

Living with minerals

The minerals industry is one of the UK’s biggest and keeps even larger sectors like construction and manufacturing in business. Yet its future is under attack as operators struggle to cope with planning uncertainties and an avalanche of legislation and regulation. That is why the CBI Minerals Group is taking the initiative with the launch of the UK National Minerals Forum, but government and the industry must agree a clear vision for its future.

Why minerals matter

Look around you. It doesn’t matter where you are—at home, at work or on the move—minerals are everywhere. As you go through your day, you encounter them at every turn. Minerals put the fabric and strength not just in our buildings, but in our lives. Modern life depends on minerals. Whether at work or domestically, our needs are underpinned by the often unseen products of quarrying and mining—minerals like granite, limestone, sand, gravel, clays, industrial minerals, metal ores and hydrocarbons.

From these raw materials come our buildings, our infrastructure, industrial products and energy. And with them go our standard of living, our health and well-being and our ability to travel. From aeroplanes and aspirins to zip-fasteners and zebra crossings, minerals are everywhere. Even our food and clothing rely heavily on minerals for their production, packaging and distribution.

The majority of our industrial and aggregate minerals are produced in the UK. But some, such as coal, are increasingly being imported even though indigenous resources remain plentiful.

Minerals and the economy

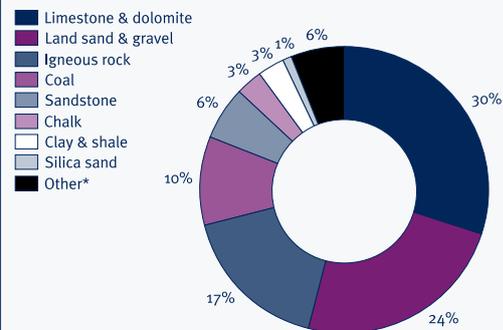
Minerals play a vital role not just in our society but in our economy. In a typical year, we use some 540 million tonnes in the UK, nearly ten tonnes for every man, woman and child. Around 60% is extracted on land, while the remainder is taken from the continental shelf around our shores or imported.

The UK’s minerals are worth £26bn a year, of which land-won minerals account for £3.5bn but their total contribution to UK plc is far greater. The industry employs some 55,000 people and many more indirectly. It plays a particular role in supporting employment in construction and manufacturing.

Many of the government’s own social objectives cannot be achieved without a continuing and affordable supply of minerals. The Sustainable Communities agenda, the Ten-Year Transport Plan, 2012 Olympics and Thames Gateway rely on access to minerals. Schools, hospitals and utilities programmes are equally dependant.

EXHIBIT: 1

Mineral resources extracted on the UK landmass



*Other includes salt, china clay, gypsum, ball clay, potash, peat, fluorspar and barytes among others.

Just some of the ways minerals feature in our day.

House building

- Stone, sand, clay, gypsum for the structure
- Limestone and clay for cement
- Silica sand for glass
- Gypsum in plasterboard
- China clay for paper and paints
- Barytes for paints, rubber and plastics.

Bathroom and kitchen

- Ball clay and china clay for ceramics, tableware and sanitaryware
- Limestone for toothpaste
- Silica sand to filter water
- Fluorspar for refrigerants
- Sand for cleaning products and adhesives.

On the move

- Stone and sand for roads
- Stone ballast for railway tracks
- Iron ore to make steel for our cars
- Foundry sand to make casts for machinery.

In our food

- Lime and potash to fertilise the fields
- Salt for flavour and to preserve.

Giving us energy

- Coal for power and heat
- Barytes for drilling gas and oil.

At play

- Sand for sports surfaces
- Stone, sand and concrete for sports stadia.

CASE STUDY 1

LINKING TO LIFE: QUARRY PRODUCTS ASSOCIATION

The Quarry Products Association has mounted a campaign to encourage its key stakeholders to ‘Make the link’ between their own most basic needs and the quarries that supply them. The theme underpins QPA’s newly-styled website www.qpa.org and is reinforced in a series of brochures and videos. It is also a key feature of

the annual QPA Showcase (pictured), an annual event which is built around case studies demonstrating the industry’s commitment to sustainable development. Aggregates tax funding has been used to support development of a Virtual Quarry (www.virtualquarry.co.uk) — a fun place for children and a valuable resource for teachers.



CASE STUDY 2

PARTNERSHIP FOR NATURE: WBB MINERALS

Partnership is one of the keys to the successful restoration of the former Messingham silica sand quarry near Scunthorpe in Lincolnshire. Operator WBB Minerals worked closely with the Lincolnshire Wildlife Trust to create a 50-hectare nature reserve which now boasts 1,800 species of flora and fauna and a rich variety of birds and insects. Such is its success that the site has been designated a Site

of Special Scientific Interest (SSSI). WBB is a member of the Silica and Moulding Sands Association (www.samsa.org.uk), which (with QPA and the British Marine Aggregate Producers Association) has signed a new memorandum of understanding with English Nature committing to pursue opportunities for biodiversity and geodiversity.



