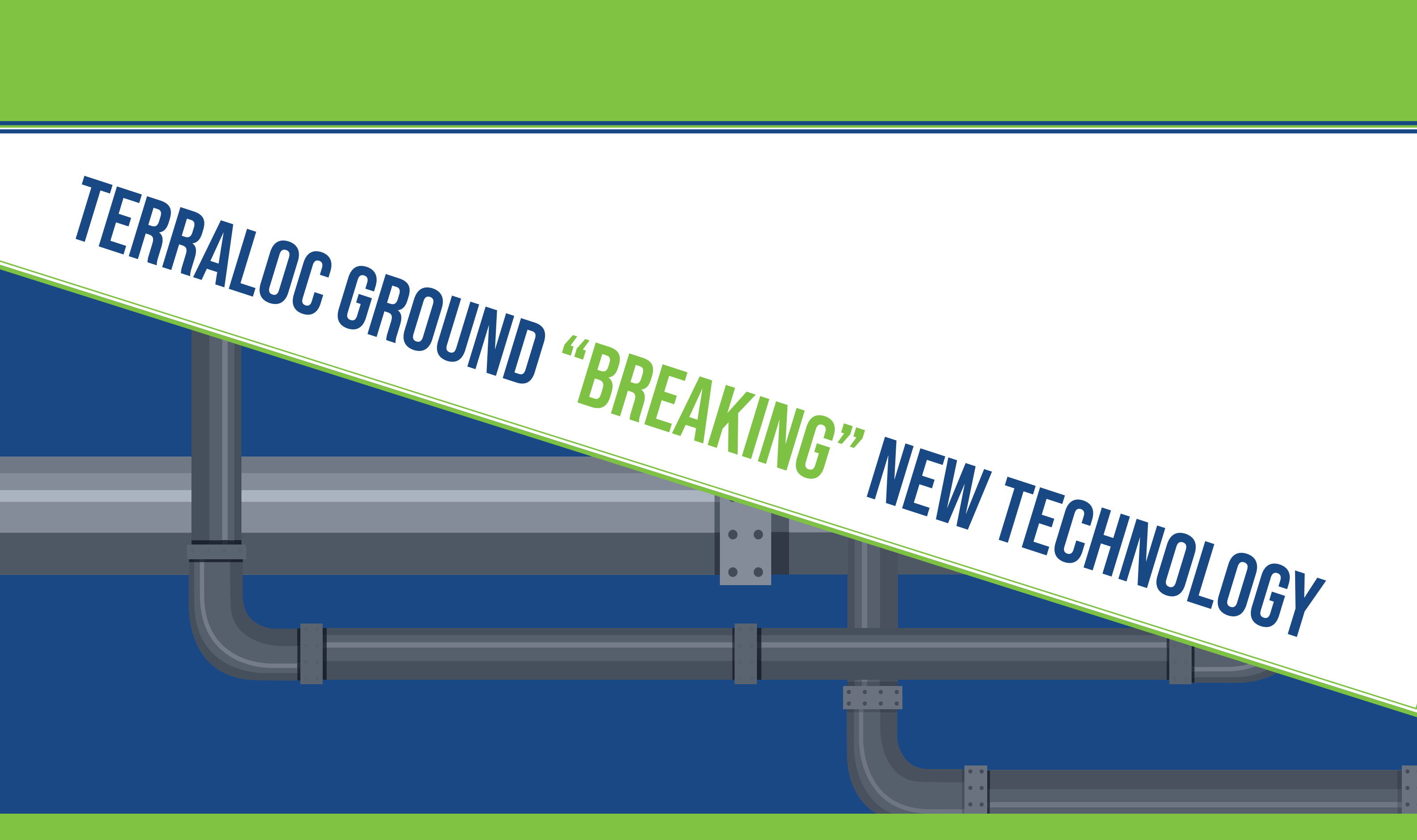




TERRALOC GROUND “BREAKING” NEW TECHNOLOGY

SOIL MODIFICATION AND UNDERGROUND ASSET PROTECTION



OUR VISION

To supply a superior and affordable product to our clients for the protection of their underground assets and to allow them to operate with some peace of mind.



