

Sustainable development

Building our strategy



The QPA

The Quarry Products Association represents one of the UK's most essential industries. It has some 120 members who between them produce more than 90 per cent of the aggregates and quarry products the nation needs. Crushed rock, sand and gravel, recycled aggregates, asphalt and ready-mixed concrete all fall within the association's remit. In addition, it is the parent for a group of product-specific bodies representing the interests of agricultural lime, industrial lime, marine aggregate, mortar, silica sand, slag and plant & equipment operators.

The QPA is the industry's major voice with government at local, national and European levels. It is also the medium through which operators share knowledge and best practice.

Towards a sector strategy

In the developed world, we all enjoy better living standards and quality of life as a result of the rapid economic advances over the past 200 years. Yet we have also come to accept that all this cannot necessarily be sustained into the future unless we conserve our resources and care for our environment. Industries such as aggregates and quarry products that underpin so much in our lives, have a key role to play now and in the future. This document marks a key stage in the development by the Quarry Products Association of its sectoral sustainability strategy, and an opportunity for you to comment.

Your opportunity to participate

QPA welcomes your views on this document and our approach to a sustainable development strategy.

You can give us your feedback via our online survey questionnaire located at www.qpa.org. Alternatively, please write to Simon van der Byl at the address shown on the back cover or email vanderbyl@qpa.org.



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A challenge for us all



Sustainable development has moved on from being simply desirable to become accepted as an imperative. Living in a way that takes full account of the social, environmental, economic and resource management impacts of our decisions on generations to come is a challenge for each one of us and for the industries that satisfy our needs.

Few industries make a greater contribution to the quality of our lives than aggregates and quarry products. Our materials stand behind every hospital, school and home. The industry sustains us not just through the end-uses of its products but through the jobs it provides and its input to local and national economies. But it also, of course, creates impacts that have to be balanced, and uses resources.

Our members have been addressing the issues of sustainable development on an individual basis for some time. The momentum they have already achieved is considerable and provides a solid base from which to progress. We can draw also on successful initiatives such as the health and safety 'Hard Target', which is

on course to reduce accidents by half, our long-standing restoration award scheme, and partnerships with conservation and other organisations.

We have readily accepted the advice from the Department for Environment, Food and Rural Affairs, the Department of Trade and Industry and the Sustainable Development Commission that a more formalised sectoral approach will deliver even greater benefits. Work has been underway for over a year and this preliminary assessment provides an opportunity for members and external stakeholders alike to influence the final shape of the strategy.

Our stakeholders have an important role to play and we will welcome comment and advice at this or any other stage.

A handwritten signature in black ink that reads "Simon van der Byl".

Simon van der Byl
Quarry Products Association

Established industry ... big future



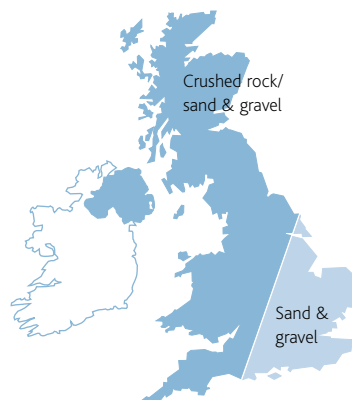
Facts

- In the UK, we each use some four tonnes of aggregates a year
- An average house needs 60 tonnes of aggregates
- Over 15 per cent of Britain's sand and gravel needs come from the seabed
- Britain tops the European league for aggregates recycling

We have always needed quarry products such as rock and sand & gravel - and the chances are we always will. In pre-historic times, quarrying produced the flints required to make weapons for hunting. Today, it gives us materials for our homes, schools, hospitals, roads, leisure facilities and much more. Quarry products are, quite literally, the foundation for our lives.

We currently need around 290 million tonnes of aggregates a year in Britain, of which over 65 million tonnes comes from recycled and secondary sources. Some 90 per cent of all aggregates are used by the construction industry, both as end-products and as raw materials in the production of ready-mixed concrete, concrete products, asphalt and mortar.

A line drawn between the Wash and Portland Bill would roughly separate the two main types of aggregates found in the UK - sand and gravel to the south and south east and crushed rock plus more limited sand and gravel outcrops to the north and west.

