



**THE PEOPLE OF AFRICA  
DESERVE BETTER**



# About Us





# WHAT MAKES ENVIROSAN UNIQUE?



Envirosan is unique as we are the only company in our field that only focusses on the Development and Manufacturing of Sanitation and Sanitation related products and systems.



Extensively researching new systems, products and applications and taking our customer's needs in consideration.



We supply the complete package, from R&D to testing and piloting and finally to production.



We have our own construction division which allows us to not only supply, but to action installation in the field as well.



# SANITATION IN SOUTHERN AFRICA



There are two main sanitation systems currently being used in Southern Africa, both with their own challenges

## DRY TOILETS (VIP / UDDT)

- Potentially unsafe – especially for Woman and Children
- Presence of Flies – unhygienic
- Users tend to use the pit as a “rubbish dump”
- Very little dignity

## FLUSHING TOILETS

- Expensive (homeowner and municipality)
- Potable water being wasted to flush
- Pressure on treatment facilities and sewer networks



# A NEW SANITATION SYSTEM HAD TO BE DEVELOPED



science  
& technology

Department:  
Science and Technology  
REPUBLIC OF SOUTH AFRICA

*This new toilet technology is based on the “pour flush” system which is widely used in Asia. Its adaptation for South Africa has been researched and tested in the field since 2010 by the engineering company Partners in Development, working on behalf of the Water Research Commission of South Africa. The injection moulded pedestal and P Trap has been made by the company EnviroSan. This demonstration project has been funded by the national Department of Science and Technology, and facilitated by the Amajuba District Municipality.*

*The advantages of the Pour Flush Toilet are:*

#### Advantages compared with VIP

- a) Has a water seal, which eliminates odours and insects
- b) Users do not see contents of pit when using toilet
- c) Users do not use toilet as a solid waste disposal pit, so it lasts longer
- d) Leach pit is not under toilet, so structure is safer
- e) Leach pit is fully offset from structure, making it easier to access for maintenance
- f) Pit sludge is easier to remove than VIP sludge as it is trash free

#### Advantages compared with full flush

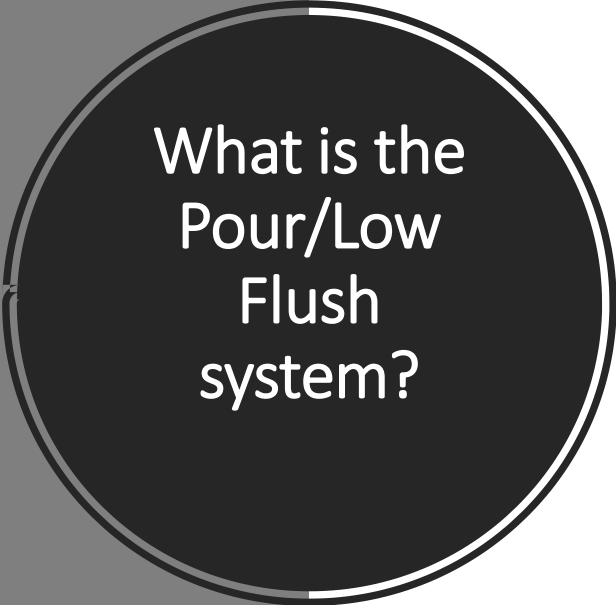
- a) Uses only 1 to 2 litres to flush (depends on whether users have urinated or defaecated, and on whether toilet paper or newspaper is used for anal cleansing)
- b) No toilets leaking 24/7, using up precious and limited water resources

Note that this toilet can be upgraded to work with a cistern so that you do not need a jug to flush. Any competent plumber can help with that. To save water the cistern should be set to flush using 3 litres or less.

#### PROJECT PARTNERS







## What is the Pour/Low Flush system?

Pour/Low flush is an intermediate technology, which is different from the VIP in that it has a water seal and also different from full flush in that much less water is required for operation and that flushing is done manually

The pour flush toilet requires no mains water connection, as it flushes manually by pouring as little as 1-2 litres of water (or greywater) into the toilet bowl, or utilising a low pressure and low volume cistern which is connected to a manual water source.