PRODUCT INTRODUCTION

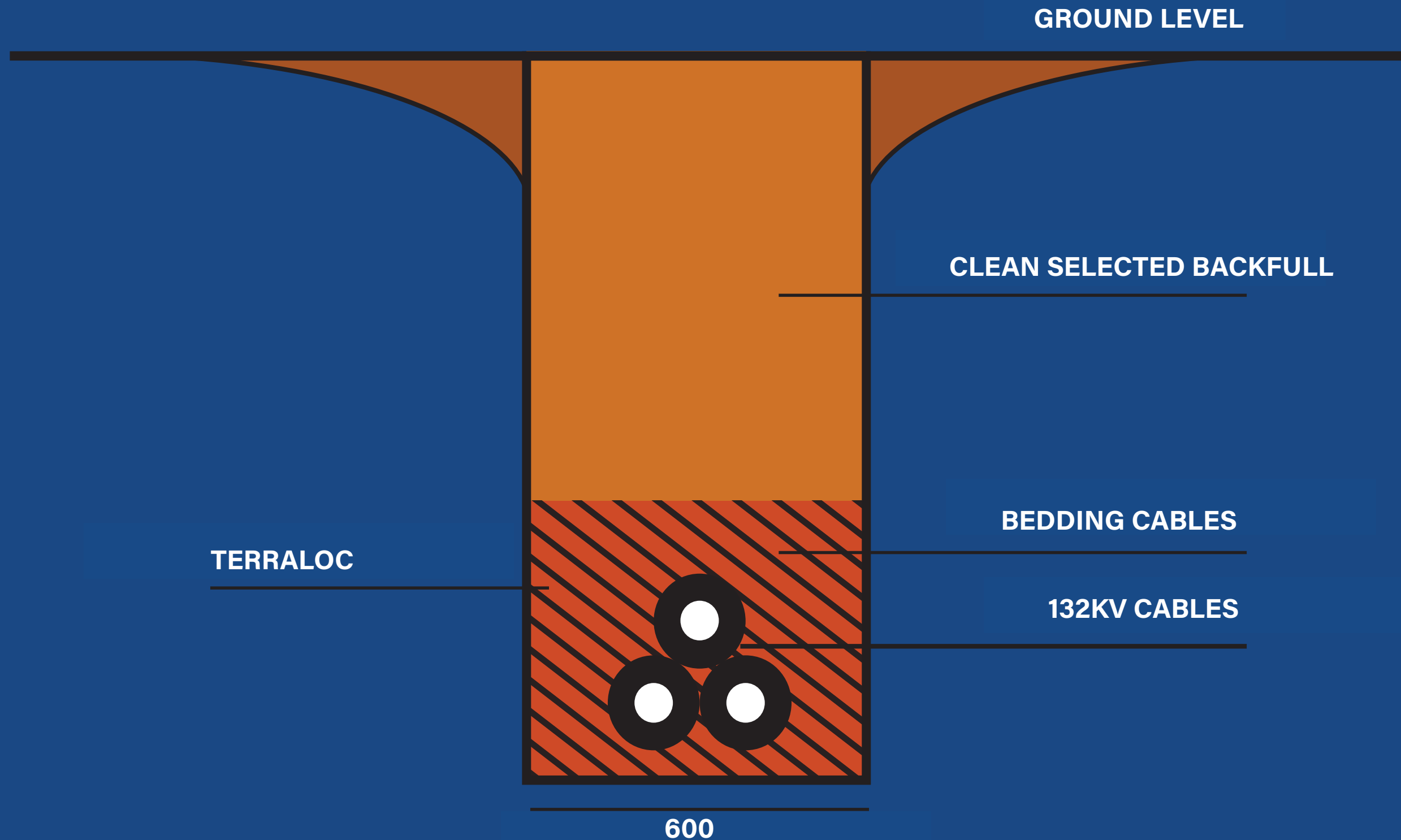
- TerraLoc is a Patented Synthetic Resin Hydrocarbon Binder and is constituted on site.
- The mixture is added to crushed stone, natural gravels or sand to form a water resistant, elastic and robust layer.
- It improves the compressive, tensile and shear strength of all gravels and also the abrasion and water resistance of the particulate materials for construction and cable protection.
- It is insoluble in water and therefore does not leach.



