Water Portfolio
As Africa’s premier resource for green technology, we set the standard when it comes to providing energy, health and corporate philanthropy solutions designed to enhance and improve the lives of all Africans, today and in the future.

“Inasmuch as we have been tasked with the guardianship of Somerset, we realise that, as Somersetians, we are the conduits of good business and wealth, and have a social responsibility to all we come in contact with.”

– Henri Thompson Executive Chairman
Since being established in 2012, Somerset has grown into a multi-disciplinary organisation with extensive skills and resources in the following sectors:

- Water
- Processing
- Advisory
- Specialist solutions
- Draughting department
- Supply
- Consulting
Water

- Water balance and monetisation
- Generation
- Processing
- Purification
- Bulk water storage and supply
- Sanitation
- Desalination and purification
- Air-to-water machines
- Micro gas turbine (produces electricity, cold and heat from waste water)
- Pumping and irrigation solutions (for subsistence farmers)
- Waterless toilets
- Metrology and pre-paid metering
Processing

- Design and manufacturing of all infrastructure equipment.

Advisory

- Our technical department services clients with all necessary advice on mechanical and electrical water-related issues.

Specialist solutions

- Water and waste water treatment plants.
- Waste and freshwater pump stations.
- Civil construction, electrical, electronic works and process designs.
- Non-revenue water (apparent and real losses; billed and un-billed consumption).

Draughting department

- Staffed by qualified, experienced draughtsmen.
- Responsible for concept and detail of the design, from the implementation and testing, to final hand over.
- Fabrication drawings and design of mechanical, civil and structural layouts and detailing.
- Disinfection and cleaning products.
Supplies

We are able to supply:

**Pumps**
- Various water transportation pump models
- De-watering and sludge handling pumps

**Power generation**
- Hydro turbines
- Micro-gas turbine

**Agitators and mixers**
Aeration
- Fine and coarse bubble diffusers
- Jet aerator
- Air blowers

Analytics instruments

Metering and automated meter reading (AMR).
Advanced Metering Infrastructure (AMI).

Control systems

Disinfection
- UV systems
- Ozone generators
Underdrain

Air-to-water machines

RO Plants

Desalination and purification

Pumping and irrigation solutions to subsistence farmers

Waterless toilets

Somerset Group
Non-revenue water

The journey starts here. Non-revenue water comes from many sources. Most utilities focus on real loss, namely leaks and tank overflows. But apparent loss, including metering inaccuracies, billing errors, bad debt, tampering and unauthorised use, leads to millions of litres of non-revenue water annually.

No matter where one stands along the journey of addressing non-revenue water, you can move towards reducing losses, costs and improving revenue.
## Understanding the water balance

<table>
<thead>
<tr>
<th>Source</th>
<th>Input</th>
<th>Delivery</th>
<th>Consumption/ Loss</th>
<th>Type of use or Loss</th>
<th>Revenue/ Non-revenue</th>
<th>Measure grouping</th>
<th>Examples</th>
<th>Lost opportunity basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface water</td>
<td>Water exported</td>
<td>Authorised</td>
<td>Billed authorised consumption</td>
<td>Revenue water</td>
<td>Billed exported</td>
<td>Municipal transfer water</td>
<td>Residential, commercial, industrial use, including customer leaks.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Billed metered</td>
<td>Residential, commercial, industrial use, including customer leaks.</td>
<td>Flat-fee structures for accounts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>consumed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground water</td>
<td>Total system input</td>
<td>Authorised</td>
<td>Unbilled</td>
<td>City use, other authorised non-payment applications, flushing.</td>
<td>Unbilled authorised</td>
<td>Unauthorised use, tampering.</td>
<td></td>
<td>Revenue lost</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>authorised</td>
<td>City use, other authorised non-payment applications, flushing.</td>
<td>consumption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>City use, other authorised non-payment applications, flushing.</td>
<td>Unauthorised</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unauthorised</td>
<td>consumption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased or imported water</td>
<td>Water supplied</td>
<td>Water losses</td>
<td>Apparent losses</td>
<td>Accuracy errors on residential, commercial and industrial meters.</td>
<td></td>
<td></td>
<td></td>
<td>Production costs lost</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Systematic data handling errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Billed not collected metered use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unbilled unmetered consumption</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unauthorised consumption</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Non-revenue water</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Impact of reducing non-revenue water

**Return on investment**

**Increase revenue**
1. Improved accuracy with low flow registration, 20-year accuracy and field-adjustable accuracy.
2. Revenue from tamper detection and unauthorised use.
3. Lower pressure loss for more consumption.
4. Revenue from dispute resolution.

**Enhance customer service**
1. Fewer main breaks.
2. Improved service pressure.
3. Fewer billing disputes.

**Optimise assets**
1. Extend the life of production and investment facilities.
2. Opt optimise storage and pumping operations.
3. Extend the life of mains and service lines.

**Lower costs**
1. Reduce leaks (production and transport costs).
2. Reduce bad debt and collections costs.
3. Lower repair costs.
4. Reduce costs for dispute resolution.
5. Reduce replacement costs.

**Reduce risks**
1. Fewer main breaks.
2. Better firefighting capabilities with hydrant monitoring and pressure management.
3. Predictive analysis.
4. Reduce water quality risk from breakage.