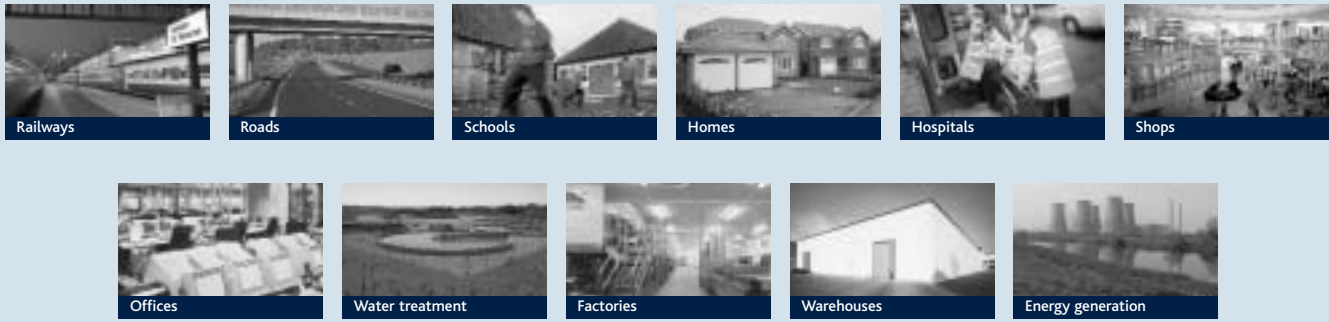


Although it is estimated that 80 per cent of aggregates are used within 30 miles of their source, the location of our reserves does not always match where demand is strongest. Some aggregates must, therefore, be moved a significant distance. For example, large quantities of crushed rock are transported by rail from the Midlands and Mendips to help meet the construction needs of the south east, East Anglia and north west.

In addition to aggregates from land quarries, over 15 per cent of our construction sand and gravel requirements are produced by marine dredging. Dredged aggregates are of particular significance in markets such as East Anglia, London and the Thames corridor, the south coast and South Wales. Dredgers also deliver material direct to beaches that are in need of replenishment.

But aggregates have uses beyond construction. Many products that we take for granted - paper, plastics, glass, steel, pharmaceuticals, cosmetics and even toothpaste - are manufactured using aggregates and related materials derived from quarrying. Silica sand makes a particular contribution to a number of industrial uses. The lime that is needed to improve our farmland for growing food, to purify our water and to clean our power station emissions comes from limestone.

Construction end uses 268 Million Tonnes



↑
Aggregates
Concrete products
Ready-mixed concrete
Asphalt
Mortar

Sources of aggregates

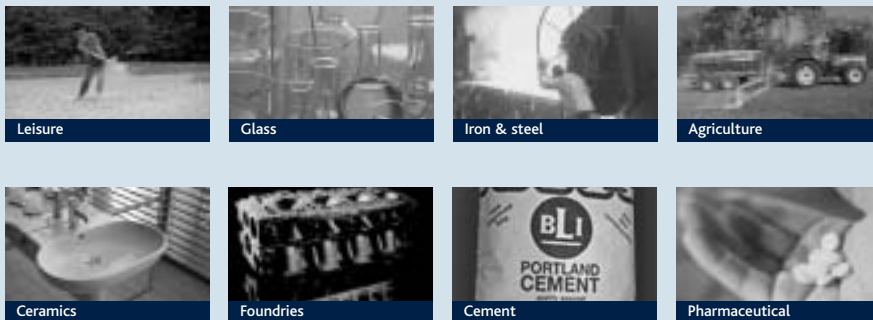


Aggregates & quarry products

Sources of aggregates



↓
Silica sand
Lime/Limestone



Non-construction end uses 24 Million Tonnes

Our core values

Social progress

Health & safety

The highest priority for QPA members is the health and safety of their employees, contractors and visitors.

Competence

We recognise the need to maintain and develop a competent workforce.

Working with the community

We recognise that our operations are part of the local community and strive to be good neighbours.

Partnerships with stakeholders

We value our partnerships with all relevant stakeholders and recognise that good communications with them are essential.

