

Summary

This report was commissioned by the National Assembly for Wales to evaluate the location and volume of potentially workable resources of land-based, fine-grained mineral aggregate in the area of the Mineral Planning Authorities of Anglesey County Council, Conwy Borough Council, Gwynedd Council and the Snowdonia National Park Authority; to examine the commercial potential of the resources; to identify the environmental constraints on future exploitation and to make recommendations on the most appropriate means of safeguarding the resources.

From a review of existing data, ten areas considered likely to yield potential mineral were identified. Each of these was geomorphologically mapped and 89 potential mineral bearing blocks identified. Each block was subject to a technical appraisal, based on an analysis of pre-existing data and a geological mapping and limited borehole programme, in order to determine the quantity and quality of potential mineral. Altogether, some 530 million tonnes of potential mineral were identified, divided into 270 million tonnes of sand and 260 millions tonnes of gravel. At the county level 92 % of potential mineral occurs in Gwynedd, with Conwy and Anglesey together providing less than 8 % and the National Park area virtually none. At the local level the greatest concentration of reserves, more than 75 % between them, occur in only three areas: Cors Geirch north of Pwllhelli; south of Nefyn and Penygroes, all in Gwynedd. All other areas provided less than 25%. In the Cors Geirch and Nefyn areas sand makes up approximately 75 % of the potential mineral; in the Penygroes area the proportions are reversed. In general terms the distribution of potential resources bears little relationship to areas of demand and the Caernarfon, Bangor and Conwy-Llandudno-Colwyn Bay areas all have disappointingly low volumes of potential mineral resource.

Some 60% of the potential resource blocks identified in the region are affected by one or more major planning constraints or environmental designations. Whilst many of these do not preclude the possibility of future exploitation they nonetheless highlight the potential conflicts that are likely to occur if the resources ever need to be exploited. As part of this study all the planning and environmental constraints affecting each block have been identified and a simplified scoring system applied in order to provide some rational basis for determining the overall level of constraint affecting any individual resource block.

Unless there is major change caused by environmental, political or economic concerns it has been assumed that the existing supply scenario in North West Wales, largely land-won with a contribution from marine-dredged supply, is likely to continue for the foreseeable future. Consequently, the report makes a number of recommendations, the chief of which are that Gwynedd should continue to provide the majority of sand and gravel in the region through continuation of extraction in the Penygroes area; that Conwy should continue to meet demand by import or crushed rock; that Anglesey should protect areas around Pentraeth to supply island demand; and that, elsewhere, a number of Mineral Presumption Areas should be identified to cover blocks of particular quality or potential commercial value. Because of the volume and quality of sand identified in Cors Geirch and Nefyn these areas should also be protected from sterilization. It is also recommended that further research should be conducted into a planning policy framework for the development of sustainable aggregate supply through a network of small local quarries providing local supplies in the National Park and other rural areas in the region.