

Case Study – Ground Investigation

Project

- A detailed investigation into ground conditions on a mountainside in the Scottish Highlands, relating to a proposed highway realignment, with a view to constructing a road tunnel through a rock promontory immediately adjacent to Loch Lomond

Client Requirements

- Boreholes were required at a number of locations across the hillside, with core retrieval down to 30 metres
- Due to the steep, wooded nature of the site, several borehole locations were inaccessible to conventional drill rigs, demanding an innovative approach to plant
- Safe systems of work were paramount, with live traffic running below the work site at all times



CAN Solution

- CAN mobilised one of its rotary masts mounted on an A frame, specifically designed to work on steep rock faces. The rig was easily split into major components and lifted onto a flat area of hillside by helicopter for reassembly
- Temporary anchors were installed and tested prior to being used as suspension points for the rig. This anchor system was subjected to a rigorous Form C temporary works design and approval process by CAN's in house engineering design division
- A robust temporary catch fence was installed beneath the works area using rockfall netting and wire rope, to provide total security for road users below
- The A frame drill rig was safely manoeuvred across very steep slopes between borehole locations, being near vertical on occasions, controlled by the 2 man drill team using twin on-board winches. Personnel used rope access techniques to safeguard themselves at all times whilst on steep slopes
- Core retrieval was successfully achieved to at least 30 metres below ground level at the required locations and all plant items returned to road level by helicopter