Heritage

We recognise the importance of our national heritage.

Environmental protection

Natural environment

We recognise the potential that our operations have to affect the environment and are committed to minimising and mitigating such effects.

Restoration of land

Quality restoration and aftercare of industry operations, sensitive to local requirements, is an essential part of the responsible stewardship that we expect from QPA members.

Biodiversity and geodiversity

We are committed to improving our management of biodiversity and geodiversity.

Natural resources

Resource conservation

We recognise our responsibility to make the most efficient use of all resources.

Economic prosperity

Providing essential materials

We recognise that the materials we supply are, and will continue to be, essential for the improvement of standards of living and the quality of life in the UK.

Employment

We recognise that our operations are an important source of employment and economic activity.

We believe that the time is right for the Quarry Products Association (QPA), as the principal UK association representing the aggregates industry, to draw together the diverse range of sustainability issues involving the industry and take the lead on a strategy for the sector as a whole.

One of the first steps in this process has been an analysis of the industry issues as they relate to the four main objectives of the UK Strategy for Sustainable Development published in 1999:

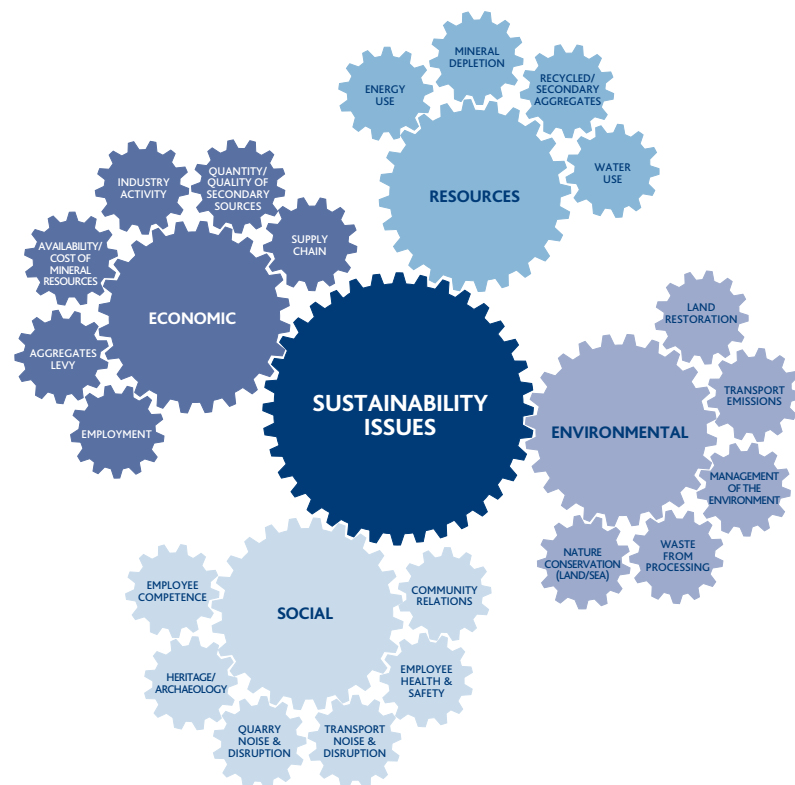
- Social progress which recognises the needs of everyone
- Effective protection of the environment
- Prudent use of natural resources
- Maintenance of high and stable levels of economic growth.

Our analysis indicated key sustainability issues for the industry as shown in the diagram on page 7.

Our sustainable development strategy

We went on to re-define our core values against the same objectives and have used them in selecting the key performance indicators from which we will measure progress.

Our sustainable development strategy also includes the various product-specific organisations that make up the QPA. The British Marine Aggregate Producers Association (BMAPA), for example, has been helping its members to develop their own key performance indicators. Other groups are working with the European Commission on the evolution of a harmonised set of indicators for the European non-energy extractive industries.



