

Gatwick Airport – Airside Investigation for a New Aircraft Stand



We were contracted to carry out ground investigation works around the existing Pier 6 at the North Terminal of Gatwick Airport. It was proposed to construct additional stands and provide increased arrival/departure capacity for new Airbus A380. The new buildings were likely to be of steel construction and supported on piled foundations.

The aim of the geotechnical investigation was to provide assessment of the existing ground conditions for foundation and pavement design, to obtain geotechnical design parameters and to determine the chemical conditions in respect of buried concrete and classification of arisings from excavations.

All works had to be carried out during a short night closure window. Being an airside and operational environment, careful planning was required before these works could commence. Detailed method statements and site specific risk assessments, details of operatives, plant and vehicles were provide to the Client enabling security passes to be obtained. Access routes need to be agreed in advance with the supervisor and the specific site areas for investigation were required to be secured and signed during the investigation.

The site was covered by pavement quality concrete which had to be penetrated and was also underlain by a number of strategic services. We mobilised a Commachio tracked rotary drilling rig which was able to drill cores through the thick concrete surfacing and then switch immediately to drive dynamic sampling equipment in order to sample the underlying soils. Dynamic Cone Penetrometer, CBR testing was also carried out at each position. Several locations were cored and sampled during a single night closure.

Detailed logs were provided for each borehole. Subsequent concrete core strength testing and concrete quality reporting as well as soil compressibility tests on open tube samples were carried out in our laboratory. A factual report was provided to the Engineer.

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