



BECON WATERTECH

Reg. no. 1995/001511/07

DIRECTORS: W.P. VAN DER MERWE & W. OLIVIER

Tel: +27 (0) 11 752 1191

Email: info@becon.co.za

11 Cooperskloof Street / P.O Box 3771 / Glenharvie / Westonaria / South Africa / 1786

www.becon.co.za

PROPOSAL: Wastewater Treatment Solution

Client: Triple 3

Date: 20 November 2025

Proposed Solution: Be-Pac 60C

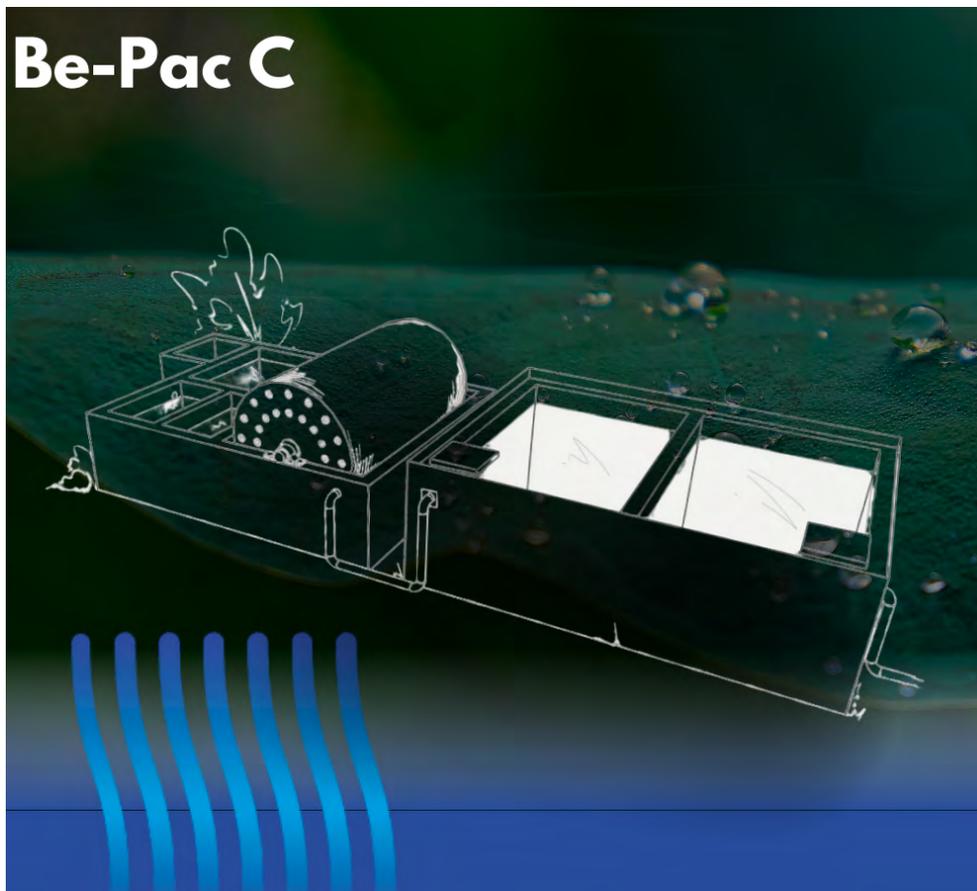


Table of Contents

1. **Introduction**
 - 1.1 Client Details
2. **Summary of Offer**
 - 2.1 Pricing
3. **Features**
4. **Process and Design**
5. **Influent Quality**
6. **Effluent Quality**
7. **Inclusions**
8. **Exclusions**
9. **Commercial Terms**

1. Introduction

Thank you for your inquiry. We are pleased to present this proposal.

Becon Watertech, part of the Tecroveer Group, is a technology-driven company specializing in the design, manufacture, installation, and commissioning of world-class wastewater treatment solutions. With over 53 years of experience and more than 2300 plants, we offer reliable and effective turnkey services as a Design and Supply provider and an Original Equipment Manufacturer (OEM).