Next steps

The key stages in the evolution of our sustainable development strategy will be:

2005

- Finalise objectives and key performance indicators
- Undertake first survey of members for baseline data
- Assess survey outcomes
- Highlight best practice through QPA Showcase 2005
- Benchmark against UK and EU performance indicators
- Agree targets for improvement and action needed
- Produce first annual report

2006

- Repeat member survey one year on
- Publish second report to evaluate progress

Social progress

The government's objective

- Social progress that recognises the needs of everyone

Our indicators will include

- Lost-time accidents
- Training and competence achievements
- Direct and indirect employment
- Community complaints
- Community liaison groups
- Educational visits
- Archaeological investigations

Few industries interact with society at so many levels as quarrying. Its products are as essential in keeping the nation's infrastructure going as they are to satisfying the needs of a typical family for a new home. Civilisation as we know it would quite literally grind to a halt without the materials with which to maintain what we already have. Further progress - whether a modern hospital, new school or improved transport links - would be impossible.

Of all the social priorities for the industry, none ranks higher than the safety of employees, contractors and visitors. The industry is on course to achieve its target of reducing lost-time accidents by half over the five years to 2005. The first sector to sign up to the Health & Safety Commission's 'Hard Target' initiative, it is now aiming to set new targets with the ultimate aim of zero accidents.

More often than not, a quarry is a local resource satisfying local needs over a radius of less than 30 miles. An industry mainly of the countryside, the 40,000 direct and indirect jobs provided by quarrying are all the more welcome because many are in rural areas.

But the advantages must inevitably be balanced against the impacts that any heavy industry can have upon its neighbours. QPA members recognise the need to consult with local people at the planning stage and to communicate constantly. In many cases, they set up local liaison committees to ensure a ready two-way flow of information.

The stakeholders are many and varied and QPA members value both formal and informal partnerships with them. At national level, the industry works with government departments and agencies and bodies.

Aggregates and quarry companies fund archaeological exploration in advance of extraction and have been responsible for some of the most significant finds of recent years. They also provide a significant learning resource for local schools and educational establishments, many of whom are regular visitors.

Environmental protection

The government's objective

- Effective protection of the environment

Our indicators will include

- Sites with certified environmental management systems
- Prosecutions for pollution and planning infringements
- Waste going to landfill
- Area of land being quarried
- Area of land being restored
- Tree and hedge planting
- Condition of Sites of Special Scientific Interest (SSSIs)
- Transport by road, rail, inland waterway and sea

The industry's investment in environmental protection is substantial. Likewise, forward-thinking companies have recognised the need to achieve accreditation to the highest national and international environmental management standards.

Issues such as screening, control of noise and suppression of dust are comprehensively addressed in planning applications and are subject to increasing legislation at both national and European level. Few industries are more tightly regulated.

With over 20,000 lorries needed for road deliveries, transport is another significant issue and the industry strives to make its road haulage operations as efficient as possible - for example, by seeking opportunities for back-hauling. The industry delivers by rail wherever it is a practical alternative. For example, to move large volumes of aggregates to the south east from the Midlands and Mendips. By delivering direct by ship close to the heart of urban areas, the marine aggregates industry significantly reduces the use of lorries. Without deliveries of marine aggregates into London for example, some 120,000 lorry journeys would be required from sources of land-won aggregates. Inland waterways are another more recent alternative that reduces road miles.

The 're-use' of quarried land is one of the industry's great successes of the past 30 years. Modern restoration is planned before work ever starts and - especially in the case of sand and gravel operations - is often completed on a progressive basis. Sometimes, restoration offers a one-off opportunity for change. Low-grade farmland might, for example, achieve a new future via quarrying as a nature reserve or recreation amenity.

More than 700 of the UK's Sites of Special Scientific Interest (SSSIs) have their origins in quarrying - and many of them are still maintained by quarrying companies.

Borrowed land

The restoration award scheme operated by the QPA has been in operation for 35 years. In that time, the independent judging panel has made over 400 awards.

