



**Mineral Products Association** 

Sustainable Development Report 2009



#### Maggie's Centre, London

This 2009 RIBA Stirling Prize award winning building by Rogers Stirk Harbour and Partners relies on heavyweight construction to provide a haven for cancer care patients. The concept is to create an environment that is welcoming, unthreatening, comforting and informal inside and out. The use of fairfaced concrete finishes for walls, floors and structure enhances the warmth and solidity of the care centre, maximising on the benefits of acoustic separation, energy efficiency and durability.

*Photographs* James Brittain

*Cover photograph* Richard Bryant/arcaid.co.uk

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# **OUR VISION**

Our vision is that our members will be recognised and valued for supplying essential materials for a sustainable future, in a manner that is economically viable and socially and environmentally responsible.

# **OUR SUSTAINABILITY OBJECTIVE**

To build on the Mineral Product Association's (MPA's) sustainable development strategy and achieve progressive improvement against core values and key indices so that members are regarded as responsible providers of materials.

# **THIS REPORT**

This is the first sustainability report produced by the MPA since its launch in June 2009. The new Association now has a product remit which encompasses aggregates (land won, marine dredged, recycled and secondary), asphalt, cement, concrete, lime, mortar, silica sand and slag. The coverage of data in this report represents companies supplying 77 per cent of aggregates, cement, asphalt and ready-mixed concrete.

Given the breadth of our scope and the diversity of our members' interests, we are presenting an overview with associated data and urge anyone with interests in particular issues and products to follow the web links (see page 55) to more detailed product reporting. MPA Cement and the British Marine Aggregate Producers Association (BMAPA), for example, both produce reports covering sustainability issues and the MPA is a key contributor to the Concrete Industry Sustainable Construction Forum (CISCF) and to the first Concrete Industry performance report published in March 2009.

There remain some inconsistencies in the availability of data for different products, an aspect of reporting the MPA will be looking to improve in the future.

# INTRODUCTION



Welcome to the MPA's first sustainable development report. Its timing is significant on two fronts. First, I believe we have arrived at a point where applying sustainability principles to a business is now a mainstream contributor to the bottom line. Most companies now also accept that they have to improve transparency, performance and communications, not just by behaving sustainably but gathering and reporting the hard data needed to verify their claims.

The MPA has an important role to play, not just for its own members, but in enabling the industry's customers to pursue the objectives of the 'Sustainable Construction Strategy'. For example, much of the current work of MPA-The Concrete Centre is about explaining how concrete can improve the sustainability performance of buildings and structures. Meanwhile, MPA Asphalt is working closely with its supply chain maximising the sustainability of our highways. We can also be proud of the fact that we have acted quickly and positively to adopt and encourage responsible sourcing across the sector with significant volumes of products already certified as responsibly sourced.

Second, this report is also significant in that we are operating in the depths of the most severe recession ever experienced by our industry. Over 2008 and 2009, we will have seen the aggregates, concrete and cement markets all shrink by around 40 per cent and asphalt by more than 20 per cent. In 2009, construction output has fallen at the fastest annual rate ever recorded and we will see the lowest peacetime level of house building since the 1920s. It is a massively challenging commercial environment in which to operate let alone drive forward sustainability issues. Yet we are still doing just that, and are determined to do better still.

In spite of the recession, this is a long term industry and the future demand for materials is likely to be in the order of five billion tonnes over the next generation (25 years). The requirements of a growing population for housing and public services, for cleaner energy generation, and more efficient and better maintained transport networks will require continuing investment in construction and in our products.

We cannot be complacent about the future supply of mineral products. Access to mineral sites is extremely difficult, rates of replenishment of permitted reserves are declining and there are few sound local development frameworks. Together these threaten the steady and adequate supply of raw and added-value materials, so crucial to our economy and the sustainable development of the UK.

Looking ahead, our industry will certainly play its part in ensuring that development is as sustainable as possible. But in order to do so, we need regulatory and planning systems that are balanced, effective and that deliver. Despite numerous Government initiatives, the experience of the mineral products sector is that the overall regulatory burden is becoming increasingly excessive, especially in the area of environmental legislation. We need regulation that supports sustainable development but does not drive key industries overseas or prevent access to indigenous resources. There would be nothing sustainable about such consequences.

I hope that you find this summary report of interest. Over the coming months, we will be refreshing the sustainable development zone of our website and enlarging the data available there. In the meantime, we will welcome your comments and suggestions on this vital area of our work.

Nigel Jackson Chief Executive

# **ESSENTIAL MATERIALS - SUSTAINABLE SOLUTIONS**

Minerals are essential for development and through that for our quality of life and creation of sustainable communities

#### HOUSING

Providing the new homes society requires and supporting upgrades to our existing stock.

#### SCHOOLS AND HOSPITALS

Enabling positive investment programmes in our health and education systems to be delivered.

#### ENERGY

Providing the materials to build a low carbon energy infrastructure.











GEODIVERSITY ENVIRONMENTAL PROTECTION

RESOURCE EFFICIENCY

TRANSPORT

#### TRANSPORT

Improving the quality of our road, rail, waterways and port networks through infrastructure investment and maintenance.

RESEARCH

DESIGN GUIDANCE

#### WATER AND SEWAGE

Enabling investments to keep our water clean, reduce leakage and meet customer needs

#### CLIMATE CHANGE ADAPTATION

Reducing carbon emissions from the built environment, supporting coastal and flood protection and more sustainable drainage as part of creating a future-proof built environment.



# MPA - THE RESPONSIBLE INTERFACE BETWEEN THE NATURAL AND BUILT ENVIRONMENT



# SUSTAINABLE CONSUMPTION & PRODUCTION SUSTAINABLE PRODUCTS



# ENVIRONMENTAL PROTECTION



Prime Minister's Better Public Building Award winner for 2008, the Royal Alexandra Children's Hospital in Brighton, demonstrates high-quality design, value for money and sustainability. The structural use of concrete helps to keep the building warm in winter and cool in summer.

#### Whole-life performance

In a typical masonry house in the South East of England the embodied CO<sub>2</sub> of the manufacturing process of materials will be offset by savings in operational energy after 11 years as the climate warms up.







# SUSTAINABLE CONSUMPTION & PRODUCTION SUSTAINABLE CONSUMPTION & PRODUCTION

## **HEADLINE PERFORMANCE INDICATORS (2008)**

Aggregates production (GB)	187m tonnes
Cement production (GB)	10.1m tonnes
Ready-mixed concrete production (GB)	20.1m m <sup>3</sup>
Asphalt production (GB)	25m tonnes

# **OUR VALUE**

MPA MEMBERS UNDERSTAND THEIR ROLE IN SUSTAINABLE PRODUCTION AND CONSUMPTION AND ACTIVELY PROMOTE THE MOST EFFECTIVE USE OF THEIR PRODUCTS.

# **ASPIRATION**

TO CONTINUE TO MEET THE REQUIREMENTS OF THE CONSTRUCTION INDUSTRY AND OTHER CUSTOMERS IN THE MOST SUSTAINABLE MANNER.

# **CURRENT POSITION**

The sustainability of the construction industry was given a new focus with the publication of the 'Strategy for Sustainable Construction' in June 2008. Central to this is the sustainability of products and the contribution they make to the built and natural environment and to society. The 'Code for Sustainable Homes' has formalised a process of sustainability measurement in this sector and the 'Code for Sustainable Buildings' will extend this principle.

This process focuses in particular on wholelife performance - especially the energy performance - of buildings and structures. Using this approach, the embodied impacts of a product or material are considered alongside the building's performance. Such assessments have demonstrated the longterm benefits the use of concrete can bring to increasing the energy efficiency of buildings.