HOW DOES THE INSTALLATION WORK?

- The soil that's removed from the trench where the cables are to be installed, repaired, or replaced is mixed on site using a Skid Steer or TLB. All large pieces of material are removed during this process to prevent damage to the cables.
- The TerraLoc mixture is then tipped into the trench and over the cables and then compacted using a hand compactor / rammer.
- The TerraLoc mixture encases HV, MV and LV cables and selected accessories (including bedding and blanket soil layers)
- LV and MV cables are covered with a 0.5m x 0.5m encasement and HV cables are covered with up to 1m x 1m. This is to allow for heat dispensation.
- The balance of the insitu material is placed back over the TerraLoc mixture to provide an even surface.
- The drying process takes about 4 hours with total curing after 24 hours.

CROSSCUT VIEW OF CABLE SECURED WITH TERRALOC





EXCAVATION FOR FAULT REPAIRS

- There is a simple means to remove the TerraLoc encasement for maintenance.
- TerraLoc makes the soil harder but not inaccessible.
- It is important to note that TerraLoc is most effective if the whole length of cable is encased and not just portions.

It takes a little more time to remove a cable secured with TerraLoc, time that is not normally available to parties who wish to remove the copper for personal gain.



PRODUCT FEATURES AND CERTIFICATIONS

TerraLoc does not affect thermal resistivity of surrounding soil or heat dissipation from cable. These tests were done independently by Steyn Wilson Laboratories (Pty) Ltd. It is important to note that the thermal properties of the substrate will remain consistent under most climatic conditions.



In Addition to this, compatibility tests were performed by Aberdare Cables (Pty) Ltd using the SANS standard with very positive results. The report is available on request.

Electric and optical fibre cables – Test methods for non-metallic materials



Part 501: Miscellaneous tests – Tests for determining the mechanical properties of insulating and sheathing compounds



TESTS AND RESULTS

- Nothing leaked from the FR PVC samples while in the compatibility test oven. However, a strong smell was detected when the oven door was opened.
- The samples were subjected to the compatibility ageing test 168h at 100°C (SANS 1411-2) in two sets, due to the restriction on space in the smaller ovens. The tensile and elongation values after ageing was compared to the un-aged values. The variation between un-aged and aged results shall not increase or decrease by more than 25%.



FR PVC cable samples after the TerraLoc and cardboard tubes were removed. Casting marks were present on the sheaths, but no cracks. The sheaths were still intact.

TERRALOC TRACK RECORD

- TerraLoc was first installed at two Eskom “hot spot” sites which were regularly vandalized and had cable stolen on a weekly basis. The two sites in question are Carletonville Bulk Substation and Big Tree Cullinan.
- In addition various sites were also done outside sub stations in Westonaria, Jhb over a year ago with great success.
- Since our installations on the 6th August 2019, there has been no more cable theft for almost two years although there have been many unsuccessful attempts.

Should you need confirmation you are welcome to contact Mr. Alluwani Phaswana on 011 871 3509 (Carletonville Bulk) at Carletonville CNC and/or Miss.Zisanda Hlakudi on 012 421 3496 (Cullinan CNC). Frik Blom Libanon (Westonaria) on 082 897 2649