The technology can assist with the hygienic disposal of greywater and, at a wider scale, has the potential to reduce the demand for potable water and alleviate pressure on overstressed sewer networks

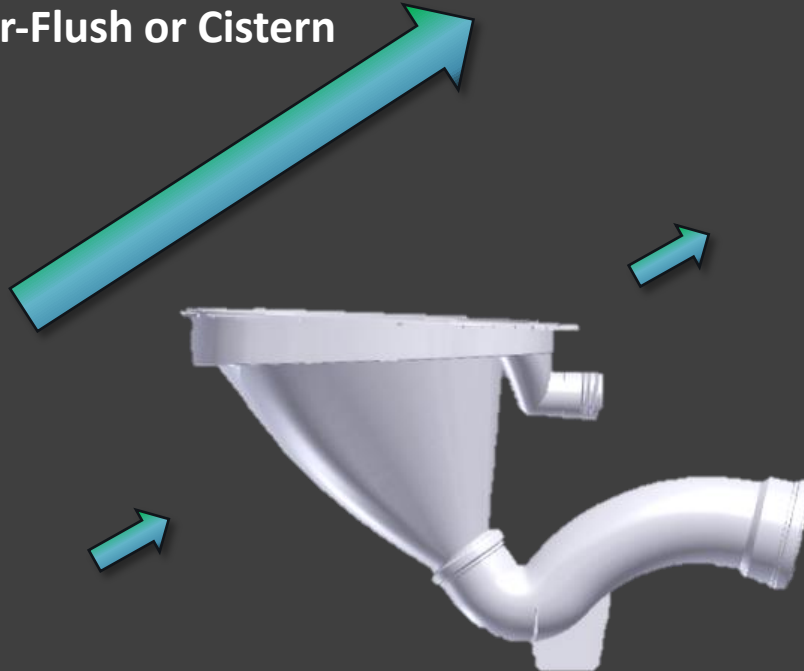


# Upgradeability of Pedestal

Envirosan is the ONLY Sanitation supplier that has a fully upgradeable system from VIP, to UD, to Pour-Flush or Cistern Flush