A key factor is 'thermal mass' - the capacity of concrete to help regulate internal temperatures, so minimising the need for air conditioning and reducing the need for heating. Its properties are also beneficial in terms of fire protection, flood resilience, and acoustic performance. In addition, MPA members supply a range of products that help prevent flooding through the construction of Sustainable Draining Systems



#### **Responsible sourcing**

To date BES 6001 certificates have been awarded to a number of MPA members, covering ready-mixed concrete, precast concrete, aggregates, asphalt and cement. In the ready-mixed concrete sector the level of responsible sourcing certification already significantly exceeds the Government target for 2012.



1 The Hanson EcoHouse<sup>TM</sup>, the first masonry-constructed house to achieve Code Level Four under the Code for Sustainable Homes. **2** SuDs paving.

**3** Delivery of recycled solvents for use as an alternative fuel at a cement works.

(SuDs). The asphalt industry similarly supplies products that enhance the safety and durability of our road network.

On a broader perspective, research commissioned by the CBI/UK Construction Group has shown that 79 per cent of the reduction in carbon emissions sought by Government by 2020 will require the resources of the construction industry and its supply chain. Without the prudent use of mineral products, for example, it will prove impossible to deliver the low-carbon energy generation infrastructure we require.

Responsible Sourcing is the process of

identifying and assessing the sustainability impacts of a material and its supply chain. Although a relatively new concept, Government wants at least 25 per cent of materials used in construction to be supplied from accredited responsible sourcing suppliers by 2012.

MPA members have recognised the increasing importance of this concept to customers and clients in both the private and public sectors. Following the publication of the Building Research Establishment's (BRE) BES 6001 Framework Standard in 2008, the concrete sector and supply chain was the first to adopt the new standard with the publication of industry guidance. A central driver for the wider use of responsible sourcing systems is that these are recognised in the 'Code for Sustainable Homes' and the BRE 'Environmental Assessment Methodology' (BREEAM), and count towards the credits available to assess the sustainability of developments.

The Highways Agency's procurement policy indicates the extension of interest in the concept from the Building to the Infrastructure and Civil Engineering sectors. MPA has also been closely involved in the development of the new 'British Standard for the Responsible Sourcing of Construction Materials, BS 8902'.

# SUSTAINABLE CONSUMPTION & PRODUCTION

# ENVIRONMENTAL PROTECTION







## **OUR VALUE**

MPA MEMBERS TAKE RESPONSIBILITY FOR THE IMPACTS THAT THEIR OPERATIONS HAVE ON THE ENVIRONMENT AND ARE COMMITTED TO MINIMISING AND MITIGATING SUCH EFFECTS.

# **ASPIRATION**

TO ENCOURAGE OUR MEMBERS TO IMPLEMENT HIGH STANDARDS OF ENVIRONMENTAL MANAGEMENT, INCLUDING ACHIEVING CERTIFICATION TO EXTERNAL STANDARDS, LEADING TO THE MAINTENANCE OF OUR POSITIVE COMPLIANCE RECORD. WE ARE ALSO STRIVING TO BETTER UNDERSTAND AND REDUCE OUR ENVIRONMENTAL FOOTPRINT.

# **CURRENT POSITION**

A high proportion of MPA members' operations have environmental management systems reflecting the increasing awareness of the importance of environmental protection in industry. The cement industry reports annually on performance measures against objectives agreed with and adopted by the Environment Agency (EA). One of the objectives is "to reduce air pollution from cement manufacturing" and actual emissions recorded for dust, nitrogen oxides and sulphur dioxide in 2008 were equivalent or lower than the objectives set for 2015.

## **HEADLINE PERFORMANCE INDICATORS (2008)**

Aggregates sites with EMS (% of survey)	77%
Cement sites with EMS (% of survey)	100%
Ready-mixed concrete sites with EMS (% of survey)	68%
Asphalt sites with EMS (% of survey)	84%



I want to pay huge tribute to your industry for being not just way ahead of the rest of the world here in the UK, in thinking seriously about reuse, recycling and how to use resources better, but also about how to reduce your carbon footprint and how to ensure the impact on climate change of this essential industry can be minimised

Lord Smith, Chairman, Environment Agency

Through significant investment and continuous improvement, emissions since the reporting base year of 1998 have been reduced by 68 per cent, 51 per cent and 75 per cent respectively for the above.

Four convictions related to planning and pollution incidents from the aggregates and associated industries were recorded for 2008.

During 2008 and 2009 the process of transposing the EU Mining Waste Directive into UK legislation has continued. The Directive, intended to prevent adverse impacts on the environment from the management of waste from mineral extraction industries, is an example of a well intentioned measure which has been subject to unnecessary 'gold plating' during this transposition in England and Wales. It appears that government in Scotland and N Ireland are taking a more proportionate approach to the implementation of the Directive.

# CLIMATE CHANGE & ENERGY | CARBON MANAGEMENT





UK cement works operate to the very highest levels of environmental control and performance.



#### **Cement and carbon**

The UK cement industry has not only met, but exceeded its performance targets in 11 out of 15 areas, including  $CO_2$ , oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>) and dust.



# **CLIMATE CHANGE & ENERGY**

# CARBON MANAGEMENT

#### **HEADLINE PERFORMANCE INDICATORS (2008)**

Aggregates production $CO_2$ emissions	4.3kg/tonne
Cement production CO <sub>2</sub> emissions	776.8kg/tonne
Ready-mixed concrete production $CO_2$ emissions	0.95kg/tonne
Asphalt production CO <sub>2</sub> emissions	34.4kg/tonne

## **OUR VALUE**

MPA MEMBERS SUPPORT THE GOVERNMENT POLICY OF REDUCING EMISSIONS OF GREENHOUSE GASES.

# **ASPIRATION**

TO ENSURE THAT THE SECTOR MAKES A FULL CONTRIBUTION TO MEETING THE CARBON REDUCTION TARGETS SET OUT IN THE 'UK LOW CARBON TRANSITION PLAN' AND IN THE GOVERNMENT'S 'STRATEGY FOR SUSTAINABLE CONSTRUCTION'.

## **CURRENT POSITION**

The activities of MPA members range from energy-intensive processes such as the manufacture of cement and lime to the production of aggregates and ready-mixed concrete, which have relatively low emissions per unit of production.

The energy-intensive part of the sector has a well-established record of reducing carbon and greenhouse gas emissions, with the cement industry recording a 40 per cent reduction in absolute CO<sub>2</sub> emissions between 1990 and 2008. Emissions targets agreed with Government have been exceeded by the cement industry. A critical

issue for the cement and lime industries will be the third phase of the European Emissions Trading Scheme (EUETS) from 2013. For such industries with internationally traded products, it is essential that regulatory costs are managed carefully so that production and emissions are not simply exported to countries outside the EU. Such 'carbon leakage' would increase rather than reduce global emissions, whereas local production ensures that emissions are regulated in the UK. This avoids carbon leakage, preserves jobs and helps to maintain the international competitiveness and security of supply of the UK and EU.

The cement and lime sectors have been



**1** CEMEX cement Climafuel.

participants of the UK Climate Change Levy (CCL) Scheme since 2000, achieving impressive improvements in energy efficiency. However, the future of this scheme is uncertain owing to changes to EU legislation and also the need for the UK to apply for State Aid approval for the extension of the scheme both to 2013, and beyond. The possible replacement of the CCL with a carbon tax is adding further uncertainty to the situation.

Elsewhere, MPA has been working closely with the Carbon Trust to develop and implement a carbon-reduction programme in the aggregates and aggregate products sector and significant company programmes are being implemented. Carbon reduction has also been the focus of the work of the UK Minerals Forum. The asphalt sector has worked closely with its supply chain and key customers such as the Highways Agency to develop the Asphalt Pavement Embodied Carbon Tool (asPECT) which will provide consistency and transparency in reporting.