CARELTONVILLE BULK INSTALLATION



TERRALOC VS CEMENT

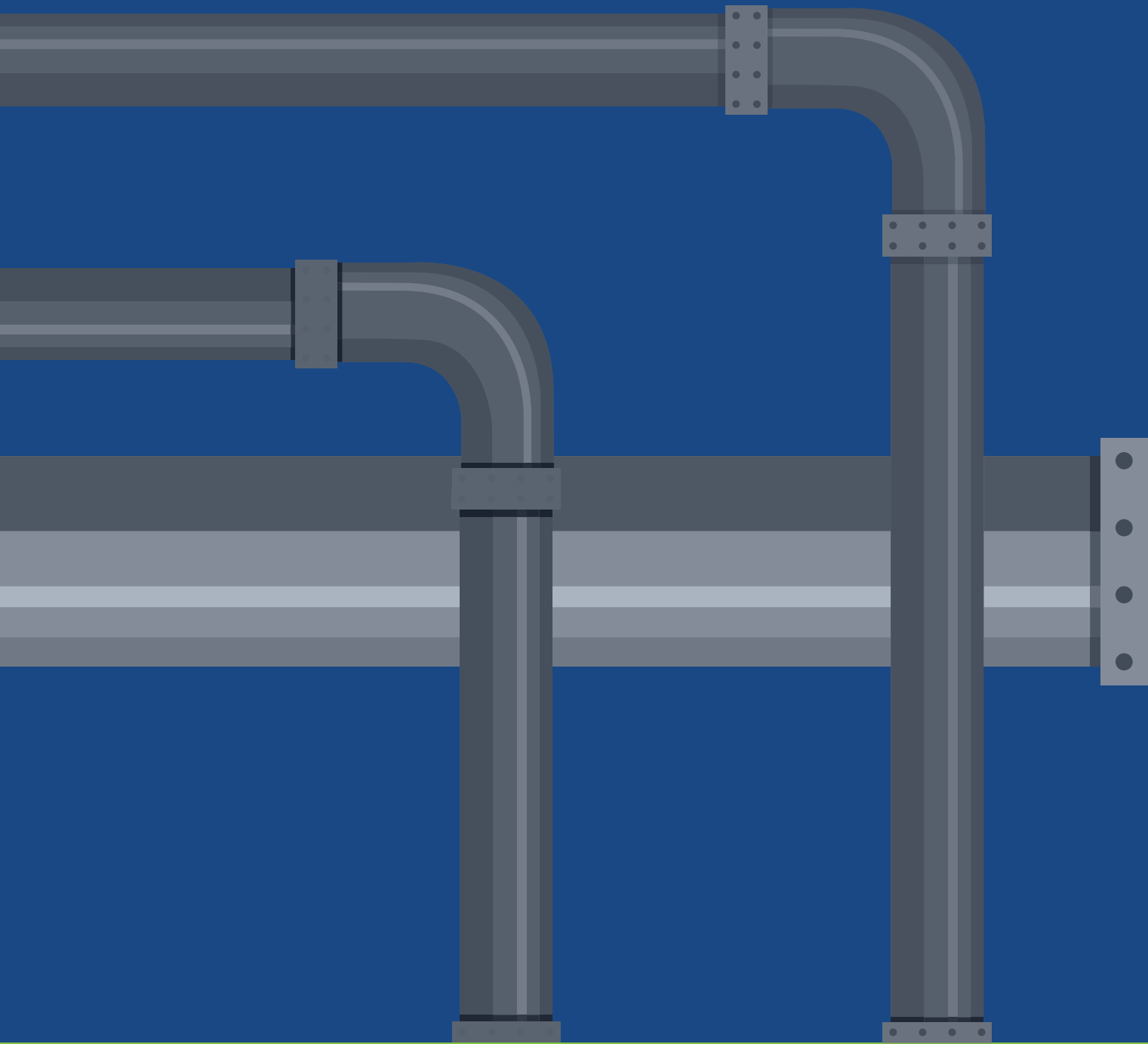
- The important point to remember is that in any technology, it is relatively easy to provide a product to achieve some kind of result but experience provides insight in what not to do.
- Cement based products have unique properties and should only be used in those applications where it is well suited, such as providing high compressive strengths. It does not adsorb heat well and is difficult to remove in the event of cable repairs or fault tracing. It is also very brittle and can be cracked easily.
- TerraLoc does not alter the soil in any way and therefore will not interfere with scanning results as is the case with cement when detecting cable faults.

CONCLUSION

Terraloc is a unique product that has not been equaled in more than twenty years. It is the only product that could achieve an interim Agrément Certificate (2015/496) for use as an additive in soils to stabilize and harden most materials.

It is the only product to provide a wet-strength as it is insoluble in water after curing. Due to its ability to harden most kinds of soils its performance remains consistent and is enhanced in sandy soils.





THANK YOU
WE LOOK
FORWARD TO
HEARING FROM YOU!!