mpa
essential materials
sustainable solutions

Summer 10 | Issue 2

The magazine of the Mineral Products Association

mineral products today

Delivering for the nation

. . . supporting the recovery

Heavyweight champion
making the case for concrete

Footprint for the future
cutting carbon

One man's mission
Brian's legacy

WELCOME

THE MPA's first year seems to have passed very quickly since our formal launch at *Showcase 09*. It has been a very active time and I hope our members and external stakeholders alike will feel it has been positive and productive.

We faced a number of initial challenges, not least in bringing together three major organisations into one cohesive and dynamic whole. I am pleased to say that it has been achieved and we feel we now have a structure that gives MPA a sharp focus and clear agenda and objectives. The synergy within the mineral products sector had been evident for some while, but it is for the first time operating as an integrated industry with increasing influence as well as better use of resources.

I am delighted that the integration process has been achieved with real enthusiasm from members in all our product areas and we are as a result seeing a surge in support for regional and other events. We are also enjoying a healthy influx of new members who recognise the benefits of a united voice.

One particular facet of our restructuring has been the decision to elevate sustainable development so that it now underpins our policy-making process. We did so not just because it is the responsible approach but because we have a powerful case.

We hope you enjoy this issue and will welcome your comments and suggestions.

Patrick O'Shea
Chairman, MPA

Supporting areas affected by quarrying is a must for the industry

Unfair to communities

COMMUNITIES in quarrying areas - originally identified by Government as the priority for help from the Aggregates Levy Sustainability Fund - are being short-changed when money is distributed, says MPA.

- **Tax since 2002: £2,500m**
- **Assigned to ALSF: £168m**
- **Communities share: £18.95m**

The scheme was designed with the express intention of supporting community and environmental improvement schemes in areas affected by aggregates extraction. But new research from MPA reveals that the proportion of the levy going to benefit communities is in reality less than 1 per cent of total revenue.

In the last eight years, the levy has raised a total of £2,500 million, of which £168.1 million (6.7 per cent) has been used to finance the ALSF, but of that only £18.95 million has been allocated to and spent by local authorities. Some have diverted ALSF funding into other areas of their general budgets.

MPA believes the fund should continue as long as the levy remains in force but that its management should be reviewed to avoid "creeping migration" of funds into the general exchequer.

MPA is calling for ALSF spending on communities in quarrying areas to increase by at least 33 per cent and ideally by up to 50 per cent of the total fund from 2011-12 onwards. It also wants measures to be introduced to ring-fence ALSF money in order to ensure that it is used for its intended purpose.

Encouragement has, however, come from former Environment Minister Dan Norris who, in a recent parliamentary debate, indicated that his department was looking at better targeting of ALSF into quarrying communities.

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Carbon 'leak' staunched . . . for now

CEMENT and lime producers in the UK have welcomed a decision from the EU Commission not to press ahead with an accelerated target for reduction of CO_2. The EU Emission Trading Scheme sector will stick with a targeted 21 per cent reduction by 2020 (based on 2005 levels) rather than make a unilateral commitment to 30 per cent in the absence of other countries signing up to a similarly demanding next stage. MPA Cement said the move could have left its members vulnerable to unfair international competition.

It had warned that members could opt to move their UK operations offshore if the European Union moved to a 30 per cent carbon reduction plan. The result, it said, would be that jobs would be lost and carbon would effectively "leak" from the UK to countries without comparable constraints.

The debate comes at a time when UK producers are already in the vanguard of the European movement to cut CO_2 emissions, with an overall 40 per cent reduction between 1990 and 2008.

Pal Chana, MPA's executive director for cement and lime, says: "The European Union has taken a leadership role in responding to climate change and its current 20 per cent target is already an ambitious one. Our concern was that the UK Government resisted pressure to increase its commitment unilaterally. "

The European Union has set out key conditions to move from 20 per cent to 30 per cent. In particular, it wants other developed countries to commit themselves to comparable emission reductions and developing countries to contribute adequately.

