

# A77 Girvan Ground Investigation

**Client :**  
Scottish Executive

**Consultant :**  
W A Fairhurst & Partners

**Location :**  
Girvan, Ayrshire

**Date :**  
2005



As part of the Scottish Executive's Trunk Road Ground Investigation Framework contract, BAM Ritchies carried out ground investigations on the A77 near Girvan.

The investigation, along the line of a proposed road improvement scheme on the A77 three kilometres south of Girvan, was to determine the general sequence of strata and soil and rock conditions adjacent to the existing A77 to allow the road to be straightened and an overtaking section to be incorporated into the proposed design.

Both conventional and inclined boreholes perpendicular to the rock bedding were undertaken to allow a new rock slope face to be designed.

A track mounted hydraulic top-drive rig was utilised for all rotary drilling. Open-hole drilling methods using tricone rock roller bits of appropriate diameter were employed.

During coring operations, double-tube face discharge "412DT" core barrels were used in conjunction with a compressed air flushing medium and diamond tipped core bits; the resultant rock cores were nominally 76mm in diameter.

Thirty five trial pits were excavated using a wheeled hydraulic excavator. The purpose of the pits was to allow inspection of the soil deposits and bedrock at shallow depth and to recover samples for subsequent laboratory testing. Additionally 120mm diameter road pavement cores were undertaken in conjunction with Dynamic Cone Penetration tests along the existing carriageway.