The commitment to carbon reduction is particularly challenging in current market conditions because sites are frequently operating at levels that do not optimise production - and therefore emissions efficiencies. Similarly, plant closures and mothballing tends to increase delivery distances. But the commitment of MPA members to minimise operational and transport emissions and to provide products that improve the energy performances of buildings and structures remains a priority.

MPA has concerns about the cumulative impact of measures introduced to reduce emissions. For example, it is likely that some asphalt plants will be included in the next EUETS phase, some will participate in the Carbon Reduction Commitment from April 2010, and other plants will not be covered by either scheme. Such inconsistency within a single sector is unlikely to produce the best overall emissions performance.

# CLIMATE CHANGE & ENERGY



# **OUR VALUE**

MPA MEMBERS ARE COMMITTED TO REDUCING THE IMPACT OF THE TRANSPORTATION OF THEIR PRODUCTS.

# **ASPIRATION**

TO MAKE FULL USE OF ALL MODES OF TRANSPORT AND TO CARRY MATERIALS EFFICIENTLY TO MINIMISE THE IMPACT OF TRANSPORT ON LOCAL RESIDENTS AND THE ENVIRONMENT. TO WORK WITH OUR STAKEHOLDERS TO UNDERSTAND MORE ABOUT THE EFFECT OF MINERAL PRODUCTS TRANSPORT ON CARBON EMISSIONS. TO ENSURE THAT AN INCREASING PROPORTION OF DRIVERS BENEFIT FROM INDUSTRY SPECIFIC TRAINING AND THE AWARD OF A DRIVERS' SKILLS CARD.

# **CURRENT POSITION**

The mineral products industry is a major user of rail and water-based transport. In 2008 13 million tonnes of aggregates were moved by rail and landings of marine dredged aggregates accounted for 12.6 million tonnes. The cement industry has also invested heavily in its rail delivery infrastructure. The bulk of aggregates are delivered to local markets from hundreds of quarries, wharves and depots to tens of thousands of construction sites and customers. Cement is delivered from a small number of supply sources to a network of ready-mixed and

### **HEADLINE PERFORMANCE INDICATORS (2008)**

Aggregates	volume moved by rail	13m tonnes
Cement	volume moved by rail	1m tonne
Average road delive	ery distance (aggregates)	38km
Average road delive	ery distance (RMC)	8.7km
Average road delive	ery distance (asphalt)	29km



precast concrete and mortar plants, builders' merchants, DIY outlets and other customers. The nature of such delivery patterns means that road transport will always be the primary delivery mode for the industry.

The industry is committed to minimising the impacts of road deliveries on communities and the environment, but we are concerned that LGV restrictions introduced in a number of areas are likely to have the effect of increasing vehicle mileages and associated carbon emissions. The MPA policy requirement for tipper vehicle and truckmixer drivers delivering for members to hold Driver Skills Cards following successful completion of an industry-specific training course has led to over 22,000 Cards being awarded to date. The MPA is working with the Mineral Products Qualifications Council (MPQC) to expand the range of vehicle types covered by the Skills Card. We are also working with MPQC to ensure that a full suite of training courses is available to meet the new legal requirement for all LGV drivers to undergo regular periodic training. Given the particular significance of greenhouse gas emissions for transport, we are working on a methodology to enable consistent measurement of such emissions across all transport modes. In the marine aggregates sector, for example, analysis of fuel use and emissions indicates a 14 per cent reduction in sector CO<sub>2</sub> emissions in 2008.

# **NATURAL RESOURCES & ENHANCING THE ENVIRONMENT** RESOURCE EFFICIENCY



# BIODIVERSITY HERITAGE RESTORATION OF LAND GEODIVERSITY



Wildlife presenter Kate Humble took Showcase 09 guests on a fascinating video tour illustrating the wide range of biodiversity at quarry sites.



# NATURAL RESOURCES & ENHANCING THE ENVIRONMENT RESOURCE EFFICIENCY

## **HEADLINE PERFORMANCE INDICATORS (2008)**

% of recycled/secondary materials in GB aggregates market	25%
% of other cementitious materials in GB cement market	18%
% of cement-making fuel comprising waste materials	26.7%

# **OUR VALUE**

MPA MEMBERS RECOGNISE THAT THEY MUST MAKE THE MOST EFFICIENT USE OF ALL RESOURCES.

## **ASPIRATION**

TO ENSURE THAT ALL MINERALS ARE USED APPROPRIATELY AND THAT WE OPTIMISE THE USE OF PREVIOUSLY USED MATERIALS, REDUCING OUR ENVIRONMENTAL FOOTPRINT PER TONNE OF MATERIAL SOLD.

# **CURRENT POSITION**

The mineral products sector has been at the forefront of increasing resource efficiency in recent years. This is highlighted by the very significant volumes of recycled and secondary materials used in aggregates markets and the increasing volume of waste used as raw materials or fuel in cement works.

The scope of MPA membership and representation includes recycled and secondary materials used in aggregates markets as well as primary aggregates. The use of these materials has increased very significantly since the mid 1990s for a range of reasons including greater awareness of the potential uses of such materials, the introduction of performance based standards and the increasing cost of landfill, notably through the Landfill Tax. The Aggregates Levy was introduced in 2002 to encourage greater use of recycled and secondary materials, but has had relatively little effect compared with these other factors. We estimate that the use of recycled and secondary materials in aggregates markets in Great Britain increased from a historic 10 per cent to 25 per cent in 2005, since when it has remained broadly stable. Although the use of these materials has declined from the 2007 peak of 71 million



1 Solids settlement tank at Tarmac's Buxton Cement plant produces clean water for re-use. 2 Maintenance on water storag tanks at a ready-mixed concrete batching plant **3** Demolition materials prior to recycling for use in aggregates markets.

**4** Tyre chips in storage for use as an alternative fuel.

tonnes due to the recession, we estimate a market share of 25 per cent in 2008. Optimising the use of secondary and recycled markets is not just an issue of stimulating demand - the MPA has worked closely with Government's recycling body WRAP to ensure that potential constraints on the use of such materials, for example as a result of official interpretations of waste definitions, can be overcome in the market to the satisfaction of regulators. This work includes the development of protocols to clarify the point at which materials such as construction and demolition waste, slags and pulverised fuel ash (pfa) can be defined as products rather than waste.

The cement industry has used waste-derived fuels and replacement raw materials since the early 1990s. These materials include solvents, chipped and whole tyres, meat and bone meal, sewage sludge, paper and plastics. The UK cement industry is a net waste user, generating less than 45,500 tonnes per year from all of its operations, but using over 1.4m tonnes per year of wastederived material as replacement fuel and raw materials. To date the industry has achieved a 26.5 per cent replacement of virgin fossil fuels and further increases are embedded in the cement industry sector plan with the Environment Agency, including a target of achieving a 50 per cent replacement rate by 2020. The use of these materials reduces the national requirement for landfill and also reduces industry's emissions of greenhouse gases.

Inspirational and an example to so many other industries (...). What the quarrying industry has achieved over the last century, in terms of what it has done for the environment, is legion

> Poul Christensen, Acting Chairman, Natural England





# NATURAL RESOURCES & ENHANCING THE ENVIRONMENT BIODIVERSITY

# **OUR VALUE**

MPA MEMBERS ARE COMMITTED TO IMPROVING BIODIVERSITY.

## **ASPIRATION**

TO IMPROVE OUR UNDERSTANDING OF THE BIODIVERSITY IMPACT OF THE INDUSTRY. WE ASPIRE TO HELP NATURE CONSERVATION AGENCIES TO ACHIEVE THE PUBLIC SERVICE AGREEMENT TARGET OF 95 PER CENT OF ALL SSSIS IN FAVOURABLE CONDITION BY 2010.

