TRACE STRUCTURAL INVESTIGATIONS

STRUCTURAL INVESTIGATION AND VOID MAPPING OF A QUAY

TRACE-SI's tailored non-intrusive survey and analysis approach allowed the client to gain valuable insights into the structural integrity and construction details of a quay in the south of England.

OBJECTIVES

To address concerns regarding a large crack, subsidence, and potential voids at their quay in the south of England. The client required a comprehensive understanding of the structural details and needed an effective solution to map the voids without causing further damage to the site.

SOLUTIONS

TRACE-SI designed and executed a nonintrusive survey using ground penetrating radar (GPR) to identify voids and determine construction details of the quay.

The survey successfully mapped the voids beneath the slab, providing the client with the necessary information to plan remediation works. The geospatially accurate data allowed the client to precisely identify the location and depth of the voids, as well as gather valuable construction details about the slab.

Furthermore, TRACE-SI's expertise in data processing and analysis enabled the client to understand the structural integrity of the quay wall and its connection to the slab, despite the presence of a steel surface plate obstructing visibility.

BENEFITS

TRACE-SI's non-intrusive survey method preserved the site's integrity and minimised disruption to the client's operations.

The geospatially accurate data enabled the client to make informed decisions for remediation works.

TRACE-SI's comprehensive report provided the client with insights into the structural details, supporting better long-term planning and management of the quay.

Underside of the slab at 280-450mm depth Approximately 900mm wide beams at 4m centres. The underside of the beams has not been resolved.

Top layer of reinforcement at ~200mm centres at 60-250mm depth. Note the bars increase in depth between beams.



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