1.1 Client Details

Contact Person: Gawie Le Roux
Email: gawie@triple3.co.za

2. Summary of Offer: Be-Pac 60C

- **Estimated Domestic Wastewater Flow:** 60,000 liters per day.
 - **Proposed Solution:** Becon Be-Pac 60 C . (60 000 Litres per day)
- 

Unit Overview: Civil Unit

The Be-Pac 60C

Our standard units that comprise of civil works for the septic tank units, rotor basins and secondary humus settling tanks, together with associated M&E package that comprises of the rotor units, each rotor unit complete with 130 discs assembled onto a 60mm shaft with 380V geared motor drive, end bearings and canopy, electrical control panel, internal humus tank equipment, desludge pump and chlorine dispensing unit (sodium hypochlorite recommended).

Please note that civil works estimates may vary. It is recommended to obtain local civil works rates for accuracy, as Becon Watertech cannot offer to undertake the civil works for this project. Becon Watertech can make our standard Bill of Quantities available for this purpose.

The civil layout can be configured in modules that can fit population growth phases if applicable. These projections will need to be shared with us in order to configure the treatment options per phase.

Costs include for the preparation of layout and civil construction drawings to our M&E specifications

Unit	Treatment Volume (kl/day)	Organic Load (BOD)	Number of Rotors	Power Required (kW)
Be-Pac 60C	60	18	2	1.5 kW

2.1 Pricing: Be-Pac 60C

Description	Price (ZAR)
Be-Pac C 60	R 1 196 953.84
Civil Work Estimated	R 775 893.60

3. Features of the Be-Pac 60C

- Overload Protection:** RBC systems efficiently handle organic matter even during overloading.
- Bacterial Stability:** Bacteria attach to rotating discs, avoiding washout due to flash floods or shock loads.
- Minimal Maintenance:** No daily de-sludging is required; septic tanks only need desludging every 12 months or longer.
- Odor Control:** Sealed septic tanks eliminate odors.
- Design Standards:** Adheres to guidelines by the South African Institute of Water Pollution Control and CSI specifications.

Pictures of similar plant



4. Process and Design

Primary Phase: Separation via Septic Tanks

- Gross removal of organic material through settlement and anaerobic oxidation.
- Septic tanks allow accumulation of material and are designed to prevent blockages.
- Servicing and desludging are required periodically as sludge accumulates beyond the anaerobic bacteria's capacity to process it.

Secondary Phase: Biological Treatment via RBC

- Settled sewage flows to the RBC for organic reduction and ammonia nitrification under aerobic conditions.
- Microorganisms attach to rotating polyurethane discs (2m in diameter), which rotate at approximately 3–4 RPM to maintain aerobic conditions.

Tertiary Phase: Humus Tank and Disinfection

- A secondary settling tank collects and removes surplus bacteria detached from the discs.
- Collected humus is returned to the septic tank for anaerobic digestion, eliminating the need for on-site sludge drying beds.
- Sodium hypochlorite disinfection ensures removal of pathogenic bacteria, making the treated water safe for release.

5. Influent Quality

The acceptable influent sewage quality for treatment by Becon Watertech includes the following parameters:

- **Ammonia (as N):** ≤40 mg/L
- **Anionic Surface Active Agents:** ≤250 mg/L
- **Chemical Oxygen Demand (COD):** ≤600 mg/L
- **Electrical Conductivity:** ≤350 mS/m at 25°C
- **pH:** 6–9
- **Phenols:** ≤10 mg/L
- **Substances not in solution (fats, oils, waxes):** Minimal
- **TKN (Total Kjeldahl Nitrogen):** ≤45 mg/L

6. Effluent Quality

The treated effluent will meet the **DWA General** standards, ensuring it is safe for environmental discharge.

7. Inclusions

- Commissioning

8. Exclusions

- Taxes

9. Commercial Terms

Validity:

- Prices are valid for 60 days.

Delivery Timeline:

- **GA Drawings:** 2 weeks after formal order.
- **Manufacturing Drawings:** 3 weeks.
- **Procurement & Manufacturing:** 4 weeks (subject to material availability).

- **Installation & Commissioning:** 1 week (subject to site readiness).

Payment Terms:

- 40% upon order confirmation.
- 40% prior to delivery.
- 20% upon commissioning.

Ownership and Access:

- All equipment remains the property of Becon Watertech until fully paid.
- Becon Watertech reserves access rights to the site for inspection or retrieval of equipment.

