The mineral products industry key facts at a glance
The Mineral Products Association is the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries.
The mineral products sector is a key enabling sector of the UK economy which has a broad impact on overall economic activity. As the largest element of the construction supply chain, a supplier of key materials to many other industries, and the largest material flow in the UK economy, a healthy indigenous mineral products industry is essential for the UK.

UK use of mineral products is based very largely on UK supply. Aggregates imports account for no more than three per cent of the UK markets and the average delivery distance is around 30 miles. 90 per cent of the cement market is supplied from UK sources.

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**Essential sector**

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**Essential to other industries**

Minerals such as sand and limestone are essential for activities as varied as glass manufacture, iron and steel making, agriculture, emissions cleaning and making washing powder and toothpaste.
Production by products

The Mineral Products Industry represented by the MPA, comprises aggregates, asphalt, cement, precast concrete, ready-mixed concrete, mortar, dimension stone, silica sand, industrial and agricultural lime and iron and steel slag.

GB Aggregates Supply Mix 2012

The main element of aggregates supply is crushed rock with significant contributions from sand and gravel and recycled and secondary materials. Sand and gravel supply comprises both land won and marine dredged materials. This broad breakdown disguises the fact that local and regional markets may be highly dependent on a particular type of aggregate.

GB Aggregates Market Sources of Supply (million tonnes pa)

Over the last 60 years there have been some variations in the relative importance of the different sources of aggregates, most notably the increase in the supply of recycled and secondary materials evident since the early 1990s. Aggregates sales have been depressed since the onset of the recession in 2008, reflecting the significant decline in construction markets.
The following chart also indicates the reduction in sales of cementitious materials in recent years following stable markets in the early and mid 2000s.

The markets for two of the principal value added sector products, ready-mixed concrete and asphalt, follow the same pattern in recent years. Ready-mixed concrete is used throughout the construction industry and therefore is an indicator of general construction activity. Asphalt is used largely for road maintenance and construction and these markets declined very steeply in 2012.

**Ready-mixed concrete** (million cu metres) and **Asphalt** (million tonnes) **Sales GB**

**Sales of other mineral products**

<table>
<thead>
<tr>
<th>Product</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortar</td>
<td>2.5 million</td>
</tr>
<tr>
<td>Precast Concrete</td>
<td>25 million</td>
</tr>
<tr>
<td>Dimension stone</td>
<td>2 million</td>
</tr>
<tr>
<td>Agricultural lime</td>
<td>2 million</td>
</tr>
<tr>
<td>Industrial lime</td>
<td>2 million</td>
</tr>
<tr>
<td>Silica sand</td>
<td>4 million</td>
</tr>
<tr>
<td>Cement and cementitious materials</td>
<td>10.5 million</td>
</tr>
</tbody>
</table>
Recycled and secondary materials now account for 29 per cent of the GB aggregates market. They include construction and demolition waste, asphalt planings, used railway ballast, iron and steel slag, waste glass, incinerator and furnace bottom ash and waste from extractive activities such as china clay and slate. Sales have increased significantly both in absolute terms and as a proportion of the overall aggregates market since the early 1990s. The share of recycled and secondary materials in GB is the highest in Europe - 29 per cent compared with the European average of 10 per cent.

GGBS and Fly Ash in the Cementitious Market

The share of ground granulated blast furnace slag (ggbfs) and fly ash in the total cementitious market has increased in recent years. These materials are supplied either as components of blended cements or directly to concrete manufacturing facilities.
The mineral products industry is active throughout the UK. We estimate that there are 990 aggregates quarries, 11 cement works, 1,010 ready mixed concrete plants and 310 asphalt plants.

The underlying geology of the UK determines the local availability of mineral products which are only transported long distances when it is absolutely necessary. However, resources are not always distributed evenly and some inter-regional movement is necessary. The South East, for example, has its own supplies of sand and gravel but relies heavily on crushed rock brought in by rail from the East Midlands and South West and by sea from Scotland. It also requires marine-dredged sand and gravel from coastal waters. The following charts show the main inter-regional crushed rock and sand and gravel movements.

### Geographical supply

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Subject to the geological conditions, a key factor influencing the supply of aggregates is the operation of the mineral planning system. In England, the managed aggregates supply system is designed to ensure a steady and adequate supply of aggregates. The chart below indicates nominal reserves of aggregates since the early 1990s.

A particular feature has been the significant decline in permitted reserves of sand and gravel over the last 15 years.

Permitted reserves - England 1993-2009 - BGS

Lost 40% since 1995

Permitted reserves - England 1993-2009 - sand and gravel - BGS
If the amount of aggregates receiving planning permission equals the level of production the replenishment rate is 100 per cent. The chart opposite indicates that over the past decade replenishment rates have been consistently below 100 per cent, notably for sand and gravel.

The implication of long term replenishment rates below 100 per cent is that at some point shortages of supply may become apparent. This is an issue of particular concern for supplies of sand and gravel in areas where reserves are low.

European comparisons

UK sales of both aggregates and cement are relatively low in comparison with the rest of Europe. The charts below indicate aggregates sales and cement consumption per capita.
Responsibly Sourced

Success on sustainability

- **Health and safety**
  MPA members’ latest health and safety objective - to halve lost time injuries in the five years to 2014 - has been achieved nearly two years ahead of target

- **Recycled and secondary materials**
  The European leader at 29 per cent of the market

- **Resource efficiency**
  Use of aggregates and cement: per capita 35 per cent and 60 per cent respectively below the European average

- **Alternative fuels**
  40 per cent of fuel (thermal requirement) used by the cement industry and 29 per cent of fuel used by the (dolomitic) lime industry is derived from waste materials

- **Carbon reduction**
  The cement industry recorded a 55 per cent reduction in absolute CO$_2$ emissions between 1990 and 2011 and is the first cement industry in the world to publish a greenhouse gas reduction strategy to 2050

- **Climate change**
  Structural use of mineral products can significantly reduce emissions over the life of buildings

- **Biodiversity**
  Making a significant contribution to UK targets and uniquely placed to do more

- **SSSIs**
  Over 700 have their origins in mineral extraction

- **Trees**
  One million planted over the past five years

Links to Sustainability Development Reports

http://www.mineralproducts.org/sustainability/reports.html
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