Pre-moulded rear cut-away sections



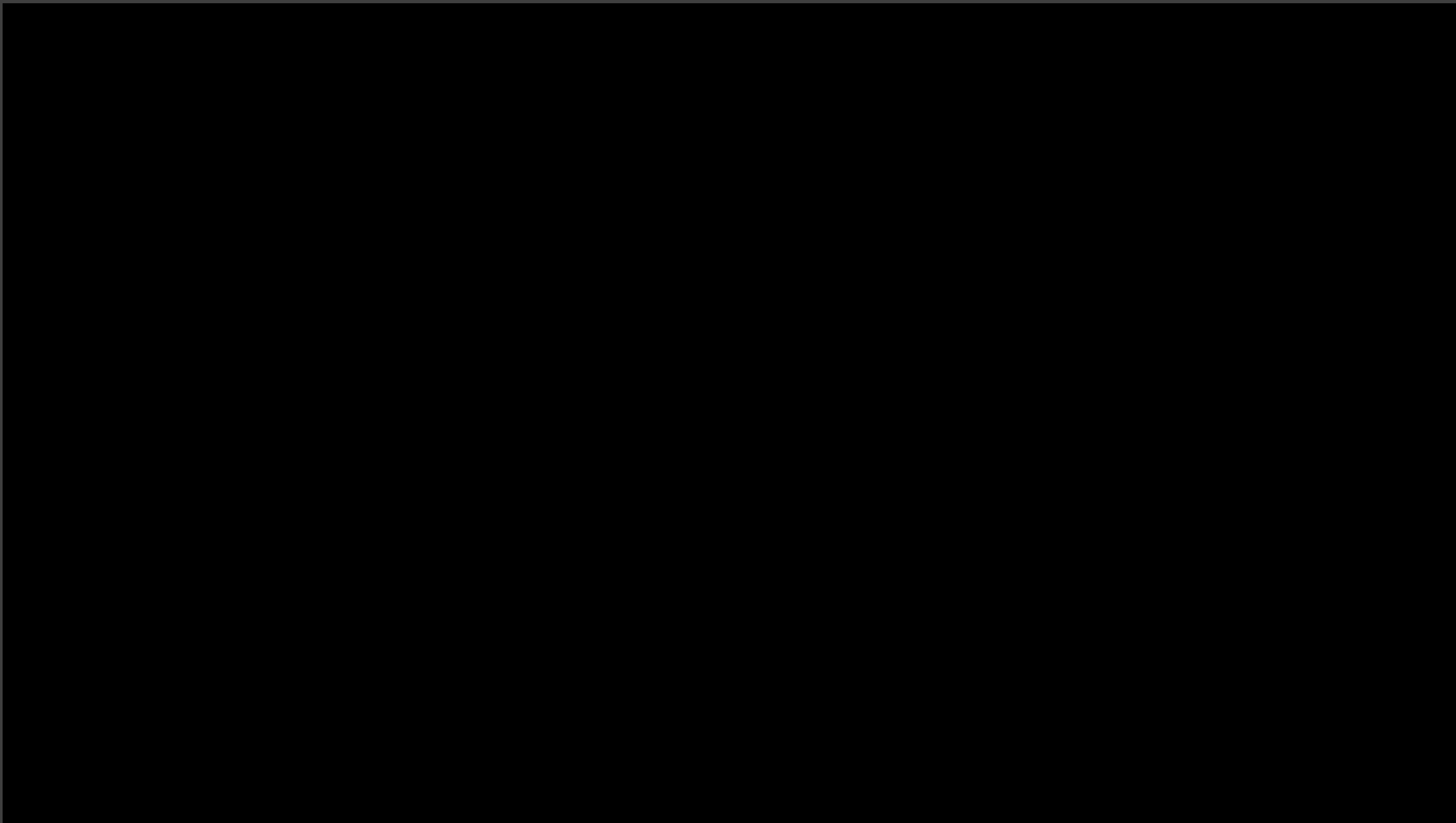




Flushing Options

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# Current/Completed Projects

- **QWE QWE Mthatha – ORT Department of Human Settlements Status – Ongoing**
  - Completed 65 x EaziFlush (Pour Flush Units) with Leach Pits. May 2019
- **Mosselbaai**
  - 360 Complete Units using community cast (EaziFlush™ connected to mainline sewer)
- **Chris Hani DM Status Ongoing**
  - +- 15 000 EaziFlush (Pour Flush) implemented over past 3 years
  - Specified for next 3 year rural Sanitation Roll-out
- **Amathole DM Status Ongoing**
  - +- 2000 EaziFlush (Low Flush) with 42L Cistern Holding Tank implemented in past Sanitation roll-out
- **Various School Sanitation Programs Status Ongoing**
  - TBF, UNILEVER, GCAP – 76 Schools across all Provinces
- **Overstrand LM Status - Completed December 2016**
  - 300 EaziFlush™ Low Flush units completed and functioning perfectly
- **Mohokare LM Status – Completed June 2019**
  - 410 EaziFlush™ Low Flush units completed
- **Nelson Mandela Bay Municipality Status Ongoing**
  - 3000 EaziFlush (Low Flush) units completed and installed.
- **Ilembe DM Status Completed 2017**
  - 1500 EaziFlush (Pour Flush) units
- **Various Bucket Eradication Projects Status Completed 2018**



Navrae  
Enquiries D Hendriks

Verwysing  
Reference Admin Site TRA

Datum  
Date 08 September 2020



HERMANUS  
ADMINISTRASIE ADMINISTRATION

To Whom It May Concern

Dear Sir / Madam

**CONSTRUCTION OF 125 WETCORES, HOUSING ADMIN SITE, ZWELIHLE**

The units have been installed during December 2016 and have been working very effectively with no reported blockages reported on the sewer network.

Due to the success of the original 125 water saving toilets installed in Zwelihle, Overstrand Municipality appointed Eaziflush for the construction and installation of 83 wetcores in Mandela Square, Zwelihle, Hermanus during June 2020 and the project will be completed by middle September 2020. We are also in the process of appointing Eaziflush for the construction and installation of 100 wetcores in Beverly Hills, Gansbaai.