Order and Cancellation Policy:

- Orders must be placed via an official purchase order on company letterhead, signed by an authorized representative.
- Cancellations or variations require written consent from Becon Watertech.

Defects Liability Period:

- A 12-month warranty applies, effective from the completion of installation.

Proprietary Information

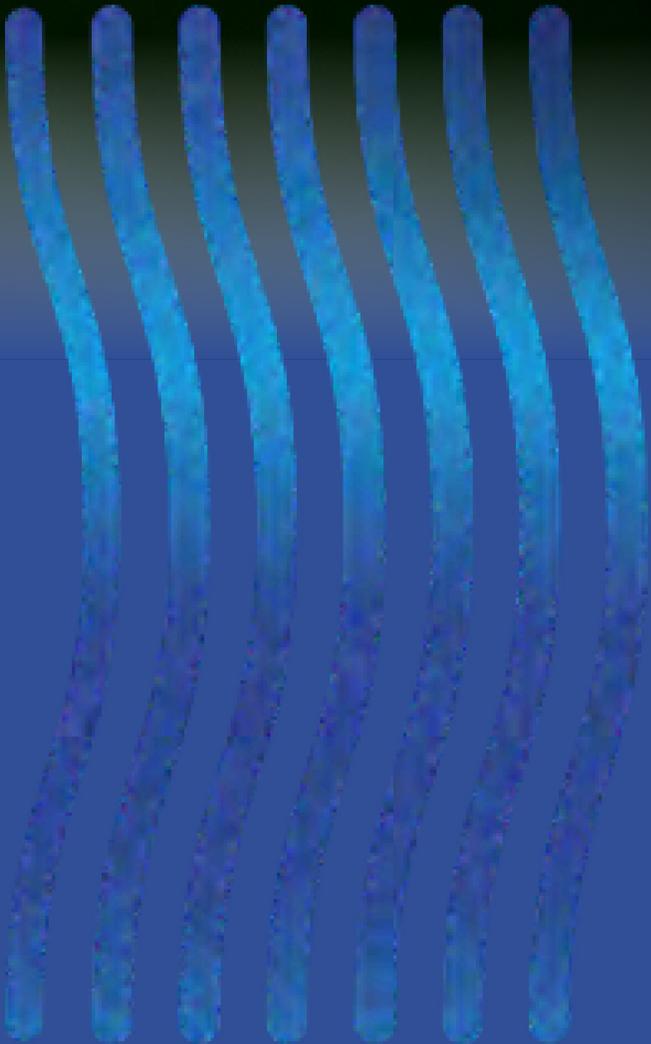
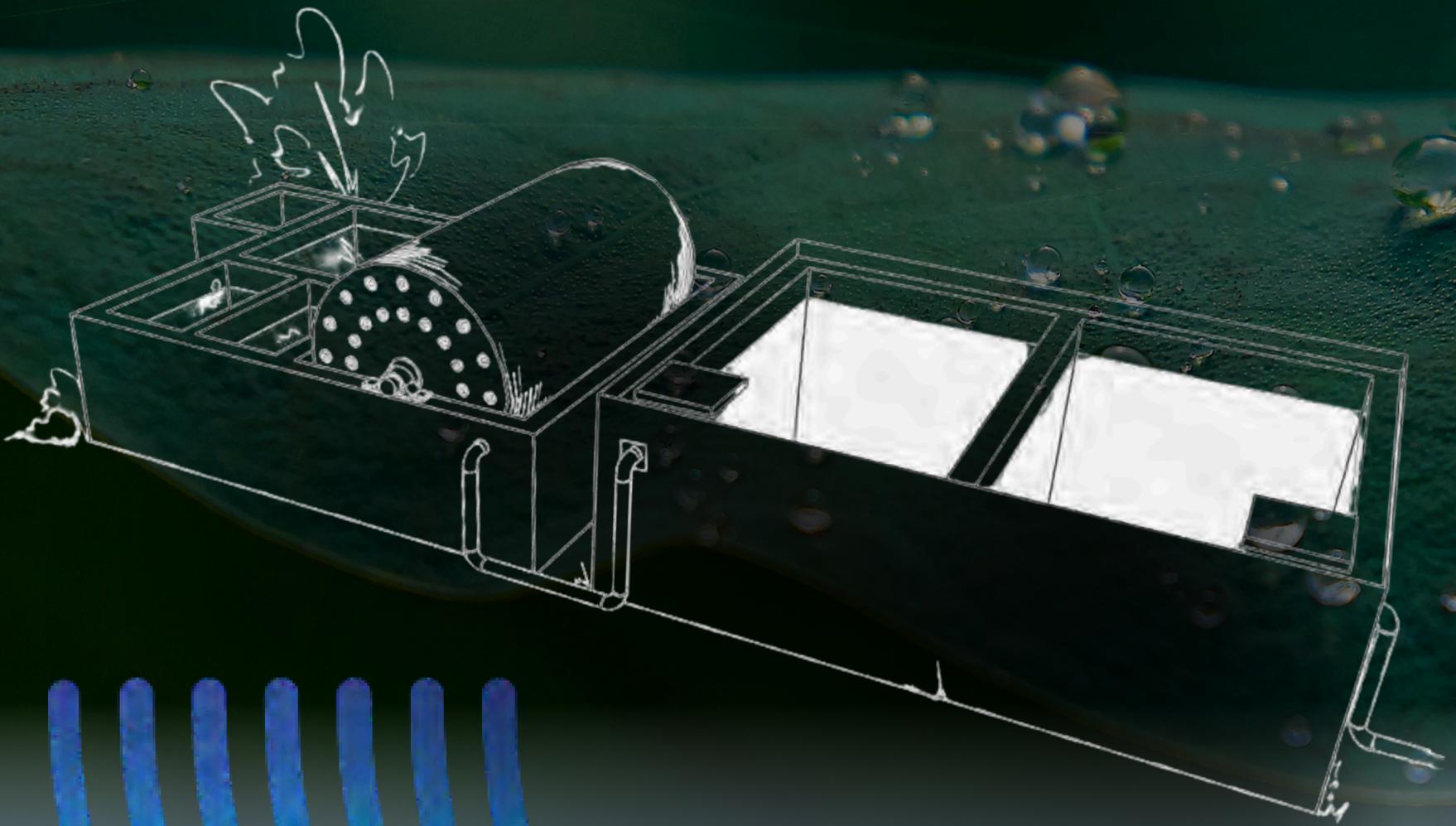
- Becon Watertech's equipment, datasheets, and drawings are proprietary and may not be copied, modified, or shared without prior consent.