# **CURRENT POSITION**

Improvement of wildlife habitats has long been a focus for the industry's land restoration work. The quality of restoration has been encouraged and highlighted through the operation of the award scheme run by MPA and its predecessor organisations.

Natural England announced at MPA's Showcase 09 a new award for industry contribution to the improvement of biodiversity. This scheme will be implemented in 2010, with the first award planned for the Showcase in 2011.

'Nature After Minerals' is a successful initiative designed to foster biodiversity on former industry sites. It is run by Natural England and the RSPB, and is actively supported by MPA. The project aims to capitalise on the opportunities provided by quarry restoration to make a significant contribution to national biodiversity targets. At MPA's Showcase 09,



#### **HEADLINE PERFORMANCE INDICATORS (2008)**

SSSIs related to quarrying	120
% of SSSI assessments in favourable/recovering condition	75%

Natural England's acting chief executive, Poul Christensen, commented that the industry's work on restoration and the natural environment was "inspirational and an example to so many other industries". He added: "What the quarrying industry has achieved over the last century, in terms of what it has done for the environment, is legion." **1** Pond dipping at Aggregate Industries' Croft quarry in Leicestershire.

2 Heathland restored by Sibelco Ltd at Wicken in Norfolk, which contributes approximately 25 per cent of Norfolk County Council's Biodiversity Target for heathland.

**3** David Attenborough helping local youngsters discover wildlife.

#### **Nature After Minerals**

An Aggregate Levy Sustainability Fund grant has been awarded to employ dedicated resources to work with mineral planning authorities, industry, local communities and any other interested parties to identify and build in biodiversity opportunities



# NATURAL RESOURCES & ENHANCING THE ENVIRONMENT HERITAGE



# **OUR VALUE**

MPA MEMBERS RECOGNISE THE VALUE THAT MUST BE PLACED ON OUR NATIONAL HERITAGE AND WILL ENSURE THAT HERITAGE ASSETS IN THEIR CARE ARE ALWAYS TREATED APPROPRIATELY.

# ASPIRATION

TO WORK WITH THE MINERALS AND HISTORIC ENVIRONMENT FORUM TO RE-ESTABLISH A REASONABLE AND CONSISTENT BASIS FOR DECISIONS REGARDING MINERALS WORKING AND ARCHAEOLOGY.

# **CURRENT POSITION**

Mineral working has made possible many significant archaeological discoveries - from a Roman vineyard to a Saxon helmet. The industry's need to excavate ground means that buried archaeology can be at risk. But it also provides the momentum and the funding for it to be uncovered and used to aid a better understanding of our past. Sometimes archaeology is best left in-situ; on other occasions it can justifiably be excavated to tell its story.

Archaeological resources are an important factor taken into account by both operators and planning authorities when considering

## **HEADLINE PERFORMANCE INDICATORS (2008)**

Land investigated pre planning permission	319 hectares
Land investigated post planning permission	339 hectares



#### Discoveries from the seabed

Marine aggregate operators work to a protocol for reporting and managing potential archaeological finds encountered during dredging. Over one year, 162 individual artefacts were reported ranging from prehistoric finds to Roman pottery, cannon balls and ship anchors. Most significant were a number of Palaeolithic hand axes for which BMAPA and Hanson received the British Archaeology Award for the most significant find of 2008.

future mineral workings. For its part, the industry has been concerned about the inconsistency of approach from different planning authorities and the heavy and often unnecessary financial burden that is often placed on operators. In an effort to resolve the various issues, a Minerals and Historic Environment Forum has been established which brings together representatives of the principal archaeological professionals and the minerals industry under the chairmanship of English Heritage. MPA wants to ensure that the relative values of heritage assets are properly defined and recognised - the best is preserved and the investigation potential is maximised.

The 'Mineral Extraction and Archaeology: A Practice Guide' has been produced by English Heritage and other archaeological organisations together with the CBI Minerals Group of which MPA is an active member.

This includes valuable practical advice and aims to re-establish a reasonable and consistent basis for decisions regarding minerals working and archaeology. **1** The industry built/re-built over 3.5km of drystone walling in 2008.

© SCE7





# NATURAL RESOURCES & ENHANCING THE ENVIRONMENT RESTORATION OF LAND

## **HEADLINE PERFORMANCE INDICATORS (2008)**

% of UK land area being quarried (aggregates)	0.13%
Ratio of land restored to land prepared for quarrying (aggregates)	1:0.7

# **OUR VALUE**

MPA MEMBERS RECOGNISE THAT HIGH QUALITY RESTORATION AND AFTERCARE OF THEIR OPERATIONS, SENSITIVE TO LOCAL REQUIREMENTS, ARE ESSENTIAL PARTS OF RESPONSIBLE STEWARDSHIP.

# **ASPIRATION**

TO FURTHER IMPROVE THE QUALITY OF QUARRY RESTORATION AND TO FURTHER INCREASE RECOGNITION OF THE CONTRIBUTION TO SUSTAINABILITY THAT RESTORATION OF LAND PROVIDES.

# **CURRENT POSITION**

The UK mineral products industry is a world leader in terms of the quality of its land restoration work. That achievement was once again highlighted at MPA's Showcase 09 (see the previous Biodiversity section of this report). The long-term commitment can be tracked back over 40 years through the industry's restoration award scheme, with hundreds of sites covering thousands of acres coming forward to be independently judged as having not just met but exceeded planning conditions. In some cases, land has been returned to agriculture with no visible evidence that it was ever quarried. In others,



it has created a unique opportunity for change from farmland to wildlife habitats that make major contributions to local biodiversity.

This recycling of "borrowed land" has helped to change the image of the industry. The long-term success of this work is, however, heavily dependent upon operators being able to attract sufficient clay-type inert materials to infill the voids created by extraction. A particular concern for the industry is the Government's current review of the Landfill Tax - it is essential that the existing landfill tax exemption for inert materials used for quarry restoration is retained following the review in order to facilitate future restoration work by the industry.

#### Best of the best

The Brett Group received a special award at the MPA's Showcase 09 when its Laleham Farm site at Shepperton in Surrey was judged the 'best of the best' over the 40-year history of the restoration awards scheme. The top MPA award for 2009 went to the National Memorial Arboretum in Staffordshire and to Lafarge Aggregates, whose restoration work on the former quarry site helped to make it possible.

# NATURAL RESOURCES & ENHANCING THE ENVIRONMENT







# **OUR VALUE**

MPA MEMBERS ARE COMMITTED TO IMPROVING THE MANAGEMENT OF GEODIVERSITY.

# **ASPIRATION**

TO CONTINUE TO WORK WITH NATURAL ENGLAND AND LOCAL GEO-CONSERVATION GROUPS TO RAISE THE PROFILE OF GEODIVERSITY AND TO MAKE QUARRY SITES AVAILABLE AS LOCAL EARTH SCIENCE RESOURCES. TO SEEK TO INCREASE THE CONTRIBUTION OF THE MINERALS INDUSTRY TO GEODIVERSITY ACTION PLANS.

# **CURRENT POSITION**

Geodiversity is an aspect of nature conservation that has grown in prominence over recent years. It relates to the identification and beneficial use of the great variety of geological features found within the landscape, including those revealed by quarrying, which provides many of the most valuable geological exposures. Since 1949, some 2,300 sites in Britain have been designated as Sites of Special Scientific Interest on account of their geological interest – 500 of them were exposed by quarrying.

#### Somerset Earth Science Centre

Funded and managed by the Mendip Quarry Producers (MQP), this purpose-built field study centre in Stoke St Michael, near Shepton Mallet provides a range of curriculum-related resources linked to quarrying for students of all ages from primary school through to adult learning. It was formally opened by her Royal Highness, The Princess Royal in July 2009.