Kind regards

SENIOR MANAGER: ENGINEERING SERVICES

Tel: (028) 313 5059  
Faks/Fax:  
E-pos/mail: dhendriks@overstrand.gov.za

P O Box 20  
HERMANUS  
7200







EaziFlush (Low Flush) with concrete Wash trough. Dual Leach Pit with mounted cistern tank that feeds Low pressure cistern

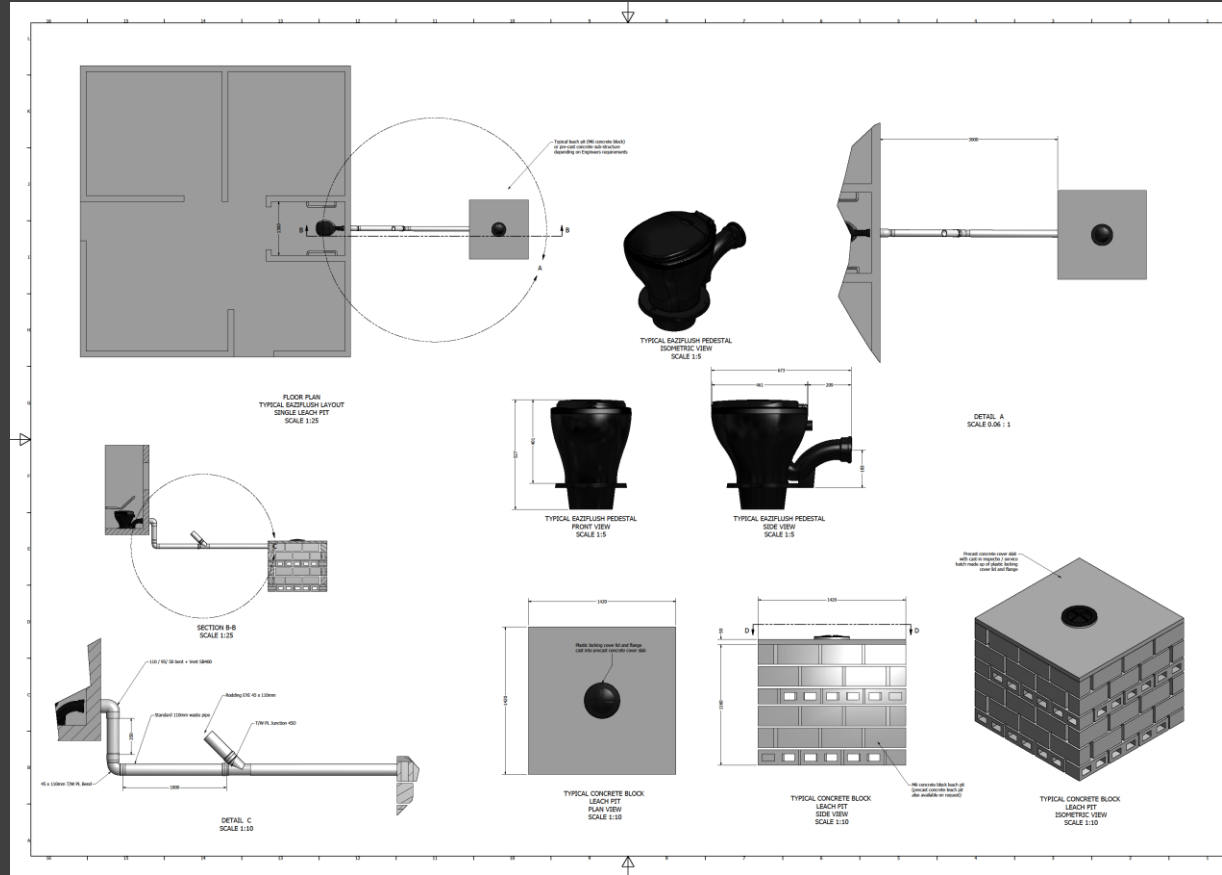


EaziFlush(Pour Flush) units  
at QWE QWE





# ABT - Ndwedwe Housing Project (KZN)



Ceramic EaziFlush™ installed inside Low Cost house. 42L Cistern Tank is mounted on outside of house and can be manually filled with non-potable water i.e. rain harvested, certain grey waters etc. Unit can be connected to mainline at later stage if/when connection becomes available.



