

Case Study – 3000kJ Catch Fences, Gibraltar

Project

- Construction of safety measures to safeguard the public from rock fall on the approach to Dudley Ward Tunnel at the foot of the main face of the Rock of Gibraltar. This to include installation of high capacity (3000kJ) rock catch fences, construction of a reinforced concrete tunnel and highway realignment.

Client Requirements

- Appointment by the Government of Gibraltar of a specialist geotechnical contractor to build 5 catch fences totalling 400m in length, capable of managing work successfully in an overseas location, working safely in a dangerous environment on unstable steep ground beneath large rock faces and coping with a technically challenging project.



CAN Solution

- Design of fence foundations including arrays of ground anchors of varying lengths and concrete bases. Installation and testing of trial anchors to prove ground conditions and verify design
- Mobilisation of extensive plant from UK, including several different drilling systems, capable of working on steep slopes and drilling through ground conditions including collapsing sands, boulders and voided limestone
- Use of sprayed concrete as an effective means of installing concrete bases in high level locations without need for ready-mix concrete
- Transport of helicopter and support crew from UK with all attendant permissions, to work in a self-supporting team, transporting all fence components upslope to reduce project timescales. Helicopter working in very tight confines, successfully installing 5m high fence posts into final position on preformed bases
- Close working relationship between site team, Consulting Engineer representing the Client on site and CAN Project Manager in UK to overcome difficulties including adverse ground conditions and interface with other, third party site operations