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The industry has been working with Natural England under a memorandum of agreement designed to encourage the production of geodiversity action plans for individual sites.

Geology within quarries is regarded as a useful resource for geological education, training and research and a number of operators conserve specific rock exposures and open them to invited visitors. **1** Limestone pavement safeguarded by the industry at Ingleborough, North Yorkshire.

# CREATING SUSTAINABLE COMMUNITIES HEALTH & SAFETY EMPLOYMENT



# COMPETENCE WORKING WITH THE COMMUNITY STAKEHOLDER ACCOUNTABILITY



Continuous professional development of industry employees is a core business activity.

# CREATING SUSTAINABLE COMMUNITIES

The mineral products industry is critically important to the future of the UK - but arguably its contribution to creating - quite literally - the foundations of the UK economy is under-recognised. Just as underrecognised in my view is the fantastic work which your association and its members and stakeholders have

> undertaken to drive down workplace accidents and to safeguard employees' health

Lord Jordan, President of the Royal Society for the Prevention of Accidents



## **OUR VALUE**

THE HIGHEST PRIORITY FOR MPA MEMBERS IS THE HEALTH, SAFETY AND WELL BEING OF THEIR EMPLOYEES, CONTRACTORS, CUSTOMERS AND EVERYONE WHO VISITS THEIR OPERATIONS AND OTHER PREMISES.

## **ASPIRATION**

THE ULTIMATE ASPIRATION OF MPA MEMBERS IS ZERO HARM AND TO MEET THE CURRENT HARD TARGET.

# **CURRENT POSITION**

MPA members are committed to making further improvements in Health & Safety performance. Historically, members producing aggregates and quarry products exceeded by a wide margin the first five year Hard Target to reduce reportable injuries by 50 per cent by 2004, and the subsequent Hard Target of seeking a further 50 per cent reduction by 2009 looks very likely to be achieved. Over the last 10 years, our data shows that HSE-reportable injuries have been reduced by 80 per cent. Of particular note is the achievement of the cement industry where the data shows a 70 per cent reduction in the number of Lost Time Injuries (LTIs) in the five years to the end of 2008. A key task since the formation of the MPA has been to align reporting between the aggregates and cement industries and to set out increasingly demanding targets for the future. MPA is seeking to achieve at least a 50 per cent reduction in the rate of LTIs for our direct employees over the next five years, at least a 50 per cent reduction in the number of LTIs recorded by Contractors, and all with an overarching aim of Zero Harm. The terminology of targets can be a little obscure to those not familiar with Health & Safety data, but the absolute commitment of members to continuing performance improvements is clear.

## **HEADLINE PERFORMANCE INDICATORS (2008)**

Number of reportable injuries in aggregates and associated industries (GB-MPA)	137
Lost time incidents for cement sector (GB)	31



MPA works closely with the Health and Safety Executive (HSE) and provides sector-leading representation on the tripartite Quarries National Joint Advisory Committee, as well as active support for the 'Target Zero' initiative. MPA involvement is also active in HSE's 'CHARGE' Committee which includes Cement and Concrete within its scope. It is MPA policy that 'competence' is best demonstrated by National Vocational Qualifications (NVQs), bolstered by auditable evidence of Continuing Professional Development (CPD).

We have continued to develop resources such as **www.Safequarry.com** to support

the whole of the mineral products sector, including non-members of the MPA. A major new initiative, launched at MPA's annual Health & Safety Best Practice Awards in October 2009, is 'Safer by Design' in which we are working closely with suppliers of plant and equipment to improve the 'designed-in' safety of plant and equipment purchased by the industry. MPA is working hard to ensure that the voluntary guidance comprising this initiative gains traction across Europe and beyond, by forging international links with like-minded centres of expertise overseas.

#### 1 A safety training exercise.

**2** The industry positively encourages employees to look after themselves and look after each.





# CREATING SUSTAINABLE COMMUNITIES EMPLOYMENT

#### **HEADLINE PERFORMANCE INDICATORS (2008)**

Direct employment (GB MPA aggregates, associated products)	23,857
Direct employment (GB MPA Cement)	3,047

# **OUR VALUE**

MPA MEMBERS RECOGNISE THAT THEIR OPERATIONS ARE AN IMPORTANT SOURCE OF EMPLOYMENT AND ECONOMIC ACTIVITY.

# **ASPIRATION**

TO BE THE INDUSTRY OF CHOICE FOR PROSPECTIVE EMPLOYEES.

# **CURRENT POSITION**

Data on industry employment have yet to catch up with the full impact of the recession on the sector, but the industry remains a significant employer in many locations, notably in more rural areas where the range of employment opportunities is more limited.

In spite of the difficult current market conditions our industry will continue to offer a wide range of employment opportunities in the long term and we need to ensure that there is wider awareness of such opportunities. In recent months there has



been an increasing trend of visits to the website **www.careersinquarrying.co.uk**, which highlights the range of industry careers available to four categories of potential employees:

- School Leavers
- Post College
- Graduates
- Career change (including ex-services)

# CREATING SUSTAINABLE COMMUNITIES



# **OUR VALUE**

MPA MEMBERS RECOGNISE THE NEED TO MAINTAIN AND DEVELOP A COMPETENT WORKFORCE.

# **ASPIRATION**

TO ACHIEVE AND MAINTAIN A FULLY COMPETENT WORKFORCE.

# **CURRENT POSITION**

The development of skills and competence is central to MPA members' ability to run safe and sustainable businesses and to meet customers' expectations for quality.

Training and development are integral to the operation of accredited management systems and the increasing evidence of quality (ISO 19001) and environmental (ISO 14001, BS 8555) management systems in the industry is indicative of the industry's commitment. MPA is also closely involved

# **HEADLINE PERFORMANCE INDICATORS (2008)**

NVQs/SVQs registered, cumulative to 2008	14,311
SHE NVQs levels 3 to 5	1,429



with and extremely supportive of the work of the industry's training and qualifications organisations, the MPQC.

The HSE has agreed a target with the industry that it should be able to demonstrate full competency in health and safety by the end of 2010. Meeting this target, for example through the award of appropriate National/Scottish Vocational Qualifications (NVQs and SVQs), is a major challenge that MPA members are pursuing. MPA is also working with MPQC to ensure that the new requirements for all LGV drivers to undergo periodic training are matched by a full range of courses designed specifically to help those in the mineral products sector.

## **Drivers Skill Card**

A Drivers Skill Card has been developed by MPA and the MPQC as evidence of training to a high



level. It is MPA policy that tipper and truck-mixer drivers delivering for member companies hold the card. Over 22,500 have been awarded to date. Work is underway to extend the training to other vehicle types



# CREATING SUSTAINABLE COMMUNITIES WORKING WITH THE COMMUNITY

# **OUR VALUE**

MPA MEMBERS RECOGNISE THAT THEIR OPERATIONS ARE PART OF THE LOCAL COMMUNITY AND STRIVE TO BE GOOD NEIGHBOURS.

# **ASPIRATION**

TO SEE ALL MINERAL-RELATED OPERATIONS VALUED BY MEMBERS OF THE COMMUNITY.

# **CURRENT POSITION**

With a network of 2,000 mineral products sites around the UK, the interaction between the industry and local communities is considerable. A high proportion of extraction sites and cement works, in particular, are of necessity in rural areas where environmental sensitivities are at the greatest and the need for community liaison is usually all the greater.

The great majority of minerals companies recognise the importance of maintaining



### **HEADLINE PERFORMANCE INDICATORS (2008)**

No of Liaison Groups (aggregates quarries)	240
No of Liaison Group meetings (cement)	41
No of visitors (aggregates quarries)	12,586
No of visitors (cement kilns)	8,489

good working relationships with their neighbours and this has been reflected in the number of formal liaison committees over recent years. Such groups have a particular role when the time comes for planning applications that involve change on whatever scale.