Natural resources

The government's objective

- Prudent use of resources

Our indicators will include

- Total volume of aggregates consumed
- Volumes from land and marine sources
- Volume of recycled and secondary materials
- Proportion of recycled to primary aggregates
- European comparisons
- Historical usage
- Water consumption
- Energy consumption

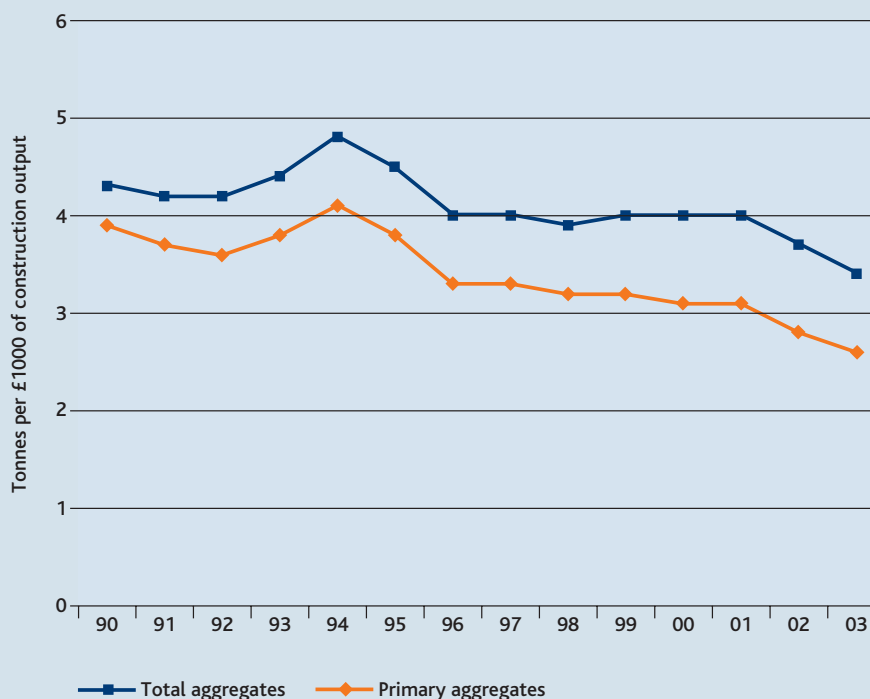
The intensity of use of primary aggregates (the relationship between aggregates use and construction output) is now only two-thirds of the 1990 level. In 1990, 3.9 tonnes of primary aggregates were used for every £1,000 of construction output (in 2000 prices), compared with 2.6 tonnes in 2003. The intensity of use of total aggregates (including primary, recycled and secondary aggregates) has declined by some 20 per cent over the period - a lower reduction because the use of recycled and secondary aggregates doubled over the period, reflecting the improving resource efficiency of construction.

With some 65 million tonnes of material in annual use, Britain is top of the European league for recycled and secondary aggregates. 24 per cent of demand is now met from such sources. Most comes from construction and demolition wastes. Secondary aggregates sources include china clay and slate wastes, slag from the iron and steel industries and ash from power stations.

The call on land-based primary aggregates is also complemented by the dredging of aggregates from the seabed around our shores, notably in the English Channel, Bristol Channel and North Sea. Marine aggregates contribute the equivalent of some 50 medium-sized land quarries. This valuable further resource is carefully managed under licence from the Crown Estate and regulated by the Office of the Deputy Prime Minister and Welsh Assembly Government.

The industry also depends on the use of other valuable resources - notably water and energy. Water needed in production processes is typically abstracted from local water courses under licence, is often recycled through the plant and returned after necessary settling and filtration. Many quarries also need to dewater in order to operate. Like any modern industry, we strive to minimise energy consumption. Particular effort is made to find uses for all quarry materials and to maximise resource efficiency.

Aggregates intensity of use



Economic prosperity

The government's objective

- Maintenance of high levels of economic growth and employment

Leading Europe

The government forecasts that most future growth in the aggregates markets will be from recycled sources. The market share of recycled aggregates has more than doubled from ten per cent in 1989 to 24% in 2003, making the rate of recycling in Britain three times the European average. The Government's Waste & Resources Action Programme (WRAP) aims to deliver a three million tonne increase in reprocessing capacity for recycled and secondary aggregates between 2002 and 2006. It is also targeting a ten per cent increase in the use of recycled and secondary aggregates in higher-value (non-fill) applications.