## Potable Water Saving with EaziFlush™: Flushing with 2L vs 9L

Water Saving – Conventional Toilet VS Eazi-Flush				
<u>Household of 6 people:</u>		<u>In 1 Yr</u>	<u>In 5 Yrs</u>	<u>In 10 Yrs</u>
Conventional Toilet uses:		98 550 l.	492 750 l.	985 500 l.
Eazi-Flush™ uses:		13 140 l.	65 700 l.	131 400 l.
Water Savings		85 410 l.	427 050 l.	854 100 l.

Water saving PER DAY:  
>230 litres per household



## Retro fitting existing Full VIPs to the EaziFlush

- The Sanitation Shortfall in South Africa may be defined as a combination of the following:
- Service Delivery Backlogs (People who have never been served with any form of sanitation)
- Refurbishment Backlogs (Sanitation Infrastructure that has deteriorated beyond regular maintenance requirements)
- Extension Backlogs (Existing Infrastructure that needs to be extended to provide the service to new households in the Communities)
- Upgrade Needs (Infrastructure that does not meet the minimum standards)
- Operation and Maintenance (O&M) Backlogs (Infrastructure that has not been properly operated and maintained, but can be adequate if funds are allocated to ensure proper operation and maintenance)
- EnviroSan Sanitation Solutions has seen the extent of the problem regarding South Africa's sanitation issues, especially pertaining to failed sanitation systems and/or sanitation systems that are unusable due to lack of servicing. This include the eradication of the bucket toilets as well as VIP toilets that have filled up and cannot be emptied nor can the top structure be relocated.





**EWS: Broken/Corroded Steel door is replaced with High Density Polymer Door, restoring safety and privacy for user.**



**EWS: Full VIP toilet is retro fitted with EaziFlush™, 50L wall mounted tank and low-pressure cistern set to flush with 2L. The old Full VIP pit is sealed off using concrete slab.**

