



Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

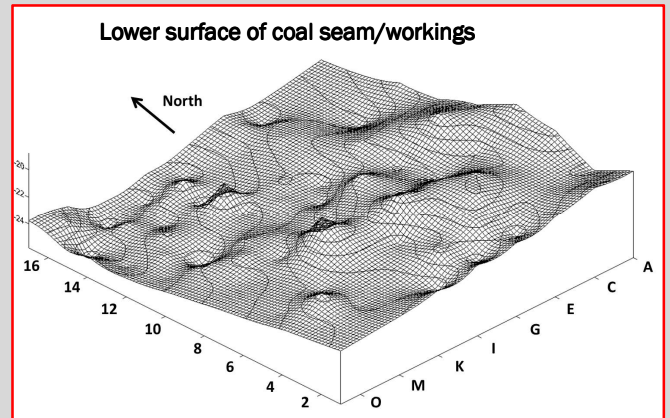
Case Study: Proposed Care Home Development, Neath

Client: Private Developer

Delivery Period: 2013 - 2014

Principal Staff and Points of Contact:

- Jeremy Hucker, ROGEP Adviser & CGeol.
- Matthew Eynon, ROGEP Specialist & CGeol



Project Description and Overview:

ESP initially completed a desk study for the development as one of a number of sites being considered for care home developments. Subsequently, a full investigation was undertaken along with the stabilisation of abandoned mine workings beneath the building footprint.

Services Provided:

- Desk study review identified potential mining risk.
- Intrusive investigation confirmed workings within the Swansea Four Foot seam within potential influencing depth of the site surface.
- Stabilisation of abandoned mine workings completed.
- Recommendations for foundation design.

Outcomes:

The desk study and investigation identified open workings (up to 3.0m in height) within the Swansea Four Foot coal beneath the site. The workings were stabilised by the injection of pfa:cement grout under the careful design and control of ESP.

The risk of subsidence beneath the structure was successfully mitigated. Due to careful control of the treatment works by ESP they were completed for substantially less than the initially anticipated costs.

Key skills

- Identification of mining hazard in desk study
- Intrusive investigation of mining hazard and shallow soils
- Provision of foundation recommendations
- Mitigation of subsidence hazard
- Cost savings to Client through careful project management