Engagement between operators and communities is particularly strong on the educational front and industry sites have in many cases become regarded as valuable cross-curricular teaching resources. Operators in turn are able to call on their relationships with individual schools when it comes to delivering the industry's vital "please don't play in quarries" message to children. MPA's educational website Virtual Quarry **www.virtualquarry.co.uk** continues to attract substantial visits and 12,586 quarry visitors for educational purposes were recorded in 2008 and 8,489 visitors to cement kiln sites.

#### Stay Safe 09

The MPA's 2009 campaign was targeted primarily at teenagers and used Premiership Goalkeepers to help promote a stronger message Stay Safe....Stay Out. Working with members, the emergency services and local communities, media coverage included 41 radio interviews.



# CREATING SUSTAINABLE COMMUNITIES STAKEHOLDER ACCOUNTABILITY



## **OUR VALUE**

MPA MEMBERS RECOGNISE THE IMPORTANCE OF OPERATING AS GOOD CORPORATE CITIZENS.

## **ASPIRATION**

TO BOTH IMPROVE AND EXTEND OUR RELATIONSHIPS WITH STAKEHOLDERS, TO DEFINE AND DELIVER ON PRIORITIES IN TERMS OF SUSTAINABILITY.

# **CURRENT POSITION**

The UK mineral products industry is ahead of many others in terms of its commitment to stakeholder engagement ranging from its employees through to Ministers. The nature of its operations is such that it routinely comes under close scrutiny from its immediate neighbours in local communities, from government and local government at all levels, from other regulators and from environmental organisations. MPA members have recognised the importance of constructive relationships at all levels and the benefits of working together to resolve issues and to produce positive benefits for society as a whole. This experience has enabled companies to shift from compliance and crisis-driven engagement to an approach that is more planned towards achieving partnership. Communication is today on a more routine basis rather than being driven by, for example, an impending planning application. At local level, liaison groups now exist at many sites - including all cement plants - but there are also an additional range of engagement activities carried out with local communities .

Operators similarly work closely with wildlife and other specific interest groups. The benefits of such engagement include the fact



#### Engaging with stakeholders

The marine aggregate industry has an extensive programme of stakeholder engagement. At community level, it has run a series of road shows to discuss concerns over issues such as coastal erosion. In liaison with the Crown Estate, it reports annually to all its stakeholders on the area involved in dredging.



that stakeholders have a much closer awareness of the imperatives that drive a typical business and of operators' genuine commitment to environmental performance.

One of the key roles of the MPA is to liaise with a wide range of stakeholders on a wide variety of issues, and member participation in such activities is essential. This liaison is integral to all the subject areas covered in this report, but we do not have a specific reporting metric to cover such activity. Nevertheless member involvement in Sustainable Development reporting by the MPA is recognised within the Stakeholder Reporting requirements of the BES 6001 Responsible Sourcing framework standard covered earlier in this report.

MPA engages with a huge number of stakeholders and works in partnership with them to develop sustainable solutions in a range of different areas. MPA is an active member of the Associate Parliamentary Minerals Group (APMG), the UK Green Building Council and the UK Minerals Forum, to name just a few.

# APPENDICES SUSTAINABLE CONSUMPTION AND PRODUCTS

	RESOURCE CONSERVATION	2007	2008
PRIMARY vs RECYCLED	GB ratio recycled and secondary aggregates	25%	25%
	GB ratio primary aggregates	75%	75%
	GB ratio of cement	82%	82%
	GB ratio of other cementitious materials	18%	18%
EUROPEAN COMPARISON	Per capita aggregates production (GB)	4.8 tonnes	4.2 tonnes
	Per capita aggregates production (Europe)	6.7 tonnes (2006)	
	Per capita cement production (UK)	226kg (2005)	
	Per capita cement production (Europe)	509kg (2005)	
WATER USE	Metered consumption (aggregates)	0.048m <sup>3</sup> per tonne	0.038m <sup>3</sup> per tonne
	ENVIRONMENTAL PROTECTION	2007	2008
SITES WITH CERTIFIED	Aggregates quarries (77% of surveyed sites)		385
MANAGEMENT STSTEMS	Ready-mixed concrete (68% of surveyed sites)	649	
	Asphalt (84% of surveyed sites)		241
	Cement (100% of sites)		14
COMPLIANCE	Convictions for infringements (aggregates)	2	4
	Cement (enforcement notices, formal cautions and successful prosecutions)		2
EMISSIONS TO AIR (CEMENT)	Dust (change from 1998)		- 68%
	NO <sub>x</sub> (change from 1998)		- 51%
	SO <sub>2</sub> (change from 1998)		- 75%

# CLIMATE CHANGE AND ENERGY

	CARBON MANAGEMENT	2007	2008
ENERGY USE (AGGREGATES)	Electricity use	0.81m MWh	0.74m MWh
	Natural gas use	45m m <sup>3</sup>	42m m <sup>3</sup>
	Gas oil use	238m litres	243m litres
	Diesel non-transport	4.1m litres	4.1m litres
	Fuel oil use	29.8m litres	96.9m litres
	Recovered fuel oil use	71.8m litres	60.0m litres
ENERGY USE (CEMENT)	Use of fossil fuels (coal, petcoke, oil, gas) for primary energy per tonne manufactured (% thermal)		73.53
	Proportion of fuel comprising waste materials (% thermal)		26.7
CARBON EMISSIONS	Total on site (aggregate/aggregate products)	5.98kg/CO <sub>2</sub> per tonne	6.71kg/CO <sub>2</sub> per tonne
	% of total UK carbon emissions: Operational Total including transport	0.45% 0.61%	0.46% 0.62%
	Crushed rock	4.02kg/CO <sub>2</sub> per tonne	4.32kg/CO <sub>2</sub> per tonne
	Sand and gravel	3.98kg/CO <sub>2</sub> per tonne	4.28kg/CO <sub>2</sub> per tonne
* emission figures for RMC	Ready-mixed concrete*	1.80kg/CO <sub>2</sub> per tonne	0.95kg/CO <sub>2</sub> per tonne
production process only, and	Asphalt*	26.82kg/CO <sub>2</sub> per tonne	34.4kg/CO <sub>2</sub> per tonne
embodied emissions	Emissions of CO <sub>2</sub> directly from cement plants per tonne manufactured (kg/t)		776.8
	TRANSPORT	2007	2008
TRANSPORT MODE OF	Rail (7.0% of aggregates sold)	15.1m tonnes	13m tonnes
PRIMARY AGGREGATES	Marine dredging (6.7% of aggregates sold)	13.8m tonnes	12.6m tonnes
	Ship (2.7% of aggregates sold)	c. 6m tonnes	c. 5m tonnes
	Inland waterways (less than 0.5% of aggregates sold)	up to 1m tonnes	up to 1m tonnes
	Road	c. 200m tonnes	c. 180m tonnes

TRANSPORT continued	2007	2008
Average road delivery distance: Aggregates	35km	38km
Asphalt	28km	29km
Ready-mixed concrete	8.3km	8.7km
<b>Average rail delivery distance:</b> Aggregates	144km	126km
Average barge delivery distance: (inland) aggregates	49km	37km
Average road volume/load: Aggregates	21.3 tonnes	20.9 tonnes
Asphalt	18.4 tonnes	16.5 tonnes
Ready-mixed concrete	6.0m <sup>3</sup>	5.5m <sup>3</sup>
Average rail volume/load	1,726 tonnes	1,471 tonnes
Average barge volume/load	256 tonnes	499 tonnes
Road (% of total cement deliveries)		84.4%
Rail (% of total cement deliveries)		14.1%
Water (% of total cement deliveries)		1.5%

