilient to current and future water scarcities.*

- Sources of **alternative water** are readily available in the province
- Other **companies are already using alternative water**, and it makes business sense.
- **Drought support is available** to help your company become more water resilient

### **The construction industry is an important job and growth creator**

In the Western Cape, the sector employs 228 000 people, and has grown by 5.5% per year between 2006 and 2015. 11.2% of all jobs created in the province between 2011 and 2016 were in the construction sector.

## There are viable and cheaper alternative water sources available for your business

- Treated effluent from wastewater treatment plants is readily available on application to local municipalities.
- Treated effluent currently only costs commercial and industrial users R5.30/kl compared to R57/kl for potable municipal water.
- In 2017, only 7.7% of this water resource was used in the City of Cape Town
- The construction sector is among the early adopters of this alternative water source, with the sector already accounting for about 68% of all treated effluent being collected from Macassar treatment works.

### **Water scarcity is the 'new normal'**

Climatologists predict that the Western Cape will become drier over time, with less frequent but more intense rainfall events. Drought or no drought, the construction industry, like others, has to adapt to this 'new normal'.

Note: Borehole water is limited under general authorisations for industry and is also subject to level 6b restrictions which require a 45% reduction in water use. Medium term plans for static sites (construction company depots) could include a water use licence through the national Department of Water and Sanitation for groundwater abstraction. This licensing process is lengthy - it can take up to 300 working days.

## Case study: Rabie group saves water and money by using alternative water sources

The Rabie Group in Cape Town only uses potable municipal water for drinking and handwashing on construction sites, which saves at least 2 000 m<sup>3</sup> of potable municipal water per month.

Having previously paid R28/kl for potable municipal water, Rabie now pays R5.30/kl for treated effluent, which it uses in mortar, and for compaction and cleaning on site.

Treated effluent, at a cost of R5.30/kl, can be used for mortar, compaction, cleaning and possibly for mixing structural concrete.

Rabie has chosen to chlorinate the effluent as an additional health and safety intervention. Each load of treated effluent used on site is tested according to the application, e.g. cube strength tests are performed for the mortar application. There is variability in the water quality with time of day and season from each water treatment plant, and differences across plants, which must be considered when using the effluent.

The decision to use treated effluent makes business sense, with the cost of potable municipal water for commercial and industrial users now at R57/kl, with savings of around 90% of the consumption cost.

Note: Although the treated effluent was tested and found to be suitable for structural concrete, Rabie receives readymix as an efficient and environmentally sound option. All readymix suppliers have been contacted regarding their potable water use, with half the suppliers already supplying readymix free of potable municipal water.

## How to access drought support and make your business more water resilient

**Step 1:** Visit the GreenCape Drought Business Support page.

<https://www.greencape.co.za/content/focusarea/drought-business-support> has extensive information for businesses, including on how to access treated effluent and groundwater.

**Step 2:** If you have questions or need more information after visiting the drought support pages, email Dr Kirsten Barnes on [kirsten@greencape.co.za](mailto:kirsten@greencape.co.za).

## Please help us improve this document

Please speak to a GreenCape staff member or email [kirsten@greencape.co.za](mailto:kirsten@greencape.co.za)

- Did you find this document useful? What other information would you like to see?
- What are effective ways to get this information to the right people?