

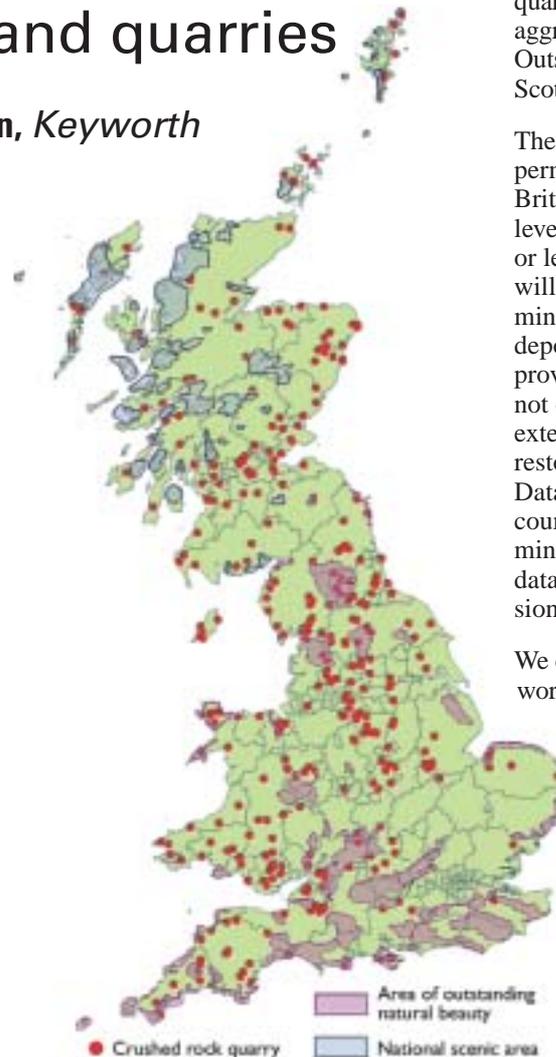
BritPits

A national GIS-linked database of UK mines and quarries

by Don Cameron, Keyworth

The BGS has been collecting geological information about working mines and quarries since 1835. We have also been collecting mineral resource data on producing mines and quarries for nearly as long. This information is held in a database called BritPits (an abbreviation of British Pits: 'pits' here includes both surface quarries and underground mines). BritPits is one of the most comprehensive and up-to-date sources available. It holds information on every active mine and quarry, its geographical location, address, operator, Mineral Planning Authority, geology, mineral commodities produced, and their end-uses. Originally, only details of active and temporarily inactive sites were included in the database and associated publication (Directory of Mines and Quarries) but, because of the importance of former workings for waste disposal and as Sites of Special Scientific Interest, information is now collected on both inactive and closed operations. The data are implemented in a relational database linked to Geographical Information Systems (GIS) to produce spatial analysis and plots.

Data are gathered from a number of sources: our own extensive records; Mineral Planning Authorities; the minerals industry; and various central government departments and agencies such as the Office of the Deputy Prime Minister (ODPM) and the Coal Authority. We have recently completed two contracts for the ODPM to compile definitive lists of active aggregate and building-stones quarries from BritPits. Data have been supplied to a wide range of customers and the database can be used for many purposes: mailing lists, route planning, market intelligence, analysis, and resource planning.



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Crushed rock aggregate quarries and areas covered by national environmental designations. Areas of Outstanding Natural Beauty and National Scenic Areas based on data provided by the Countryside Agency and Scottish Natural Heritage, respectively.

On behalf of the ODPM, we are also preparing digital information on mineral resources in map, database, and GIS format. This includes the known extent of a number of mineral resources, the location of mineral workings and planning permissions for extraction, as well as designated areas (international and national) of environmental interest. The aim is to produce digitally accessible

information for national, regional, and local planning. In the future, it could also provide a consistent set of information on which to base strategic environmental assessments, mineral plans and policies, and regional planning guidance. The illustration (*left*) shows the locations of quarries that produce crushed-rock aggregate in relation to Areas of Outstanding Natural Beauty and, in Scotland, National Scenic Areas.

The intention is to include all planning permissions for mineral extraction in the BritPits database, together with index-level information on source, restoration, or legal status. Planning permissions will cover active, former, and restored mineral workings and some unworked deposits. The database and GIS will provide valuable tools for monitoring not only resource depletion, but also the extent that mineral sites have been restored after extraction has ceased. Data are not yet available for the whole country, only for those areas covered by mineral resource maps, but a national database of mineral planning permissions will be completed by 2005.

We can supply data on active mineral workings either in printed form as the Directory of Mines and Quarries, or as a digital database in spreadsheet and database formats. We can also supply the data in widely used GIS formats. A digital index to the locations of all the currently active mines and quarries can be viewed on the BGS web site in the Geoscience Data Index (www.bgs.ac.uk/geoindex) under the geology section.

The compilation and maintenance of a definitive database of mines and quarries depends on the co-operation of a number of bodies, primarily the operating companies, the Mineral Planning Authorities, and government. Such co-operation is in the interests of the minerals industry in promoting its activities and informing the public of the important role that mineral extraction plays in the regional and national economy. Compilation of a single national database of all active mines and quarries benefits the nation by reducing duplication of effort, and the BGS will endeavour to provide the most up-to-date and accurate information to the public, government, and industry.