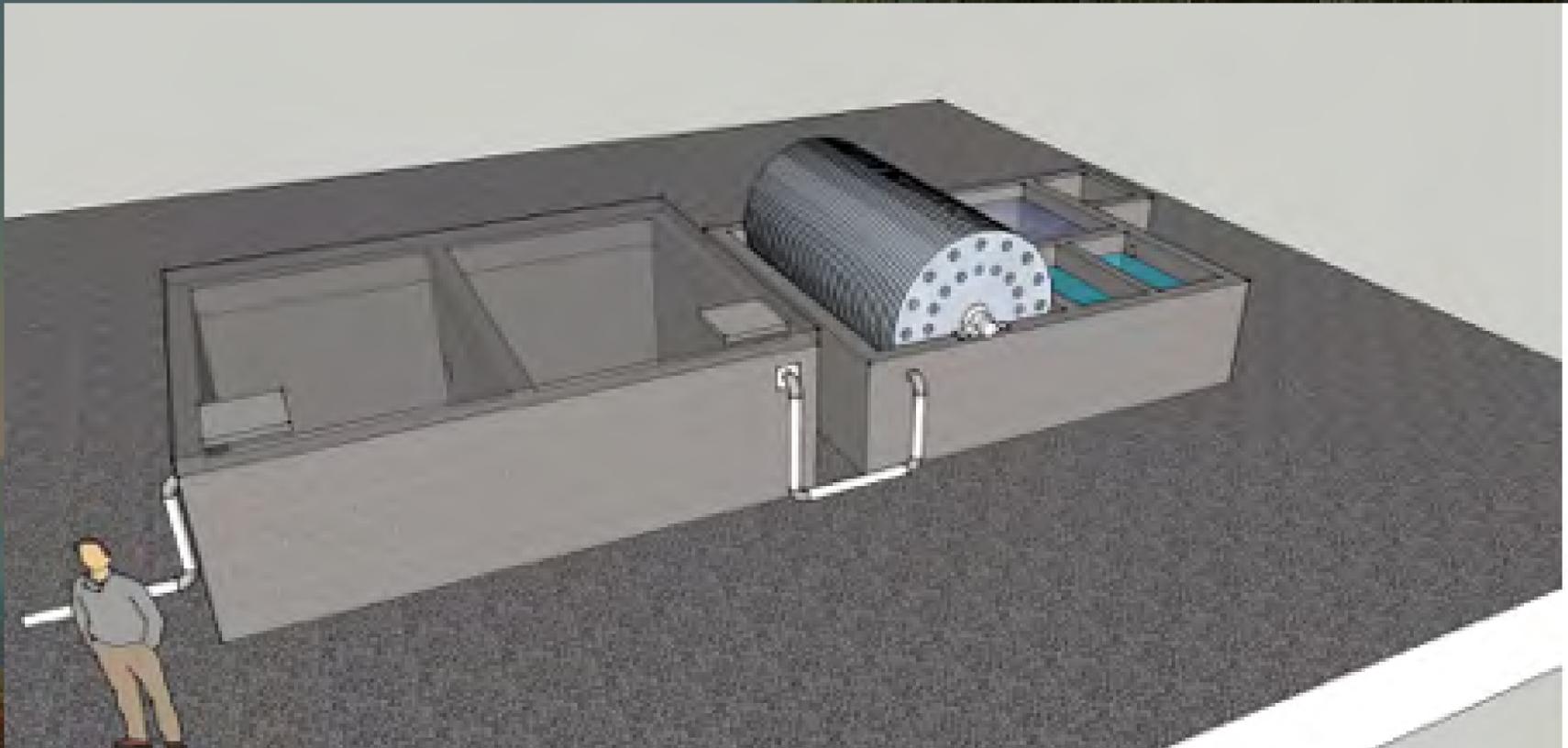
We trust this proposal meets your requirements and look forward to your confirmation.

