CASE STUDY

DAMS & RIVERS

Country Club Johannesburg — Rocklands Dam

Country Club Johannesburg, Gauteng

RESULT

Rocklands Dam achieved a 94% reduction in E. coli using biological treatment alone, verified by WATERLAB. Five weeks after a single estate-wide dosing round, dissolved oxygen improved across six monitored water bodies, and two previously eutrophic ponds recovered to healthy levels.

OVERVIEW

A golf-course and estate water treatment programme covering Rocklands Dam and six further water

bodies, demonstrating biological treatment results without aeration equipment.

THE CHALLENGE

Rocklands Dam had no aeration installed, meaning any improvement had to come from biological treatment alone. Elsewhere on the estate, two ponds had become eutrophic with a noticeable odour.

TREATMENT

Biological treatment was applied to Rocklands Dam with no aeration installed, and a single dosing round was applied across six water bodies on the estate.

Duration: Five weeks (estate-wide dosing round); ongoing for Rocklands Dam

OBJECTIVES

- Reduce E. coli in Rocklands Dam without adding aeration
- Improve dissolved oxygen across the estate's water bodies
- Recover eutrophic ponds affected by odour

SITE CONDITIONS

- Rocklands Dam had no aeration system installed.
- Six water bodies across the estate were monitored for dissolved oxygen.
- Two ponds (Lily Pond Upper and Lily Pond Lower) were eutrophic with a noticeable odour before treatment.

RESULTS IN DETAIL

BEFORE

ESTATE WATER BODIES, 5 WEEKS AFTER DOSING

Dissolved oxygen (mg/L): Lily Pond Upper 1.8->7.8, Lily Pond Lower 1.8->6.5, Night Heron Dam 4.8->7.0, Irrigation Dam 5.7->7.1, Rocklands 5th hole 4.0->5.1.

ROCKLANDS DAM

94% reduction in E. coli achieved with no aeration installed — biological treatment alone, verified by WATERLAB.

VERIFICATION

Rocklands Dam E. coli result verified by WATERLAB, a SANAS-accredited laboratory. The dissolved oxygen figures across the six water bodies are on-site instrument readings rather than laboratory

results.

WHY THIS MATTERS

The absence of aeration on Rocklands Dam is worth stating plainly: it shows the biology carrying the result on its own. A further dam on the estate declined over the same period due to a contamination source that has not yet been identified, and is not included in these results.

DISCLAIMER

Dissolved oxygen figures are on-site monitoring readings, not laboratory-verified results, and should be described as such. Client name confirmation is pending with Steve Nicholson before this case study is published.

Managing golf course or estate water bodies?

Discuss a dosing programme for dams, ponds and irrigation water on your course or estate.

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