# TRACE
STRUCTURAL INVESTIGATIONS

## HOLISTIC DATA COLLECTION AND ANALYSIS OF CONCRETE STRUCTURES

Trace Structural Investigations's (TRACE-SI) innovative survey workflow and holistic approach to data collection and analysis enabled the client to gain a more comprehensive understanding of the construction details and quality of their pool structures.

### OBJECTIVES

TRACE-SI, a specialist structural investigations consultancy, was approached by a client to conduct data processing and analysis of concrete walls and floors of their swimming pool, spa pool, and infinity pool. The client needed to understand the construction details and the quality of the concrete used in these structures. Traditional targeted grids might not have provided enough information on the construction details, so TRACE-SI offered a different, more holistic method of data collection and analysis

### SOLUTIONS

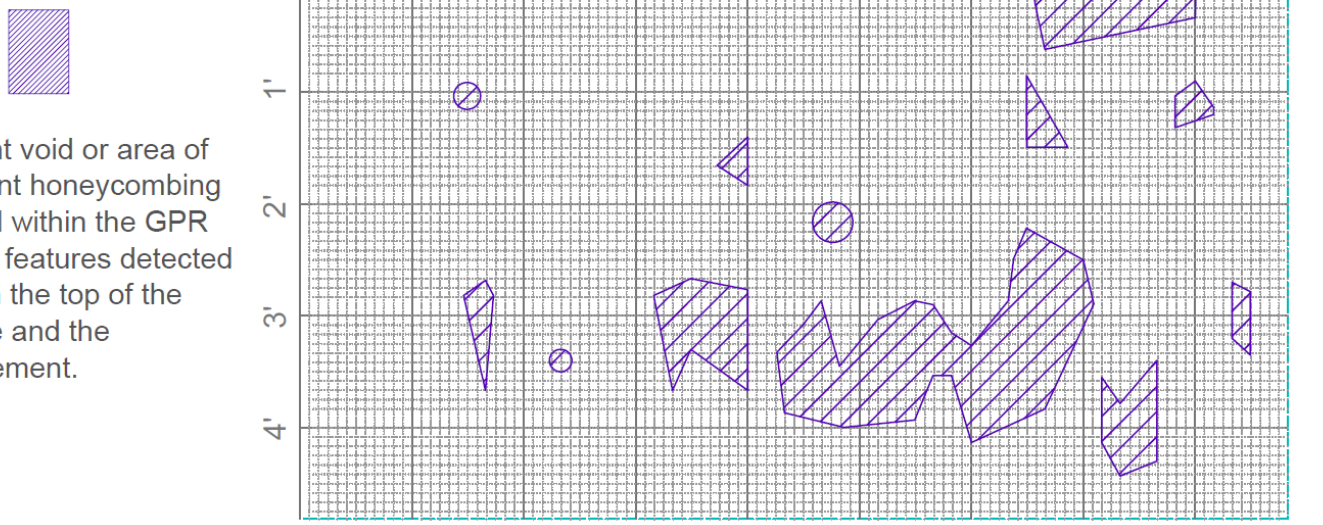
TRACE-SI collaborated with the client's on-site team to collect data using ground penetrating radar (GPR), which was then processed and analysed. The data was subjected to several filters to improve visualization, and features were picked through manual interpretation. The survey identified significant areas of potential honeycombing and voiding within the scanned areas. Some pool elements showed little to no noise, indicative of good concrete compaction, while others exhibited poor concrete compaction.

### BENEFITS

The holistic approach that TRACE-SI implemented provided a more detailed report than traditional targeted methods.

The client received valuable insights into the construction quality of their pool structures.

The comprehensive analysis allowed for informed decision-making regarding potential remedial actions or improvements




Apparent void or area of significant honeycombing detected within the GPR data. All features detected between the top of the concrete and the reinforcement.