Yours sincerely,
Wimpie Olivier
For: Becon Watertech

Clean Water for Future Generations

Be-Pac C





BE-PAC C

Be-Pac C is a civil structure that features our trusted RBC technology. This is a more permanent solution but due to its modular design the capacity is flexible and can be increased.

It is a cost-effective and reliable system with large capacity.



»»» BE-PAC C

A cost effective civil structure that offers large capacity & reliability

MODEL	KL/DAY	POP@ 200L/P/D	BOD KG 60G/ P	NUMBER OF ROTORS	DISC AREA M ²	POWER REQUIRED
Be-Pac C15	15	75	4,5	1	375	0,5
Be-Pac C30	30	150	9	1	750	0,8
Be-Pac C60	60	300	18	2	1500	1,5
Be-Pac C90	90	450	27	3	2250	2,0
Be-Pac C120	120	600	36	4	3000	3,0
Be-Pac C150	150	750	45	5	3750	3,75
Be-Pac C200	200	1000	60	6	4500	4,5
Be-Pac C250	250	1250	75	8	6250	5,0
Be-Pac C300	300	1500	90	10	7500	6,0
Be-Pac C400	400	2000	120	12	10000	8,5



Contact Us



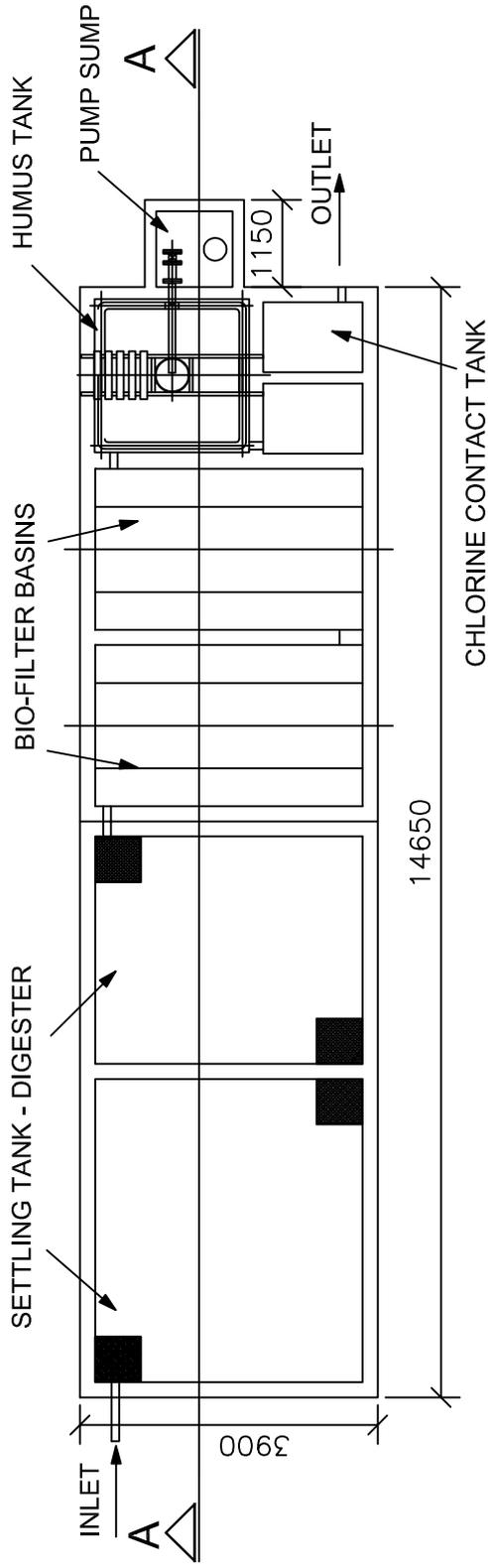
www.becon.co.za



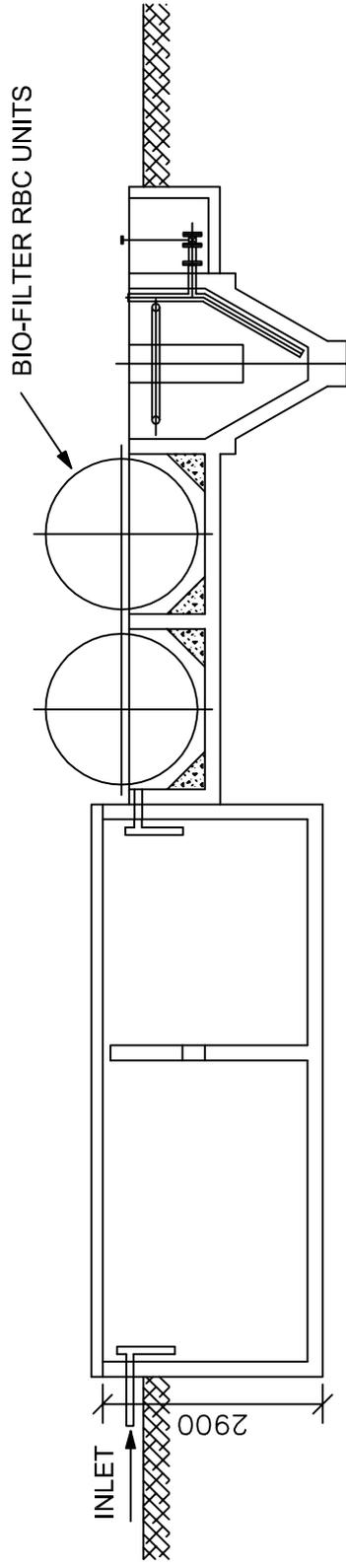
+27 11 752 1191



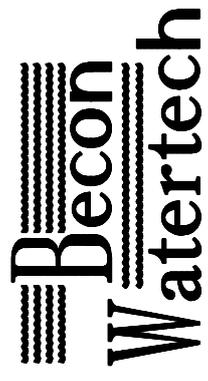
info@becon.co.za



PLAN



SECTION A-A



Project Engineers In Water & Waste Water Treatment
 PRETORIA
 (012) 804-1128 ☒ 912-504, SILVERTON, 0127
 (012) 804-1159 e-mail beconwater@icon.co.za
 Internet: <http://www.beconwatertech.co.za>
 ALSO AT : CAPE TOWN, DURBAN, GABARONE,
 GEORGE & MAURITIUS

TITLE: BIO-FILTER MOD 300 (60 cub.m./d)

PROJECT: PURIFICATION PLANT

DATE: 20/04/2002	SCALE: NTS	CONTRACT No.	DRG. No.	REV.
DRAWN: T.B	CHECKED: Checked		BFM/300	0