Results of a survey commissioned by the Minerals and Waste Planning Division of the Department for Transport, Local Government and the Regions

Sustainable Development Issues for Mineral Extraction in the Wareham Basin of East Dorset
The Wareham Basin of East Dorset contains internationally important but scarce deposits of ball clay — a clay used in the manufacture of high quality ceramics — together with important sand and gravel resources. Elsewhere in the UK, ball clay is confined to only two small areas in Devon. The Wareham Basin is also subject to very extensive landscape, and international and national nature-conservation designations. These include the Dorset Area of Outstanding Natural Beauty, and numerous Special Areas of Conservation and Special Protection Areas designated in accordance with the European ‘Habitats’ and ‘Birds’ directives, respectively. The constraints on mineral extraction are, therefore, very severe and it is becoming increasingly difficult to identify acceptable sites for future mineral working.

The study recommends:

· that Government should take a view on the national importance of ball clay;
· the results of the study should be used to assist the identification of the extent of commercial ball clay deposits in the area, and the location of these in relation to landscape and nature conservation designations;
· the Geographical Information System and associated database developed should be maintained to provide a framework for planning, and specifically mineral planning, in the area;
· that the options for the supply of ball clay, including alternative sources and materials, should be monitored and reviewed;
· that research on the restoration of mineral workings, especially the re-creation of natural habitats in isolation and as part of an integrated resource and rehabilitation programme, should be promoted by the planning process; and
· that consideration of whether the current approach to safeguarding ball clay resources is adequate.

If these issues cannot be resolved, then it is likely that over the next ten years or so ball clay working in this area will gradually decrease.

The research included detailed geological mapping, a small borehole and pitting programme, together with associated sampling and analytical work, the creation of a large borehole database and the collation of a large amount of data on the environmental constraints. To facilitate the interaction and interpretation of the large amounts of spatially-related data collected, a Geographical Information System (GIS) has been designed and incorporates the main elements of the data to facilitate their rapid analysis. It is intended that the reports and their associated maps and databases, will deliver information that will assist sustainable resource management, planning and policy development in the Wareham Basin.
The results of this research are summarised in:


  This report sets out recommendations in relation to resource management issues, the planning process and sustainable development considerations.

  This report can also be viewed on www.mineralsUK.com (in pdf format).

  A full account of the background to the research, the methods of investigation and results, together with the potential for heathland restoration and detailed recommendations are presented in the following Technical Report, which is aimed at specialists in the minerals industry and planning community entitled:


  The following thematic maps on a scale of 1:30 000 have been produced and are available from the British Geological Survey, Keyworth, Nottingham NG12 5GG.

  Price £25 each + pp.

Thematic Maps

Map 1. Distribution of ball clay and other clay resources in the Wareham Basin.
Map 2. Distribution of sand and gravel and bedrock sand resources in the Wareham Basin.
Maps 3 and 4. Mineral planning permissions, mineral workings, and preferred areas, Ball Clay Area of Search and Ball Clay Consultation Area on Map 1 and 2 bases.
Maps 7 and 8. National landscape and nature-conservation designations (SSSIs, NNRs, AONB, Heritage Coast, Scheduled Monuments) on Maps 1 and 2 bases.
Maps 9 and 10. Other land-use factors (MOD land, National Trust, Groundwater Protection Zones, agricultural grade 2 land, Conservation Areas, pipelines and commercial forestry) on Map 1 and 2 bases.

In addition, elements of the GIS developed for the study may be purchased under licence.

Photographs and Figures BGS © NERC 2002

Both reports are available from:

Sales Desk
British Geological Survey
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