



TERETEK®

The Most Advanced
Way to Improve Ground
Bearing Capacity and
Re-level Structures

mainmark



Introducing Teretek®: Mainmark's new state-of-the-art engineered resin solution

Sinking floors, cracked walls, or doors and windows that won't close properly can all be signs of ground instability or subsidence under a structure. If a building experiences differential settlement and becomes unlevel, it can result in significant and expensive damage, particularly if left unaddressed.

Australia and New Zealand face unique ground and environmental problems, from the expansion and contraction of soils due to drought, through to soil liquefaction resulting from earthquakes. Additionally, many buildings in coastal areas sit on sandy, shifting soils.

All of these contributing factors has the potential to result in ground instability and weakness that leads to subsidence and the need to enhance the bearing capacity underneath structures and re-level buildings.

Wall cracks and other signs of instability are often ignored in fear that the solution will be prohibitively expensive and extremely disruptive. That doesn't have to be the case. The sooner action is taken, the easier and more cost effective these problems are to fix, in turn avoiding further damage.

For more than 25 years Mainmark's team of experts has developed unique and innovative methods for correcting ground instability issues, including resin injection. Leveraging this experience, Mainmark is

proud to launch Teretek®, a proprietary engineered resin solution that utilises our perfected injection delivery method to raise, re-level, and re-support buildings and other on-ground structures.

Teretek® is a unique two-in-one solution that delivers both ground improvement and re-levelling. It increases ground bearing capacity, fills voids, and can mitigate soil liquefaction, all at a fraction of the cost of traditional underpinning and ground engineering methods, and with no detrimental effects on the environment.

Mainmark technicians select a precise number of injection points under the structure. The Teretek® engineered resin solution is then injected in a process similar to keyhole surgery, this stabilises the ground and re-levels buildings quickly and with minimal disruption. In most cases, building occupants are not required to move out or move furniture. Treated areas, including concrete driveways and slabs, are quickly returned to full operation and can be driven on within hours.

Teretek® can be used in commercial, industrial, civil and mining applications as well as residential.

Talk to Mainmark today about how Teretek® engineered resin solution can help solve your ground stability problems.

FEATURES

BENEFITS

Ultra-quiet, low-disruption process	No inconvenience to neighbours, surrounding businesses or property.
Keyhole surgery method	Delivers a fast, non-invasive and less messy alternative to traditional underpinning.
Teretek® can be used to raise, re-level, and re-support almost any structure	It is suitable for application across a broad range of buildings and assets.
Increases ground bearing capacity and re-levels structures in a single process	Giving you two processes for the price of one, which is up to 30 per cent more cost effective.
Rehabilitates foundation ground	Ground bearing capacity is increased to re-support the structure, thus avoiding the need to replace foundations or rebuild.
Backed by a 50-year product warranty	Mainmark stands by Teretek®, giving you peace of mind.
Delivery method perfected by Mainmark over 25 years	Leverages our vast experience which achieves optimal outcomes in most ground conditions.
Resins have been used for more than 25 years	So they have a proven history in use, providing confidence in their performance.
Application via a low carbon footprint process	Sustainable and responsible solution that focuses on rehabilitation and preservation rather than repair or replacement.
Teretek® resin is environmentally inert	Teretek® doesn't affect groundwater, soil quality, or local wildlife.
Suitable for regions experiencing seismic activity	Assurance that the product will perform even in earthquake-prone areas, and can be used for Liquefaction Mitigation.

Solving ground engineering problems for industry



COMMERCIAL: keeping premises safe while re-levelling or re-supporting structures

The Teretek® solution raises, re-levels, and re-supports buildings and structures of any size. It also corrects moving and sunken driveways, pavements, floors, and machinery bases. It strengthens and stabilises weak ground. As a result:

- trip hazards are removed
- water ponding disappears
- voids can be filled
- doors and windows come back to level
- unsightly wall cracks may close up completely.

Because Teretek® uses a targeted injection method similar to keyhole surgery, it's not just cost-effective; it also keeps business downtime to a minimum. Your business can usually operate as normal without needing to relocate furniture, stock, or machinery.

There is no mess and no excavation, so you don't



INFRASTRUCTURE: maximising the ongoing value of assets

Mainmark has successfully re-levelled and re-supported everything from concrete slabs and pavements to roads and bridges. We also use Teretek® to fill holes, voids, and abandoned pipes, keeping those areas safe.

Non-invasive methods are time-efficient so the work can be done quickly with no detrimental effects on the environment.

Using Teretek® we can:

- help to prevent water ingress and erosion in critical infrastructure
- stabilise strata in tunnels
- strengthen foundation ground
- help decommission old infrastructure
- address land slippage around infrastructure



MINING: **stabilising uneven ground for improved safety**

Mainmark can help stabilise above-ground structures like stacker-reclaimer rails, conveyor belt supports, tanks, and machinery, as well as roads and pavements. This can minimise safety risks in all types of mining operations. We can also conduct void filling and post-fall recovery treatments, as well as water and gas ingress control.