Minerals and Sustainability

We all demand more minerals—but less environmental impact from the companies that produce them for us. Minerals can, of course, only be worked where they naturally occur and must be transported to where they are needed. They are also a precious and ultimately finite resource that needs to be conserved for future generations. Creating the right balance is a major challenge for operators and for government.

Few industries have taken as many positive steps to minimise their environmental impact and maximise their sustainability. Operators have made substantial progress over recent years on important fronts such as:

- Improved energy efficiency—including use of alternative fuels
- Reductions in carbon dioxide emissions
- Alternatives to road transport such as conveyor, rail and canal
- Improving resource efficiency—producing more from less
- Restoration of land
- Development of biodiversity and geodiversity action plans
- Development of sustainable development strategies by companies and sectors.

Recycling

The industry is committed to recycling as a means of conserving primary resources and is continually working to find new ways to recycle waste and re-use secondary materials. More than 25% of today's construction materials are made from recycled products. Demolition materials are now commonly re-used in concrete, as are road planings and glass in asphalt. Glass is also recycled back once again to glass. Other recycled products include blast furnace and steel slag from industrial processes, ash from burning coal, residues from china clay and glass from bottles and windows.

The vast majority of what can be recycled is recycled and Britain heads the European recycling league for aggregates. Even materials that cannot be directly recycled such as soils and clays are employed in restoration, so helping to recycle land.

Recycling and maximising efficiency will continue to be important but cannot be the whole answer. Quantity and quality will always impose some limitations and there are often environmental downsides to using them. New primary sources of minerals will always be needed.

Borrowed land

The minerals industry is an important and responsible manager of large areas of land. The total area permitted for surface mineral workings is about 1% of the UK's total land surface and only a fraction is worked at any time. Agriculture covers 80% and urban settlements 9%.

Environmental standards are high from planning right the way through to restoration and aftercare. While working closely to the requirements of their planning consents, operators frequently enter voluntary agreements with local conservation and environmental organisations with substantial nature and biodiversity benefits.

Restoration of land from which minerals have been extracted is one of the great strengths of the modern industry. The land is, in effect, only borrowed—and is usually returned with interest. Some sites are returned to agriculture with no sign that they have ever been worked. In other cases, extraction offers a one-off opportunity for change to create nature or community facilities.

Good neighbours

The minerals industry works hard to reduce the impact of its operations on communities close to its sites. Minimising noise, dust, traffic and visual impact are fundamental to running an operation.

Public consultation forms a key part of the planning process and ensures that all stakeholders—particularly neighbours—are kept informed about proposed developments.

CASE STUDY 3

TACKLING GLOBAL WARMING: BRITISH CEMENT ASSOCIATION

The UK cement industry has cut its annual emissions of carbon dioxide by more than 18% (more than two million tonnes) over the past eight years. Replacement of traditional fossil fuels with more sustainable—usually waste-derived—alternatives was one of the keys to the progress made. Operators are also investing heavily in new tech-

nology to further improve environmental performance, blending cement-like materials such as slag with traditional cement, and using alternative raw materials. The British Cement Association says that in 2005, the industry used more than one million tonnes of waste as replacement for conventional raw materials and fossil fuels.



CASE STUDY 4

CLEANER COAL: CONFEDERATION OF UK COAL PRODUCERS

Clean coal power generation using indigenous coal is one of the major objectives of the UK coal industry. In June 2006, the Confederation of UK Coal Producers (Coalpro) published a Framework for Clean Coal in Britain urging the government to maintain at least the current coal-fired generation capacity while at the same time

moving the whole of the coal fleet to clean technology and ultimately to zero emissions. The industry believes the ambition can be achieved by a combination of new-build and retrofits, including a number of new plants with carbon capture and storage. Carbon dioxide savings are estimated at between 25 and 43 million tonnes a



Minerals and the future

There will never come a time when we won't need minerals. While our use will evolve and research will find some viable alternatives, our grandchildren will be as dependent on them as we are today. But can we satisfy their needs?

Many mineral operators are facing increasing difficulties in obtaining planning permissions. As a result, existing operations may be unable to sustain current levels of production beyond the next 10 to 15 years. While imports could help to fill the gap, that opens up broader issues of sustainability as well as of infrastructure and logistics.

The big picture

It is essential that the industry is subjected to long-term strategic planning by both operators and government. While national need dictates that we think in terms of generations, the mineral planning system is largely focused on a five and ten-year horizon. We need a big picture.

The need for a strategic review is all the more pressing following re-organisation of government departments in England and devolution for Scotland and Wales. In England, the industry is steered by no fewer than four main government departments. As a result, there is now no single organisation to act as guardian of a national minerals strategy, nor any process to link the different perspectives into a coherent national picture.

The last attempt to undertake a strategic overview came some 30 years ago with the 1975 Verney Report Aggregates: the way ahead. The minerals industry believes now is the time to repeat that exercise, not just for aggregates but for the whole of the industry, and put a strategic plan in place for the next 25 years.

