



Mineshafts Under Carpark in Tonypany, South Wales

Cost—50% Lower

70% Time Savings

Problem:

Retaining wall excavations were required only 1.5 metres from upper portions of old brick lined mine shafts, which were in danger of collapse.

Underground stream flowing through lower shafts prevented total filling of the mine shafts.



Factors for Consideration:

Quick & effective solution needed to allow new Asda store to open on schedule.

Method/Process Applied:

Uretek recommended by engineers Clarke Bond to work alongside specialist contractors Quantum (GB) Ltd

Uretek suggested the use of suspended plugs, so upper sections of shafts (adjacent to excavations) are filled, restraining brickwork from collapse

Result:

Water tables and flows unaffected

“Quantum and Uretek worked closely as a site based team to adapt the process of filling the shafts as new problems were being encountered on a daily basis. Working under stringent targets for completion, all three shafts were treated to a satisfactory condition to enable the client to open the store on programme.” – Peter Lindsell, Quantum GB Ltd



“Uretek allowed for a quick, safe and sensitive solution to the problems posed – traditional methods would have required contractors to work inside the shafts for a sustained period.” – James Brown, ASDA

Benefits of Uretek v's Foam Concrete:

Simple comparisons of cubic metre rates of Uretek with Foam Concrete are misleading

Uretek site installed prices range from \$105/m³ to 3 times that - depending on strength and application.

Unique light weight allows cost saving engineering solutions not available with foam concrete

Less disruptive logistics—1 tanker of Uretek = 30 agitators of concrete

Light weight—does not induce a new subsidence problem

Faster - Vertical lifts of 8 metres per day vs 1.5m / 3 days with foam concrete

Easier site handling - Truck remotely located - No concrete pumps required



CASE STUDY

- * Consolidate Soil
- * Re-level Concrete
- * Fill Voids