

Stourbridge Area Mine Workings Investigation.

Project Profile

Client: Birse Rail

Designer: Scott Wilson Rail

Value: £250k



Following a desk study of Coal Authority and other historic records it had been identified that there was a risk to rail infrastructure due to the presence of 'Thick Coal' mineworkings in four locations in the Stourbridge area between Cradley Heath Station and Stourbridge Junction.

Site Investigation drilling was required to confirm the presence, depth and condition of these mineworkings and whether there was a need to carry out stabilisation by drilling & grouting to remove the risk of instability .

As much of the work was carried out either on or adjacent to live rail, pre-booked T3 week-end track possessions were required. In addition, drilling rigs had to be mounted on rail transport to access some of the areas and drilling positions.

- Each of the 4 areas area required five rotary open boreholes and one rotary cored hole resulting on a total of 20 rotary open boreholes up to 48m deep, and 4 No 100mm cored holes up to 35m deep
- 3 Klemm KR701 geotechnical drilling rigs were resourced to site including one rig with a specially shortened 3m mast to allow green zone working in the cess 3.5m from the track
- Open holes were drilled using 101mm OD casing and by a 70mm open hole, cored holes were drilled using a PW core barrel
- 6 nr T3 weekend possessions were required.
- Work also carried out in separated, safeguarded and fenced green zones during the week
- De-vegetation works to existing cess and adjoining areas.
- Preparation of drilling platforms
- Use of rail vehicles (R.R.V's) to access restricted site areas
- Provision of Safety Critical Staff—COSS & ES
- Accessing from predetermined points stipulated by Network rail
- An experienced Geotechnical Engineer logged cores and boreholes



Continuous liaison took place with the client and all stakeholders including adjoining property owners and the combined efforts of all parties ensured that the work was completed to the satisfaction of the client, on time and on budget.