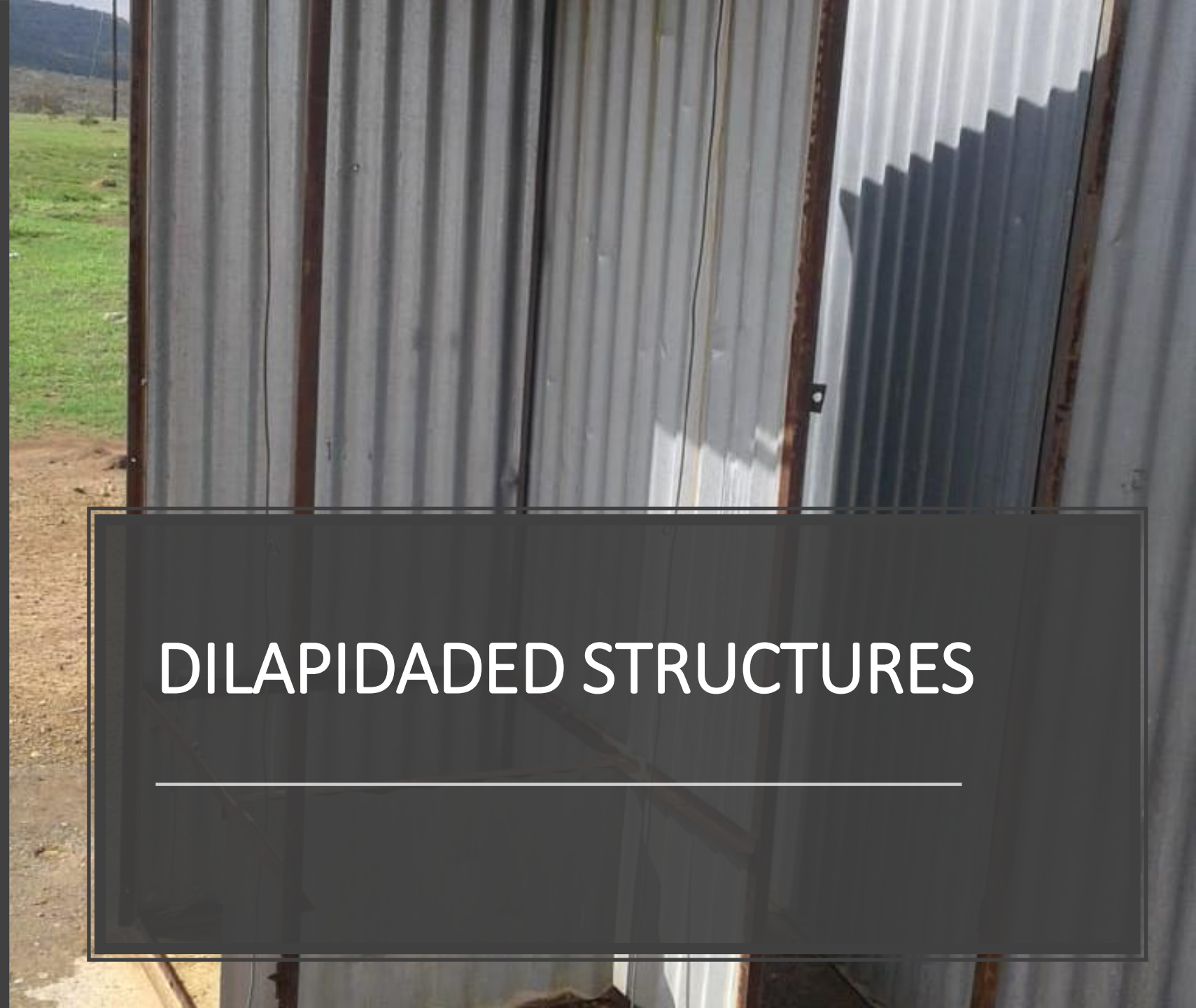




# RETROFIT EXISTING FULL VIP WITH EAZIFLUSH SANITATION SYSTEM AND POLYMER DOOR







DILAPIDATED STRUCTURES





NEW STRUCTURES: PRECAST CONCRETE  
OPTION

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STRUCTURES – POOR CONDITION  
RETROFIT OPTION - BEFORE





STRUCTURES – POOR CONDITION  
RETROFIT OPTION - AFTER

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# Certification and Approvals



**Agreement**  
SOUTH AFRICA

Innovative construction product assessments  
Copyright © Agrément South Africa, February 2019

**Agreement Certificate 2018/589**

**Subject:**  
Eaziflush Sanitation Systems

**Certificate holder:**  
Envirosan Sanitation Solutions cc  
PO Box 1769 New Germany, 3620  
Tel: 031 700 1866 Fax: 013 700 1867  
Email: [info@envirosan.co.za](mailto:info@envirosan.co.za)



The master copy of this document will appear on the website:  
<http://www.agrement.co.za>

**Validity**  
Users of any Agrément certificate should check its status: All currently valid certificates are listed on the website. In addition, check whether the certificate is [Active or Inactive](#).

The certificate holder is in possession of a confirmation certificate attesting to his/her status.

**SANS 10400** The application of the National Building Regulations

**Quick guide**

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Compliance with the National Building Regulations	page 7
Technical description	page 11
Technical drawings	page 14

P O Box 72381 Lynnwood Ridge 0400  
Telephone 012 841 3708  
Fax 012 841 2539  
E-mail [agrement@agrement.co.za](mailto:agrement@agrement.co.za)  
Web <http://www.agrement.co.za>

