

## James Adams Mine (Remainder) Stage III Treatment

Client	-	Walsall M B C (English Partnerships)
Engineer	-	Johnson Poole & Bloomer
Value	-	£2.5m
Completion	-	November 1998

Work involved infilling and stabilisation of a disused and partially collapsed and flooded limestone mine over an area of 5 ha in a densely populated residential area of Walsall (169 properties) and included;

- 450 No drill holes drilled both angled and vertically to the base of workings (40-100m BGL) to high tolerances.
- 57000 tonnes of grout injected into the collapsed and broken ground
- Establishment and operation of displaced mine water pumping wells and water treatment facilities.

Grout mixing was undertaken using computer controlled continuous grout batching plant with mixed grout pumped to a mobile agitation / pumping unit situated at the treatment area.

This infilling project was unique in terms of the sensitive location and the constraints involved, requiring detailed technical appraisal and adoption of innovative solutions based on our specialist experience of treatment methods. The work involved several demanding constraints posed by working within narrow sheets and private property, drilling and grouting adjacent to Victorian terraced properties with shallow foundations and siting a large grout batching facility within the residential area. The properties remained fully occupied throughout the contract period, which required a close, structured liaison system with the residents, involving monthly meetings with the local Residents Action Group and public meetings prior to the commencement of the works and throughout their duration.

Extensive control measures and innovative plant operation techniques were used to achieve the high level of environmental protection from dust, noise, vibration and ensure minimal disruption to residents and commercial interests during the work.

- PFA storage and mixing plant area, container surrounded with overhead spray bars for PFA damping.
- Mixing plant additionally screened and covered to ensure no dust generation.
- Drive through wheelwash provided.



## James Adams Mine (Remainder) Stage III Treatment (contd)

- Water flush drilling with cuttings collected at drill hole and pumped to settlement tanks in compound.
- Continuous liaison and planning with Engineer and Client regarding sequencing the works and positioning of drill holes, pipelines and grouting plant, maximising use of angled drilling from protected locations and minimising entry to highways and garden areas, thus limiting disruption, reinstatements and impact of the work.
- A proactive customer care approach was adopted by the site team (Contractor, Engineer, Client) including public meetings, regular residents association meetings and news letters to provide information on progress, likely areas of disruption etc., which fostered a high level of co-operation with the residents particularly on sensitive issues such as on street parking.
- Speedy reinstatement of working areas to client and resident satisfaction.
- Immediate attention to and resolution of any complaints or claims.
- Extensive monitoring was carried out during the contract, which included:
  - ◇ property surveys
  - ◇ photographic and video surveys
  - ◇ CCTV sewer surveys
  - ◇ continuous checking for grout ingress to sewers
  - ◇ twice daily ground water level surveys
  - ◇ noise level monitoring

The teamwork approach by Client, Engineer, Contractor ensure that this potentially very difficult contract was successfully completed within budget and programme.