Our indicators will include

- Production figures
- Ratio to construction output
- Ratio to Gross Domestic Product (GDP)
- Employment
- Numbers of operations (by type)

The quarry products industry today has a turnover of over £4 billion and accounts for 40,000 jobs, around half of which are directly related to production of aggregates in 1,300 quarries. In a typical year, the industry produces over 200 million tonnes of primary aggregates and some 65 million tonnes of recycled and secondary aggregates.

To truly appreciate the economic contribution made by the aggregates and quarry products industry you have to look at the myriad of

downstream industries that it supports. In particular, it feeds essential materials to the construction sector, which makes a £100 billion contribution to the economy. Non-metallic minerals supplied to industry for the production of iron and steel, cement, ceramics, glass and inorganic chemicals (to name just a few) are vital raw materials for the manufacturing sector.

At local level, quarries and allied operations are significant contributors to local and regional economies, not just through the jobs they provide and the business rates they pay, but through their spending with suppliers ranging from hauliers to engineering companies and their financial and "in-kind" support for local projects.

Sustainable consumption and production of quarry products

The QPA recognises that the UK's Sustainable Development strategy has been under review and a new version is scheduled to be published in the spring of 2005. We aim to align our emerging strategy with the national priorities identified by government.

One of the four priority areas identified by government in its *Taking It On* consultation paper is 'sustainable consumption, production and use of natural resources'. The case studies here demonstrate the contribution our industry is already making in this area.

Showcase for sustainability

The association's main annual event, the *QPA Showcase*, has already become established as a barometer for sustainable development. In 2004, it featured 28 case studies that demonstrated best practice in health & safety, restoration, community relations, biodiversity, geodiversity, heritage, operational best practice and resource conservation. The show will remain a main element of our sustainability strategy in terms of promoting the standards that are expected of our members.

Fledmyre Quarry

Forfar



Fledmyre is a working quarry that supplies the construction needs over a wide area around Forfar and Dundee. Operational since 1980, it has been progressively restored to create a 30-hectare wildfowl nature reserve with a series of small spring-fed ponds and flower-rich meadows bordered by new woodland. The wildfowl now attracted include redshank, coot, snipe, sandpiper, ringed plover, little ringed plover, lapwing, swan and duck. Careful management of the meadows has also made it attractive to ground-nesting birds. The site has substantial educational value and has been included in the Scottish Executive's Businesses and Biodiversity initiative.

Shorcote Quarry

Gloucestershire



The 550-bed Great Western Hospital at Swindon in Wiltshire has been built using aggregates from Shorcote quarry, near Cirencester. The quarry produces 250,000 tonnes of sand and gravel, which is used within a 30-mile radius and creates rural employment for 40 people. Once restored, the quarry will become a valuable new nature facility in the Cotswold Water Park. Created by quarrying, the park provides enjoyment for thousands of people every year and is half as big again as the Norfolk Broads.

Needingworth Quarry

Cambridgeshire



Needingworth quarry in Cambridgeshire is situated on the edge of the Fens, which was once a wetland wilderness. But drainage to create new farmland meant that by the end of the 1980s, just one third of one per cent of the original remained - an area of only 10 square kilometres. The landscape changed - and wildlife paid a heavy penalty. A group of conservation organisations led by the RSPB (encouraged and supported by the quarry operator) saw an opportunity to swing the balance back towards wetland. Their vision won the support of Cambridgeshire County Council and the local community. It is a project that will span 30 years and will, over that time, create a 700-hectare nature reserve of which 460 hectares will be reed bed, making it the largest single area of reedbed in the UK. Species to benefit already include the nationally threatened bittern.

Cornelly Quarry

South Wales



Cornelly quarry in South Wales supplies around 600,000 tonnes of high-purity limestone each year to the neighbouring steel-making plant for use as a reducing agent in the manufacturing process. The resulting blastfurnace slag co-product then goes back to the quarry for the further processing that gives it additional life as ground granulated blastfurnace slag (GGBS), a cement substitute. GGBS satisfies some two million tonnes of the 12 million-tonne UK cement market, so reducing the call on primary raw materials and reducing both the greenhouse gases associated with the cement-making process.



Providing Essential Materials for Britain

The trade association for the
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concrete industries

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