



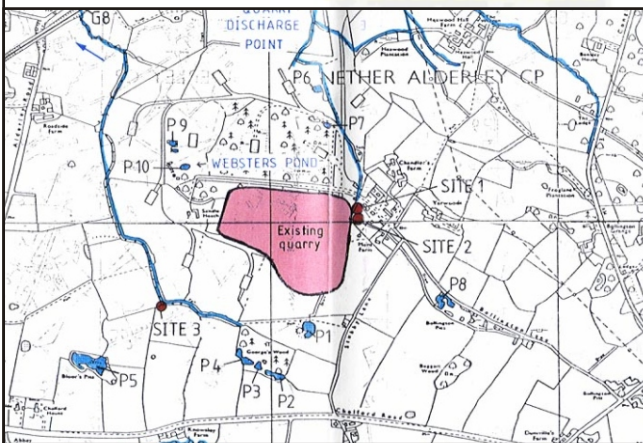
## PROJECTS

### HYDROGEOLOGY

Hydro 11

#### TARMAC ROADSTONE (WESTERN) LTD

Groundwater modelling, quarry dewatering & associated impacts

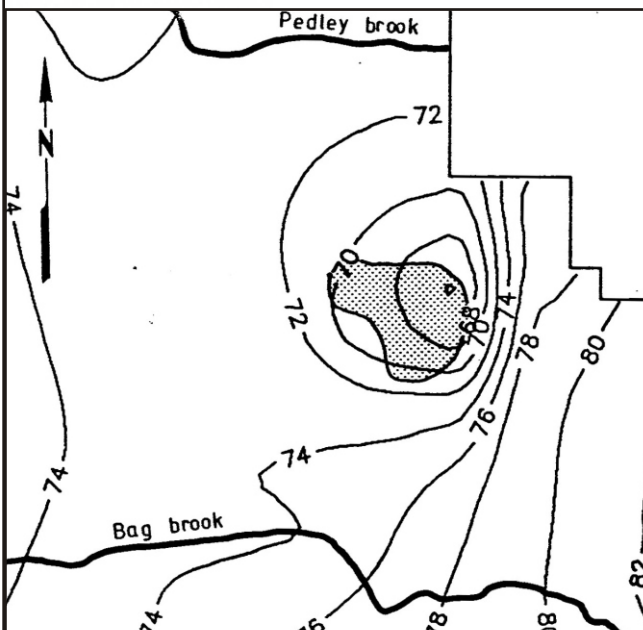


Part topographic map courtesy of Ordnance Survey

As assessment of the hydrological & hydrogeological impacts of dewatering a large open pit was undertaken.

Existing data was reviewed, and a groundwater and surface water monitoring network was established. A program of Hydraulic and geotechnical testing was undertaken, together with a stream gauging exercise.

A groundwater numerical model was constructed using MODFLOW and calibrated against historical level and flow records.



The effect of drawdown on streamflow and perched water levels was assessed, together with interference effects on licensed groundwater abstractions. An assessment of settlement on adjacent on nearby properties.

Recommendations were made for augmenting the existing monitoring network.

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