Licence to operate

It is becoming increasingly difficult for the industry to operate existing and new sites due to the growing burden of regulation, much of it only indirectly related to mineral operations.

In the past, the UK has been almost entirely self-sufficient in meeting our need for minerals. While we now import a large volume of coal and metallic minerals, the UK is still able to produce most of its own non-metallic minerals. And geological investigations show there are sufficient UK mineral resources for many decades to come. But before these resources can become available, mineral companies have to embark on a complex legal process to obtain the necessary permissions and licences.

The planning process is designed to ensure appropriate developments are suitably located and to address the concerns of interested parties. It is, of course, important that different interests are balanced, but in the case of mineral operations, it is vital that their strategic importance is recognised.

Securing planning permission takes many years, involves complex negotiation, and can be very costly, with no certainty of success at the end of the process. This is compounded by increased regulation, often not directly connected to minerals, which has begun to undermine the industry's ability to operate efficiently. The industry is increasingly concerned about the cumulative impact, which is beginning to jeopardise its ability to maintain supplies. Further legislation could result in increasing imports, environmental problems, job losses, and more expensive everyday products.

UK National Minerals Forum

'Joined up' thinking on minerals is needed, which the industry accepts cannot come from the 'unjoined-up' nature of government control. The CBI has therefore taken the initiative by establishing a UK National Minerals Forum. Its main aim is to consider the strategic use of the UK's minerals resources for the next generation and to act as a focal point for developing solutions to issues that unreasonably constrain access to minerals or jeopardise their supply. In this way it is hoped that a better and more effective interface with government will be formed for the future.

The terms of reference for the Forum are:

- To act as the overarching national industry forum which draws together all the main stakeholders necessary to help inform government on the prudent use of UK mineral resources and keep this advice and information up to date
- To undertake a strategic review of the UK's mineral resources and how they may be most appropriately developed in order to ensure that the economy and society receive the essential materials they need over the next 25 years and keep it up to date
- To act as the focal point for developing solutions that respond to challenges arising as a result of either specific or cumulative impacts of legislation that unreasonably constrains access to minerals or jeopardise security of supply.

CASE STUDY 5

HEATHLAND HABITAT: IMERYS AND GOONVEAN

China clay operators Imerys and Goonvean have recreated 750 hectares of heathland on former waste tips in Cornwall. The project is being tackled in partnership with English Nature (now Natural England) and Cornwall County Council. It is a key part of English Nature's national Tomorrow's Heathland Heritage initiative, which aims to recreate 6,000 hectares. The contribution from the Cornwall

project will add up to 12.5% of the UK Biodiversity Action Plan target for lowland heath. The vast area of the china clay spoil heaps makes the project unique and has also done much to enhance public access. The restored habitats will be of international significance and are likely to attract butterflies such as the small copper and silver studded blue, and birds like the curlew and Dartford warbler.

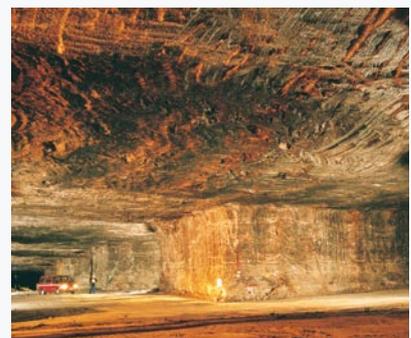


CASE STUDY 6

SAVING LIVES WITH LESS SALT: MINING ASSOCIATION OF UK

Rock salt from mines like the one shown here is a vital mineral which saves lives by keeping our roads free of ice. But its chloride content can also damage the roadside environment. UK salt operators have therefore introduced an additive which helps to bind in the fine element of the salt, so reducing the amount that bounces off the road surface or is subsequently blown onto verges by high winds. The

secret of the new product is a derivative of the sugar production process which is mixed with the rock salt at a rate of 3%. While making no difference to skid resistance, the additive enables less salt to be used as it reduces what is otherwise wasted by being lost from the road surface. It also reduces corrosion of steel and aluminium, not just vehicle bodies but roadside signs and cuts freeze/thaw damage to carriageways.



CBI Minerals Group Membership

Aggregate Industries
 Alliance Planning and Environment
 British Aggregates Association
 British Cement Association
 British Ceramic Confederation
 British Gypsum
 Bucbricks Company
 Confederation of UK Coal Producers
 Entec UK
 Gerald Eve
 GVA Grimley
 Hanson Aggregates
 Kaolin and Ball Clay Association
 Lafarge Aggregates
 Mills and Reeve Solicitors
 MJCA
 Mining Association of UK
 Silica and Moulding Sands Association
 SLR Consulting
 Quarry Products Association
 Tarmac
 Wardell Armstrong

Observer

British Geological Survey

CBI Minerals Group

Our aims

- Promote the role and importance of the UK's minerals
- Champion issues that affect the industry's future
- Promote the cause of sustainable development within the industry
- Comment on new legislation that affects the industry's ability to operate.

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