+ 5.15%  
- 5.15%
# Projects completed with our partners

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Code/Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloemhof 3MI</td>
<td>BDM2005-023E</td>
<td>Electrical</td>
</tr>
<tr>
<td></td>
<td>BDM23C/2005</td>
<td>Mechanical</td>
</tr>
<tr>
<td>Klipspruit WWTW</td>
<td>07/2010</td>
<td>Mechanical and electrical</td>
</tr>
<tr>
<td>Dr Kenneth Kaunda District Municipity</td>
<td>RDM2014/035C</td>
<td>Upgrading bulk sewer infrastructure in Bloemhof</td>
</tr>
<tr>
<td></td>
<td>RDM 2012 - 022B</td>
<td>Mechanical works</td>
</tr>
<tr>
<td>Dr Ruth S Mompati District Municipality</td>
<td>EE 14/2008</td>
<td>Water supply pump Station volume 2</td>
</tr>
<tr>
<td>Ga-Segonyana Local Municipality</td>
<td>Contract: 15/2010</td>
<td>Mothibistad Bulk Water Supply Electrical</td>
</tr>
<tr>
<td>Hartbeesfontein WWTW</td>
<td>EP 3/2/2009</td>
<td>Electrical works</td>
</tr>
<tr>
<td></td>
<td>ME 3/2/2009</td>
<td>Mechanical works</td>
</tr>
<tr>
<td>Heilbron</td>
<td>PCE04/2009</td>
<td>Upgrading outfall sewer line Mechanical, electrical and civil</td>
</tr>
<tr>
<td>Ipelegeng C and D</td>
<td>BDM2005-021G</td>
<td>Mechanical</td>
</tr>
<tr>
<td></td>
<td>BDM21C/2005</td>
<td>Civil</td>
</tr>
<tr>
<td>Kgetlengrivier Municipality</td>
<td>8K636</td>
<td>Emergency restore of Pump Stations in Koster and Swartruggens</td>
</tr>
<tr>
<td>Khuma</td>
<td></td>
<td>Bulk water phase 2 Electrical</td>
</tr>
</tbody>
</table>
# Projects completed with our partners

<table>
<thead>
<tr>
<th>Location</th>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klerksdorp</td>
<td>CE17/2/2008</td>
<td>Kld inlet works Mechanical and electrical</td>
</tr>
<tr>
<td>Klipspruit WWTW</td>
<td>07/2010</td>
<td>Mechanical and electrical</td>
</tr>
<tr>
<td>Kokosi Ext 6</td>
<td>SDM09/09</td>
<td>Bulk water line</td>
</tr>
<tr>
<td>Koppies WWTW</td>
<td>PCE 01/2008</td>
<td>Mechanical</td>
</tr>
<tr>
<td>Lefaragathle</td>
<td>RBA/PROJWAT/2008/TC04</td>
<td>Upgrade pump house Mechnical, civil and electrical</td>
</tr>
<tr>
<td>Madibeng</td>
<td>MW/MADIBENG/RBIG/2011-1</td>
<td>Upgrading of bulk water supply systems Mechanical and electrical</td>
</tr>
<tr>
<td>Magalies Water Klipdrift WTW Part C</td>
<td>MW/KBWS/13/2013: Contract No 4</td>
<td>Refurbishment of mechanical equipment</td>
</tr>
<tr>
<td>Matjabeng Local Municipality</td>
<td>Project 2243</td>
<td>Allanridge pump station</td>
</tr>
<tr>
<td>Matlosana</td>
<td>EE 14/2008</td>
<td>Pump stations water supply Volume 1</td>
</tr>
<tr>
<td></td>
<td>EE 4/2012</td>
<td>Upgrading of mechanical and electrical equipment at various pump stations volume 4</td>
</tr>
<tr>
<td>Maquassi Hills Local Municipality</td>
<td>NW404/8.5-12/2and40</td>
<td>Refurbishment of pump stations in Leeudoringstad and Kgakala</td>
</tr>
</tbody>
</table>
The Somerset Group takes its responsibility to the environment, human resources and the world at large very seriously. 30% of all profits generated are committed to the Somerset Foundation, which enables us to support well-run NGOs who use the funds for:

- Scholarship programmes
- Feeding schemes
- Medical and humanitarian assistance
- Rural water deployment
- Rural women upliftment programmes
- Safe water programmes
A few of our partners

- Xylem
  Let’s Solve Water

- AEHI

- Locco
  my solution

- Axis Communications

- Sizwe Sechaba Mining (Pty) Ltd

- Altsa

- Aeon Corporation

- Hutz Medical

- Flir

- Cambium Networks

- Gensys Workforce Systems
  Your Partner in Time

- Futran Podcars
United Nations social development goals

The Somerset Infrastructure solution fulfills a number of social development goals as set out by the United Nations:
Contact us

South Africa:
Gauteng:
Gustav Klopper: +27 64 503 3846
Piet van Niekerk (Pr.Eng): +27 84 430 2110

Western Cape:
Vivek Gianpersad: +27 72 312 8122

MH House, Ground Floor, Block A, Capricorn Road, off Wroxham Road, Paulshof, Johannesburg, 2191

contact@somersetgroup.co
info@somersetgroup.co