

# Non-invasive JOG and Teretek® Used to Re-level South London Business Unit

PROJECT PROFILE

2018-66UK

mainmark



## INDUSTRY

Industrial

## STRUCTURE

Business unit

## PROBLEM

Subsidence

## LOCATION

London, England

## DURATION / YEAR

11 days / December 2018

## TECHNOLOGY

Teretek® and JOG  
Computer-Controlled  
Grouting

## BUSINESS UNIT

Mainmark UK

## Summary

Many industrial sites, business units and especially end units, can suffer from excessive water damage due to poor quality drainage systems. This water damage can lead to multiple ground issues, including subsidence. This was true for the South London business unit of Traders Coffee Ltd.

After years of leaking and overflowing gutter, the ground underneath the unit had become weakened, resulting in the integrity of the building being compromised. As the original building had been built on poorly compacted ground, the situation got progressively worse. The previous and current occupiers had attempted to fix the problem by laying more concrete on top of the sloping floors, a common quick fix, but one that doesn't address the ongoing subsidence issue.

## Objectives

The primary objective was to re-level the floor of the business unit, requiring a lift of approximately 120mm, without compromising the structure in any way.

In addition, there were a number of considerations that the Mainmark team needed to factor in, including: the confined space the team of four had to operate in, not disturbing the neighbouring unit and, most importantly, not impacting Traders Coffee Ltd's daily operations. Therefore, traditional concrete underpinning would not have been suitable which is why the company opted for an advanced non-invasive solution.

Furthermore, a mezzanine had been added after the unit had started to subside, requiring Mainmark to determine the precise amount the building could be lifted without compromising the mezzanine's structure.

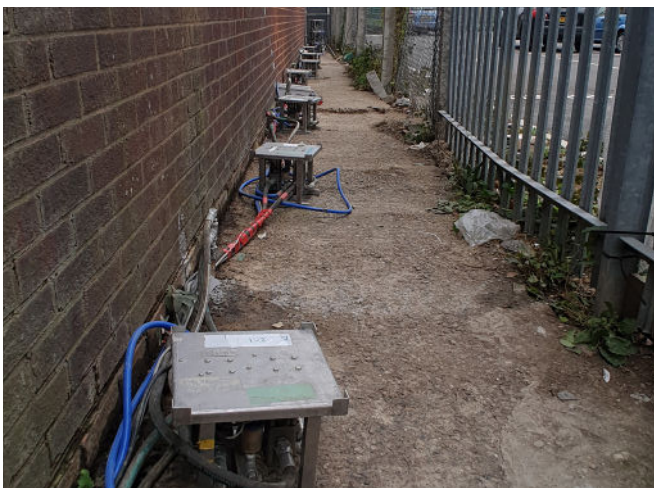
**Non-invasive JOG and Teretek® Used to Re-level South London Business Unit** continued

## Solution

To successfully avoid business interruption for the client, Mainmark recommended the use of JOG Computer-Controlled Grouting (JOG) to re-level the perimeter concrete foundations and structural pads while at the same time utilising its proprietary Teretek® resin injection solution to raise and void fill the internal floor slab.

The precise degree of control offered by Mainmark's cost effective and time efficient JOG technology enabled the substantial lift of the unit's foundations, while not impacting the adjacent properties.

Multiple injection ports were installed through the concrete foundation and structural pads along the subsided section of the building, through which the JOG high mobility cementitious grout was introduced under computer control. This enabled Mainmark to gradually and precisely lift the large industrial unit in a controlled manner without causing any business interruption. The spacing and placement of the injection ports were tailored to accommodate the structural elements of the foundation, while the grout was mixed and pumped from just outside the unit's main entrance.



JOG Computer-Controlled Grouting set up

While the JOG technology raised the unit's external walls, Mainmark's proprietary Teretek resin injection solution was used to fill any resulting voids under the internal floor slab, thus raising the floor to level with the external walls. Teretek is unique in that it delivers both ground improvement and re-levelling with a fast, non-invasive process

Despite the area Mainmark was able to operate in being extremely limited, the operation was seamless given the modular nature of the equipment.

The structure was successfully re-levelled by 138mm within 11 days on site while leaving the neighbouring property unaffected. Both the JOG and Teretek are backed by a 20-year product warranty.



Sloping floor being corrected with JOG and Teretek®