"These conditions have so far clearly not been met," says Pal Chana. "The 2009 Copenhagen Accord has demonstrated that, whilst other countries are willing to take action to tackle climate change, they are not willing to take comparable or equivalent actions to those proposed by the European Union."

He added: "The UK cement and lime industries fully support the Government's ambitious CO_2 reduction targets, but we must maintain a level playing field at a global and European level in order to maintain a healthy domestic manufacturing industry. Other threats to the UK cement and lime industries' international competitiveness continue to hang over their heads, not least adoption of a benchmark on which CO_2 allocations will be made from 2013 onwards."

What the UK industry is doing on carbon - see page 8.

"We need a level playing field at a global and European level to maintain a healthy domestic industry"

The UK industry is already a leader in reducing CO_2 emissions

New Government dialogue

THE new Government will be the target for an intense lobbying effort by MPA as it seeks action to reform a planning system it believes is not fit for purpose.

The industry is concerned that likely reforms will not wholly recognise the special nature of minerals extraction, nor the fact that minerals development is very different from run-of-the-mill construction.

Says MPA executive director Simon van der Byl: "An urgent dialogue is needed with the new regime to communicate the fact that the long-term nature of minerals planning and the investment that goes with it require a dedicated and different approach.

"We are particularly concerned that a drift towards localism could mean an intensification of parochial and nimbyistic attitudes. Localism is fine in its place but it does not work when difficult strategic decisions need to be made in the national interest."

Management of the public sector debt is another Government challenge in which the industry has a major interest. With deficits likely for years, the overall debt will rise and so will annual debt interest payments. Historically, Governments have dealt with such problems by cutting investment – an approach set out in the March Budget.

"But if we are to make real progress in dealing with outstanding national problems such as the poor condition of the road network and the chronic and growing undersupply of low-cost housing, Government must put funds into these areas," says Simon van der Byl.

With every £1 invested in construction generating £2.84 of economic activity, the industry believes it has a key part to play in the rate of economic recovery – as well as improving infrastructure and quality of life.

Setting the agenda

Chief executive Nigel Jackson explains the background to MPA's newly launched agenda

THE birth of a new Parliament with 232 newly-elected MPs taking a fresh look at the issues of our time presents both a challenge and an opportunity for MPA. It is one which chief executive Nigel Jackson is determined to grasp with both hands.

"In many senses, we start with a blank canvas and there will never be a better time to build a better awareness of the essentiality of our industry and the fact that we are achieving very high levels of sustainability," he says. "At the same time, we need those who represent us at Westminster to understand that we face considerable problems and need their cooperation, because without a healthy mineral products industry they will find it difficult to deliver their agenda."

In shaping up for the election and the aftermath, MPA decided that it needed to be very clear on its agenda for the future. Its new publication *"Delivering for the nation . . . supporting the recovery"* sets out what the industry believes it can contribute to the UK's future. But it also details the challenges that it faces and the Government support that it needs to help overcome them.

Featured in detail on pages 10 and 11 of this issue, the five-point agenda identifies the key strategic priorities to enable the industry to help deliver Government's economic, environmental and social aims and aspirations. While a big player in its own right, the mineral products industry is more significant still when you recognise that it is the major material supplier to the construction and manufacturing industries which are so vital to the nation's economic performance – and its recovery.

"This is a positive agenda for our industry and Government," says Nigel Jackson. "We are not presenting Government with a shopping list of demands, but setting out how we can contribute to improving our built environment and enhancing our natural environment. Our relationship with Government is critical, as is its response to a number of key issues."

Economic issues inevitably come at the top of the MPA's agenda as its looks for a period of economic stability. Without the resulting confidence, operators are unlikely to be prepared to invest for the future and so contribute to the recovery. Cost, complexity and taxation are a particularly big disincentive for international companies that could opt to invest elsewhere.

The need for a "licence to operate" is equally fundamental. Reasonable access to mineral resources has long been an issue, with operators still pleading for an effective, simpler and faster planning system that is based on realistic assessments of future demand.

While accepting the need to be effectively regulated, the industry says it is overwhelmed by an often conflicting volume of legislation from both Westminster and Brussels. Often, such legislation is "gold plated" by the time it is transposed to the UK.