We use Teretek® to stabilise strata in mines and tunnels, reducing hazardous ground movement and instability in fractured rock.

Mainmark's technicians have many years' experience helping mining operations address ground instability issues.



INDUSTRIAL/WAREHOUSE: **keeping plant and machinery operating correctly**

Regardless of the size of your building, driveway, or hardstand, Teretek® provides a level correction solution that is fast, reliable, cost-effective, and non-disruptive.

Sinking floors can be dangerous. Trip hazards and puddles, for example, can create occupational health and safety issues in industrial buildings. Unlevel floors can throw machinery out of level, which can damage or even destroy it. The cost of maintaining or replacing plant and equipment can be high.

Using Teretek®, we can bring your building and floors back to level, avoiding structural damage. Teretek® also improves the ground's bearing capacity, so you can confidently drive heavy trucks over driveways and store heavy goods in warehouses.

Teretek® provides significant benefits including:

- minimal disruption and downtime
- no excavations, no mess
- forklifts and trucks can usually run smoothly over concrete slabs and driveways just 30 minutes after treatment
- there is no need to move stock or machinery
- warehouse shelves and conveyor systems return to correct operating positions.



RESIDENTIAL: keeping your home or investment property structurally sound

If your home has developed cracks in the walls, or if doors and windows aren't operating as they should, then your property could be suffering from subsidence or ground instability issues. Many home-owners fear that solving these problems will incur high costs and significant disruption.

Teretek® is the least-invasive way to re-level and re-support a home, backed by a 50-year product warranty.

Strategically-placed injection holes are barely visible, with work typically carried out like key-hole surgery from the outside of the house through 16mm diameter tubes, reducing to as little as 6mm in diameter if applied from inside the home. There is usually no need to move out. As the resin is injected, the ground starts to compact and the building begins to re-level. You will see wall cracks begin to close up and doors and windows will generally operate smoothly again.

Using Teretek® means:

- your house can be made structurally sound, securing its future
- you won't have to move out, or even move furniture, while the issue is being resolved
- you will save money compared to traditional underpinning techniques
- your driveway may be less likely to retain pools of water.

We can raise and re-level strip footings, raft slabs, and 'waffle-pod' slabs, as well as infilling slabs and driveways, using Teretek®.



Application methods



For more than 25 years, Mainmark has developed and perfected its unique and proprietary process for ground improvement and structural re-leveling. Utilising this flagship method, we inject one or more of our engineered structural resins beneath the sunken sections of the affected construction or structure, filling any voids encountered to maximise ground support. Then, from deeper underground we lift the structure or construction, as conditions allow, using the controlled force generated by expanding resin.



We inject one of our engineered structural resins beneath (or into) the construction of concern, filling any voids encountered to re-establish ground support. The Teretek® void-fill method may also be used for arresting water movement, and filling abandoned utilities and other man-made voids.



Vast experience solving issues quickly and cost effectively

Drawing on vast experience gained from having offices across 16 cities and 6 countries, Mainmark's non-invasive ground engineering solutions have lifted more than 30,000 structures.

Mainmark has completed successful re-levelling and re-supporting projects, including:

- Major shopping centres – re-levelling buildings while retailers continue to trade, and without compromising public health and safety
- Airport infrastructure – strengthening and re-supporting sunken structures to allow continued use of runways
- Community care facilities – re-levelling to correct structural and aesthetic issues without disrupting residents and facility operations

- Petrol stations – addressing ground subsidence by filling voids and re-supporting slabs to ensure ongoing site safety and the ability to receive frequent heavy-vehicle deliveries.

The Teretek® engineered resin solution is backed by more than 25 years of experience in resolving complex ground engineering problems in the Asia Pacific region for civil, residential, and commercial clients. Mainmark's award-winning team of engineers has widely demonstrated expertise in undertaking geotechnical investigations, assessing risks, and identifying potential hazards relating to the region's unique ground conditions. This includes a deep understanding of managing issues linked to seismic events and adapting solutions for specific site requirements across a range of industry sectors.

The Mainmark group of companies are leaders in advanced ground engineering and asset preservation technologies. For more than 25 years, Mainmark has led the world in offering unique, innovative solutions for foundation repair, and rectifying problems in residential, industrial, commercial, civil engineering, and mining situations.

In Australasia, the Mainmark group of companies has been in operation since 1995, with ten locations throughout Australia and New Zealand. Since 2001, we have also operated wholly-owned subsidiaries in Japan and most recently in the UK.

We are a privately-owned company with highly-trained technicians and state-of-the-art equipment. Our solutions are all non-toxic, inert, and environmentally neutral. All of our works are planned, supervised, and executed by our own experienced personnel. We guarantee our products.

Companies of the Mainmark group present creative, effective solutions to many types of ground engineering problems in a wide range of sectors: industrial; commercial; residential; civil; and mining. Some of the companies offer related solutions in the building and construction areas. Many of these solutions are unique to Mainmark and its associates.

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