

# A83 Trunk Road Widening Scheme - Case Study

Ian Farmer Associates were commissioned by Scotland Transerv, acting on behalf of Transport Scotland, to undertake a ground investigation for the proposed widening of the A83 trunk road. The section of the route was approximately 2km in length. The site operations required Traffic Safety provisions and the production of an Environmental Management Plan.

The aim of the investigation was to provide sufficient information for a safe and economic design to be undertaken. This included the thickness of deposits, engineering properties, rippability of rock and the chemical properties of the soils and groundwater.

The site work included light cable percussion boreholes, some of which were extended by rotary open hole and coring methods with the installation of piezometers. Standard penetration tests were also carried out. Groundwater levels were recorded in the piezometer standpipes during and after site works. The boreholes were backfilled to SEPA requirements.

Trial pits were dug by mechanical excavator and hand vane readings were obtained. Photographs of the trial pit excavations and rock core were taken



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The ground levels and co-ordinates of the exploratory holes were determined by Ian Farmer Associates to local grid and datum.

Rock Mass Description of rock faces was also undertaken and stereographic projections were produced using Orient 2.1.1 software.

A varied suite of geotechnical and chemical tests were carried out including uniaxial compressive strength, point load, moisture condition value, small shear box, sulphate, pH, loss on ignition, chloride and compaction.

An enhanced factual report was required in line with the Manual of Contract Documents for Highway Works, Eurocode 7 (BS EN 1997/2:2007) and the Association of Geotechnical and Geo-Environmental Specialists. AGS digital data report was also produced and checked for errors utilising the gINT software

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