But perhaps the issue that frustrates Nigel Jackson most is the failure of Government to recognise the progress that has been made by the industry. "We have come a long way over the past 20 years and are now a world leader in the fields of recycling, restoration and biodiversity," he says. "We are contributing to the evolution of both the built and natural environments and we are making real inroads in tackling climate change.

"Yet still all too often our achievements go unrecognised and there is a failure to make the link to the fact that we are central to delivery of Government aspirations."

Rocky roadshow

***GRAVEL is great* is the title of a new schools roadshow that will be making its way between primary schools in Wiltshire and Gloucestershire over the coming months.**

Support from Natural England via the Aggregates Levy Sustainability Fund has enabled the Cotswold Water Park Society to develop an educational programme that includes a video celebrating the gravel extraction that has paved the way for creation of a 40 square-mile park that is now bigger than the Norfolk Broads.

The park includes 10 lakes and six grasslands that are of SSSI status and attracts over 20,000 waterbirds every winter to its nationally important wetland.

More info on the schools initiative from www.waterpark.org

Photo courtesy Tarmac

Heavyweight is champion

There is now growing awareness that, when it comes to making our built environment more carbon friendly, concrete has the answers. As a local material that travels short distances from the point of production, it scores heavily. But buildings that use traditional heavyweight construction materials are also much more energy efficient.

IT is a startling fact that around 27 per cent of the UK's CO_2 emissions come from our homes as the energy for which we pay so dearly seeps into the atmosphere. Construction methods that retain warmth in winter and reduce the need for air conditioning in summer must then be the future.

Concrete has, of course, been popular for a very long time but the extent of its sustainability credentials when compared with timber and steel still comes as a surprise – even to those on the inside of the industry that produces it. There can, however, now be no doubt that concrete and masonry construction is winning some key victories.

It is significant that latest NHBC housing statistics show a substantial drop in the market share for timber frame – from 27 per cent in the first quarter of 2009 to just 18 per cent by the end of the year. While explicit figures for concrete and masonry are not collected by NHBC, the results indicate a significant rise in masonry construction.

Andrew Minson, executive director of MPA The Concrete Centre, is convinced that increasing emphasis on sustainable performance and thermal efficiency has resulted in growing recognition of the role that heavyweight construction can play in reducing heating and air conditioning requirements.

"The concrete block industry can take heart from the increase in its market share, which bodes well for the time when construction activity really picks up," he says. "The wide range of inherent benefits of heavyweight construction is seeing off the challenges of lightweight solutions."

The key to the advantage of masonry and concrete lies in what is known as "thermal mass" – put simply, the capacity of a material to store heat. Concrete and masonry steadily absorb heat and store it until exposed to cooler conditions when their temperature

Photo courtesy CEMEX

> "The wide range of inherent benefits of heavyweight construction is seeing off the challenges of lightweight solutions"

continued overleaf

Heavyweight is champion > *continued from previous page*

begins to drop. This special ability to absorb and release heat enables buildings with thermal mass to respond naturally to changing weather conditions.

Research carried out by The Concrete Centre in conjunction with a registered social landlord shows that heavyweight construction can reach the highest levels of the Government's Code for Sustainable Homes, the national standard for sustainable design and construction. As well as sustainability credentials, heavyweight scores in terms of fire resistance, flood resilience and sound insulation.

It is estimated that some 570,000 UK homes are at high risk of flooding, which is a significant proportion of the total housing stock. That proportion is expected to rise in the years ahead as pressure mounts to use flood risk areas for new housing. When used as part of a flood resilience design strategy, concrete and masonry don't absorb significant water and may not require finishes such as plasterboard that would have to be stripped after floods.

Photo courtesy Hills Homes

. . . heavyweight scores in terms of fire resistance, flood resilience and sound insulation

The fire safety argument is equally powerful given that fire costs the economy of England and Wales some £8 billion a year. It is not then surprising that insurers have become particularly conscious of the part that construction methods can play in minimising the effects of fire, with timber-frame coming under particular scrutiny.