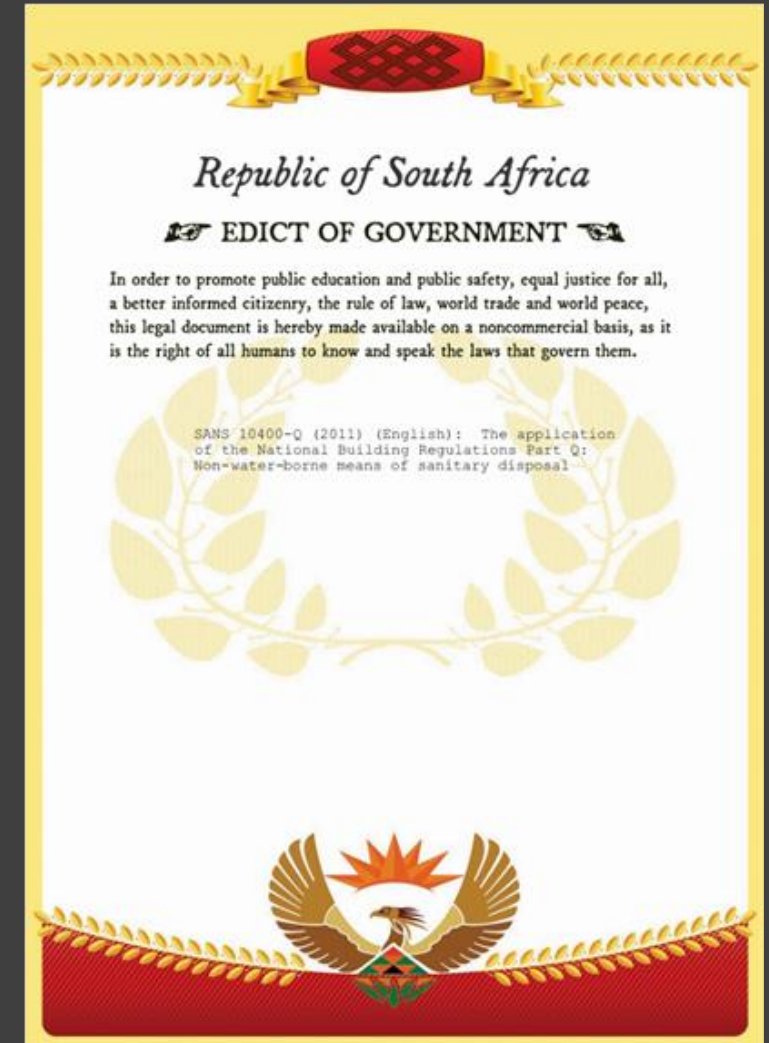
**Use**

The certificate covers the use of Eaziflush Sanitation Systems for use in water- and non-water-borne, for off-grid, formal and informal applications in all regions of South Africa for internal and external use.

This certificate and Agrément South Africa's assessment apply only to Eaziflush Sanitation Systems components manufactured by Envirosan Sanitation Solution cc. The sanitation system components must be installed in accordance with the certificate holder's installation manual and as described and illustrated in this certificate, and where the terms and conditions of certification are complied with.

At WRC/SALGA conference NHBRC has categorically stated that it is illegal for government organizations to use any sanitation systems that aren't Agreement/SABS certified.

Many municipalities continue to use unapproved systems and sanitary items.....which ultimately result in units failing and costing more in the future to rectify.





**The New Normal**

**WHY FLUSH USING 9L OF WATER WHEN YOU CAN FLUSH WITH 2L?**

DESIGNED TO EFFICIENTLY AND EFFECTIVELY FLUSH THE TOILET USING AS LITTLE AS 2L OF GREY WATER OR POTABLE WATER

POUR FLUSH OR CONVENTIONAL FLUSH WITH LEAK FREE CISTERN USING LESS THAN 2L OF WATER PER FLUSH

**17 MILLION HOUSEHOLDS IN SOUTH AFRICA WOULD RESULT IN A SAVING OF 2.4 BILLION LITRES OF WATER EVERY DAY!**

PROUDLY MADE IN SOUTH AFRICA

**EnviroSan**  
SANITATION SOLUTIONS

**AGRÉMENT SOUTH AFRICA**  
Innovative construction product development

Head Office: Durban, Tel: +27 31 790 1566, E-mail: [info@envirosan.co.za](mailto:info@envirosan.co.za), Web: [www.envirosan.co.za](http://www.envirosan.co.za)

**THE EVOLUTION OF THE TOILET**

# Thank You.

Friday 4<sup>th</sup> @ 3pm - Site Visit to Kwanonqaba Informal Settlement (Mosselbaai) lead by Mr Dolfie Brits. Will look at 3 sites that have EaziFlush™ installed in Agrément Approved superstructures. Units have been in for 3 + years. (2021 IMESA/CESA winner Community upliftment and Job creation)