

A Blockbuster/Drain Corp Joint Venture Project.

“No Dig” replacement of 40m of “Santar” sewer pipe in Constantia Kloof, Roodepoort.

An existing domestic sewer line, that was not operational, was causing significant seepage of contaminated water into the adjacent property. The line had been problematic for years and had been cleaned many times with solid steel rods.



Downstream view

Further investigation revealed that the line was in fact “dead” and was acting like a septic tank/drain field. Sewerage was no longer reaching the council line. It appeared that this had been happening for many months if not years. Most of the contaminated water had soaked away however so no over pumping was required.



Winch winding itself into position

It was decided to replace the whole 40m length with class 10 HDPE using pipe bursting equipment developed and manufactured by BB&DC. Three pits were

excavated. Two pits at either end, and one in the centre. The winch was positioned in the centre pit to pull first from the downstream side and then turned around to pull from the upstream side. The pipe was joined by conventional 110mm fittings and a rodding eye installed at the 20m mark.



Breakthrough!

Some difficulty (unusually high tonnage required) was experienced in pulling on the downstream side, and a 4th pit was dug to investigate the cause. Turned out to be issues associated with the ground being too soft in some areas! Soft (mud) is not always your friend!



Hard at work – the winch.

Total time to replace 40m at an average depth of 1.2m was about 15 hours. Most of this time was spent in the preparation of the pits and also the re-connection time after the pipe was in place. Actual pulling time was less than 2 hours.

This project was completed in the budgeted time, at exactly the budgeted cost that compared closely with a quotation received from another contractor to re-lay the pipe by conventional means. The customer experience minimal disruption to his property.

Disruption to his existing system was not really applicable in this case – he had no existing system to speak of!

Website with more info on Santar used as sewer pipe is at www.blockbusterdrain.co.za

Conclusion.

A great test of the recently commissioned hydraulic winch working at near maximum design distance – we don't pull more than 25m because we need a rodding eye every 25m anyway.

The project was done in clear open ground that enabled us to investigate anomalies if we wished to.

A very cost effective solution for the client – our price was only about R500 higher than the cost to dig it all up and replace it by conventional means.

Hard to beat, time to replace 40m of sewer pipe in 1.5 days!

The garden is still pretty much intact!

Scaleable solution from 6m to 600m!

The Benefits of using BB&DC's pipe replacement method

1. The most cost effective solution – especially if you need to go under buildings, walls, paving and roads.
2. Minimal disruption to the property – we only dig a series of small pits.
3. Little or no contamination of the area we work in – we don't dig up all the contaminated earth and spread it around as you would have to using conventional methods.
4. We can replace the pipe in heavily contaminated ground that is in fact nothing less than a septic tank. The contaminants stay where they are and will ultimately become inert.
5. The replacement is quick and disruption to sewerage flow minimal.
6. Pipe is replaced – not patched or lined with resin liner. You thus have a brand new pipe that is round and smooth inside with no compromised structural integrity.
7. **Immensely strong HDPE (class 6-10) pipe with a minimum of joins will provide hassle free sewerage flow for the next 100 years!**



New pipe running in

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