



Alan Auld

ENGINEERING

Project Data Sheet - Ground Freezing

Alan Auld Engineering has a long history of involvement in the design of ground freezing schemes for civil engineering and mining projects. This specialist techniques is used to stabilize granular material under water pressure and allows excavations for tunnels and shaft to be made without the risk of sudden innundation.

We have carried out freeze wall designs for a number of civil engineering projects, including box tunnel jacks at Dorney Bridge in the UK under the Great Western Main Line (pictured) and in Haifa in Israel.

In addition to civil engineering projects many deep mine shaft sinking projects also employ this technique, enabling shafts to be sunk to great depth through unstable ground under extremely high water pressure.

We are well known for our work in this field and we have designed and carried out designs and independant checks on many schemes around the world. We work extensively with British Drilling and Freezing Ltd, who are acknowledged specialist contractors in this field, but also have links and working relationships with other international specialists operating in this field.

Current ground freeze projects we are involved in include freeze wall design work and thermal modelling, as well as independant checking work on new potash mine shaft sinking projects in Saskatchewan, Canada. These mine shafts have to be sunk to depths in excess of 1000m and are required to pass through heavily water bearing, high pressure, unstable granular ground at around 500m.

Ground freezing will be essential to the success of these projects.

