

## Concrete cutting vibration free operation

### Reading Sub-Station - Switching on a Vibration-Free Solution

- Stitch Diamond Drilling
- Vibration-Free Operation
- Multiple Openings of Various Sizes and Angles
- Dust-Free Environment

Project Duration: 1 week

### Project Overview

With the knowledge that one piece of debris could cause significant damage - and potentially a black-out - TCC's expertise for delivering vibration-free stitch diamond drilling was put to the test when a Reading electricity sub-station was replaced.



*Diamond Drill rig drills angled hole to form opening*

### Project Methodology

The 275kVA substation equipment had become fragile and tripping was a genuine possibility, which meant that new switchgear/ transformers had to be introduced. But the sensitivity of the existing equipment meant any work had to be undertaken free of vibration and dust.

Fortunately, TCC has considerable experience in this area - and the company used its stitch-drilling expertise to create 15 openings of various sizes and differing angles through the 450mm thick floor slab for new cable ways from the chamber below. Some openings had one side on an angle to allow for the gen-

tle sweep of large 75/100mm diameter cables. Water lubrication ensured no dust.

### Key Performance Criteria

The timely completion of the project within one week was essential to meet the scheduled arrival of the new 15m long switch panel. In addition, a large number of old cables below the



*Openings Stitch Diamond drilled in substation floorslab*

opening had to be protected, which meant supporting sections of concrete to avoid any falling debris.



*Vibration and dust free drilling of opening for cable entry to electric substation*

### Outcomes

The project was completed in a vibration and dust-free manner - negating concerns over VWF - and on time to ensure the fitting of a new switch panel, ensuring that the area's electricity supply was maintained throughout.

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