#### TRANSPORT BY MODE

CEMENT

# NATURAL RESOURCES AND ENHANCING THE ENVIRONMENT

	BIODIVERSITY	2007	2008
PLANTING	Trees planted	171,581	129,799
	Hedgerows planted	8.3km	9.05km
DRY STONE WALLING	Kilometres built	5.129	3.577
SITES OF SPECIAL SCIENTIFIC	SSSIs related to quarrying	120	120
INTEREST (SSSIS)	% of SSSI assessments in favourable/ recovering condition	75%	75%
USE OF RESOURCES - CEMENT	Natural raw material per tonne cement manufactured (kg/tonne)		1426
	Waste recovered as raw materials per tonne manufactured at kiln sites (kg/tonne) 		94.1
	Waste recovered as raw materials and fuels by cement industry at kiln sites (tonnes)		1,418,191
	Proportion of fuel comprising waste materials (% thermal)		26.5
	Proportion of fuel comprising waste materials (% mass)		6.17
	HERITAGE	2007	2008
ARCHAEOLOGY	Land investigated pre planning permission	451 hectares	319 hectares
	Land investigated post planning permission	473 hectares	339 hectares
	RESTORATION/LAND AND SEABED USE	2007	2008
LAND USE AND RESTORATION	% of the UK land area being quarried	0.12%	0.13%
	Ratio of land restored to land prepared for quarrying	1:0.9	1:0.7
SEABED USE	Area of seabed licenced for marine dredging	1,344km <sup>2</sup>	1,278km <sup>2</sup>
	Area of seabed available for marine dredging	556km <sup>2</sup>	570km <sup>2</sup>
	Area of seabed dredged	134.7km <sup>2</sup>	137.9km <sup>2</sup>

# **CREATING SUSTAINABLE COMMUNITIES**

	HEALTH AND SAFETY	2007	2008	
REPORTABLE INJURIES	Number of reportable injuries (GB) covering the aggregates and associated sectors	152	137	
LOST TIME INCIDENTS	Lost time incidents for cement sector (direct employee and contractors)		31 (16 + 15)	
	EMPLOYMENT	2007	2008	
SECTOR RELATED	Direct employees of MPA member companies (aggregates and associated sectors)		23,857	
	Direct employees of MPA cement members		3,047	
	COMPETENT WORKFORCE	2007	2008	
TRAINING AND QUALIFICATIONS	NVQs registered - cumulative	13,190	14,311	
	Number of SHE NVQs Levels 3 to 5	1,215	1,429	
	Number of cement sector direct employees at kiln sites with NVQ or equivalent qualifications		844	
	WORKING WITH THE COMMUNITY	2007	2008	
COMPLAINTS	Number of Complaints (aggregates)	690	524	
	Complaints by type: Blasting	123 (18% of total)	125 (24% of total)	
	Dust	175 (25%)	108 (21%)	
	Lighting	14 (2%)	17 (3%)	
	Noise	112 (16%)	88 (17%)	
	Odour	21 (3%)	29 (6%)	
	Transport	56 (8%)	58 (11%)	
	Water discharge	52 (8%)	50 (10%)	
	Unclassified	137 (20%)	49 (9%)	
	Number of justified complaint free days (cement)		337	

# **CREATING SUSTAINABLE COMMUNITIES**

	WORKING WITH THE COMMUNITY continued	2007	2008
COMMUNITY LINKS	Liaison groups (48% of aggregates quarries)	307	240
	Open days (aggregates quarries)	26	18
	Liaison group meetings (cement)		41
EDUCATION	Site educational visits (aggregates)	853	703
	Number of visitors (aggregates)	18,365	12,586
	Visitors to cement kiln sites		8,489

# CEMENT PRODUCTION AND DELIVERIES (GB) thousand tonnes

#### CEMENT

	PRODUCTION of which:	EXPORTS (from GB)	DELIVERIES (into GB from GB production)	IMPORTS (into GB) by manufacturers	by others	CEMEN MATER other	ITITIOUS RIAL total
2003	11,215	164	11,072	576	646	2,329	14,623
2004	11,405	141	11,074	609	825	2,443	14,951
2005	11,216	110	11,004	306	971	2,385	14,666
2006	11,469	127	11,221	124	1,089	2,648	15,082
2007	11,887	74	11,638	255	1,121	2,769	15,783
2008	10,071	61	9,937	283	1,084	2,432	13,660
2004 Q1 Q2 Q3 Q4	2,623 3,023 2,971 2,788	31 40 36 34	2,683 2,875 2,863 2,653	138 176 185 110	196 220 219 190	554 625 688 576	3,571 3,896 3,955 3,529
2005 Q1 Q2 Q3 Q4	2,544 3,024 2,940 2,708	21 30 29 30	2,555 2,986 2,923 2,540	104 70 77 55	225 264 264 218	547 632 666 540	3,431 3,952 3,930 3,353
2006 Q1 Q2 Q3 Q4	2,647 2,981 2,990 2,851	25 30 37 35	2,737 2,895 2,917 2,672	28 32 40 24	269 268 303 249	601 692 732 623	3,635 3,887 3,992 3,568
2007 Q1 Q2 Q3 Q4	2,678 3,188 3,130 2,891	27 22 9 16	2,779 3,061 3,011 2,787	43 59 84 69	271 297 294 259	643 701 746 681	3,735 4,117 4,135 3,796
2008 Q1 Q2 Q3 Q4	2,609 2,803 2,520 2,139	18 18 13 12	2,551 2,816 2,496 2,074	88 94 72 29	268 327 263 226	598 682 648 505	3,505 3,917 3,445 2,793

# **MARKET SUMMARY 1980 - 2008**

	GDP CHAINED VOLUME measures £m	CONSTRUCTION OUTPUT (GB) £m 2000 prices	PRIMARY AGGREGATE SALES (GB) million tonnes	CRUSHED ROCK million tonnes
1980	631.074	50.728	199	103
1900	622 722	45 829	182	92
	635.756	47.487	194	103
	658,798	51,576	213	112
	676,394	53,627	211	111
1985	700,740	54,219	217	115
	728,856	56,178	228	123
	762,107	62,580	254	142
	800,457	68,616	291	162
	818,719	71,857	300	169
1990	825,099	72,085	278	162
	813,610	66,841	246	148
	814,803	64,033	233	144
	832,910	62,823	239	150
	868,560	62,589	259	162
1995	894,988	63,381	241	151
	920,757	65,776	215	133
	951,208	67,369	220	134
	985,506	68,411	218	132
	1,019,735	69,294	221	133
2000	1,059,658	69,676	219	130
	1,085,745	71,087	222	134
	1,108,508	74,090	210	127
	1,139,746	77,852	203	123
	1,171,178	80,254	214	128
2005	1,195,276	79,540	204	122
	1,229,196	80,426	207	127
	1,266,347	82,424	209	130
	1,275,299	83,248	187	115

SAND & GRAVEL (TOTAL) million tonnes	SAND & GRAVEL (MARINE)* million tonnes	RECYCLING (EST) million tonnes (est)	TOTAL AGGREGATES (GB) million tonnes	ASPHALT (GB) million tonnes	READY-MIXED CONCRETE (GB) million m <sup>3</sup>
96	12.5	20	219	24	22.4
89	11.5	18	200	22	19.9
91	11.9	19	213	26	20.7
101	12.8	21	234	27.2	21.5
100	12.6	21	232	25.5	20.8
102	13.8	22	239	26.9	21.6
106	15.3	23	251	28.4	21.5
111	16.2	25	279	29.9	24.3
130	19.6	29	320	31.8	28.8
131	20.7	32	332	33.7	29.6
116	17.2	33	311	36.7	26.78
98	12.4	34	280	36.4	22.53
89	10.6	35	268	36.6	20.78
89	10.1	37	276	36.3	20.77
98	11.3	39	298	37.7	22.93
90	11.6	42	283	34.9	21.68
82	11.5	45	260	29.3	20.89
86	12	48	268	27.5	22.33
86	13	51	269	27.7	22.93
88	13.4	54	275	26	23.55
89	14.4	57	276	25.7	23
88	13.6	60	282	26.5	23
83	13	62	272	27.8	22.54
80	12	64.5	268	27.8	22.3
86	13	67	281	26.9	22.9
82	13	68.3	272	27.9	22.4
80	14	70	277	25.7	22.9
79	14	71	280	25.7	23.5
72	12.6	64	251	25	20.1

# EUROPEAN PRODUCTION OF AGGREGATES

	2006 VOLUMES m SAND & GRAVEL	nillion tonnes CRUSHED ROCK	RECYCLED/SECONDARY	TOTAL	PER CAPITA
AUSTRIA	66.0	32.0	6.5	104.5	12.6
BELGIUM	13.6	55.5	14.3	83.4	7.9
CROATIA	6.2	21.8	-	28.0	6.2**
CZECH REPUBLIC	27.1	41.5	4.1	72.7	7.1
DENMARK*	71.6	0.3	-	71.9	13.3**
FINLAND	54.0	46.0	0.5	100.5	19.0
FRANCE	173.0	233.0	23.0	429.0	7.0
GERMANY	277.0	270.0	78.0	625.0	7.6
IRELAND*	54.0	79.0	1.0	134.0	31.9
ITALY	210.0	135.0	9.0	354.0	6.0
NETHERLANDS	94.5	0.0	25.0	119.5	7.3
NORWAY	13.4	45.0	-	58.4	12.7**
POLAND	115.0	43.0	11.0	169.0	4.4
PORTUGAL	7.5	90.0	-	97.5	9.2**
ROMANIA	15.5	6.5	1.0	23.0	1.0
SLOVAKIA	10.0	16.5	0.5	27.0	5.0
SPAIN	170.0	314.0	1.5	485.0	7.7
SWEDEN	46.5	122.0	68.0	87.0	11.1
SWITZERLAND	50.0	5.7	5.7	61.4	8.2
GB	80.0	127.0	70.0	277.0	4.7
TOTAL	1,458.4	1,429.2	237.8	3,125.4	6.7
TOTAL EXCLUDING GB	1,377.4	1,296.2	167.8	2,841.4	7.0



# AGGREGATES INTENSITY OF USE (GB)



Tonnes per £1,000 of construction output

Total aggregates --- Primary aggregates ----

# **MPA MEMBERSHIP**

#### MEMBERS

Aggregate Industries UK Ltd Allen Newport Ltd Ballast Phoenix Ltd Barker Brothers Aggregates Ltd Bathgate Silica Sand Ltd Bestco Surfacing Ltd Borough Green Sandpits Ltd Brett Group Bromfield Sand & Gravel Co Ltd C & G Concrete Limited Cardigan Sand & Gravel Co Ltd CEMEX UK Chambers Runfold Plc Colas Limited **CPI** Mortars D J Broady (T/A Robin Concrete) Day Group Ennstone Johnston Erith Haulage Company Limited F H Gilman & Co FM Conway Ltd Francis Flower Gallagher Group Ltd GRS Roadstone Limited H Tuckwell & Sons Ltd Hadley Recycling & Waste Management Hanson UK Harleyford Aggregates Ltd Henry Streeter (Sand & Ballast) l td Hills Group Holderness Aggregates Ltd Huntsmans Quarries Ltd J & J Franks Ltd J Clubb Ltd J Wainwright & Co Ltd John Carr (Liverpool) Ltd JPE Holdings Ltd Kendall Brothers (Portsmouth) l td

Lafarge Aggregates Ltd Lafarge Cement UK Lhoist UK Ltd Mansfield Sand Co Ltd Marshalls plc Mid-Essex Gravel Pits (Chelmsford) Ltd Midland Quarry Products Moorhouse Sand Pit Moreton C Cullimore (Gravels) Ltd Morris & Perry (Gurney Slade) Ltd MultiServ Group Ltd Myers Group Needham Chalks Ltd New Milton Sand & Ballast Co l td Northumberland Stone Northwood (Fareham) Ltd R.J.D. Ltd Remix Dry Mortar Ltd **Ringway Roadstone** Rotherham Sand & Gravel Co Ltd S Grundon (Ewelme) Ltd S S G Quarries S Walsh & Sons Salop Sand & Gravel Supply Co Ltd Sibelco UK Ltd Singleton Birch Ltd Smith & Sons (Bletchington) Ltd Springfield Farm Ltd Steetley Dolomite Limited Tarmac Quarry Materials **Tendley** Quarries Thomas Scourfield & Sons Trefigin Quarries Ltd Tudor Griffiths Group W Clifford Watts Ltd William Boyer & Sons Ltd

Wm Allison & Sons

#### ASSOCIATES

Alliance Planning Ayton Products **BASF** Construction Chemicals (UK) Limited BDS Marketing Research Ltd Benninghoven UK Ltd Birketts Solicitors Burges Salmon **Business Insurance Solutions** Camco Advisory (Services) UK Cathay Industries (UK) Limited Chaselet Ltd Christeyns UK Ltd Corus UK Ltd Crutes D B Schenker Davies Planning Ltd DLA Piper UK LLP Entec UK Ltd EPC United Kingdom Ltd Fairport Engineering Ltd Finning (UK) Ltd Freeth Cartwright LLP Gerald Eve LLP Golder Associates (UK) Ltd Grace Construction Products Ltd GVA Grimlev Howes Percival LLP Hydrex Equipment (UK) Ltd Jeremy Murfitt Consultants Kingsbridge Risk Solutions Ltd Knights Solicitors LLP Land & Mineral Management Ltd Lanxess Ltd Linatex Ltd Marubeni-Komatsu Ltd Master Lock UK Matthews & Son Chartered Surveyors Mills & Reeve

Mineral Products Qualifications Council Mineral Services Ltd MICA Neil Beningfield & Associates Ltd ORICA Europe Ltd PDE Consulting Ltd Refined Bitumen Association Rockwood Pigments (UK) Ltd RPS Group Savills (L&P) Ltd Scott Wilson Ltd SLR Consulting Ltd Smiths Gore Stephens Scown Stocksigns The Saint Consulting Group Thring Townsend Lee & Pembertons TLT Solicitors UK Quality Ash Association Whitwick Engineering WYG Environment Planning Transport Ltd

# **MPA AFFILIATES**

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**BRITISH PRECAST** 

MPA SITES Mineral Products Association www.mineralproducts.org Includes aggregates, asphalt, recycling and slag

ALA (agricultural lime) www.aglime.org.uk

BLA (industrial lime) www.britishlime.org

BMAPA (marine aggregates) www.bmapa.org

BRMCA (ready-mixed concrete) www.brmca.org.uk

MIA (mortar) www.mortar.org.uk

MPA Cement
www.cementindustry.co.uk

MPA-The Concrete Centre www.concretecentre.com

SAMSA (silica sand) www.samsa.org.uk

Safe Quarry www.safequarry.com

Virtual Quarry www.virtualquarry.co.uk

Careers www.careersinquarrying.co.uk

#### AFFILIATES

British Precast www.sustainableprecast.org.uk

QPA Northern Ireland **www.qpani.org** 

OTHER Nature After Minerals www.afterminerals.com

UK Green Building Council **www.ukgbc.org** 

WRAP www.wrap.org



The Mineral Products Association is the trade association for the aggregates, asphalt, cement, concrete, lime, mortar and silica sand industries

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The Mineral Products Association welcomes comments and requests for further information about the industry's work.

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