There are even reports that some insurers could refuse cover for timber-frame buildings due to growing concern about their fire safety and the increasing costs of claims. Concrete, on the other hand, can offer fire resistance well beyond the periods stipulated by building regulations for life safety.

In 2006, the six-storey Colindale timber-frame housing development in north London burned to the ground during construction in less than nine minutes. A subsequent report from the Fire Protection Association questioned whether timber-frame should be used for high-rise developments. Brian Coleman, chairman of the London Assembly and vice-chair of the London Fire and Emergency Planning Authority said: "Nobody in their right mind would buy a timber-frame building higher than two storeys."

Andrew Minson concludes: "Concrete offers insurers and policy holders the potential for minimal fire damage, and therefore, smaller claims and lower premiums."

Concrete proof

FROM clients to builders, architects and specifiers – everyone in the construction sector is now talking about how best to achieve the Government's sustainability targets.

Concrete's credentials in bidding for recognition as the lead material is gathering pace with the launch as this issue goes to press of a new "This is Concrete" campaign, which seeks to establish pride within the sector and create a dialogue with stakeholders. The campaign gets underway with a series of ads in specifier journals like the one shown here which features Hampshire County Council's revitalised Winchester headquarters, now known as Elizabeth II Court.

Faced with the choice of demolition or re-use of the original 1960s concrete frame, the project team saved half the embodied energy by revitalising what existed. Concrete from the elements that were demolished was recycled, crushed and re-used as aggregate. Use of the available space was much improved, with the original 625 occupants now doubled in a building that is naturally cool in summer and warm in winter. It has been achieved with exposed concrete soffits, solar shading and intelligent lighting and water-saving systems. Computer modelling has predicted that the carbon footprint in terms of emissions of CO_2 per square metre per year should reduce by around two-thirds.

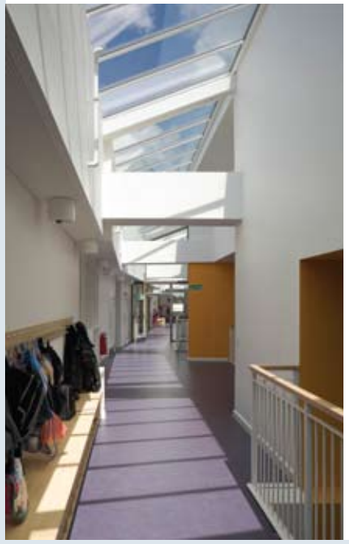
You can follow the new campaign and contribute your own experiences to the debate via www.thisisconcrete.co.uk.

At school

WITH day-to-day operation of UK schools resulting in emission of over nine million tonnes of greenhouse gases every year, the world of education has an important part to play in a sustainable future. As our case studies here demonstrate, concrete is being chosen not just for its energy efficiency but because it is flexible – and looks good.

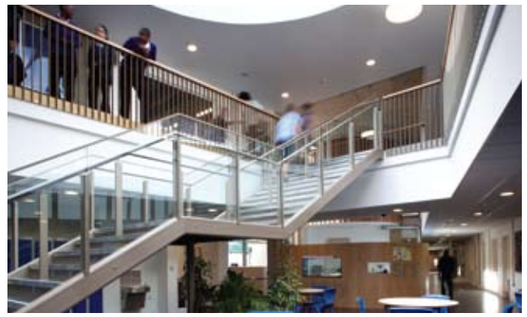
John Perryn Primary School, Acton, London

A project that incorporates both a primary school and children's centre and is designed over two floors to create a light-filled building. A concrete panel wall slab system allowed for rapid construction and high quality durable exposed internal finish. The frame was constructed in just 35 working days. Solid concrete walls and exposed ceiling soffits provide thermal mass which is enhanced by night-time cooling, cross-ventilation and high levels of daylight. The building achieves a 33 per cent saving in CO_2 over current building requirements.



Highbury Grove and Samuel Rhodes Schools, Islington, London

Samuel Rhodes is a special educational needs school which shares a site with Highbury Grove secondary school. The new £30 million building caters for 1,400 children and was erected around existing buildings that needed to be kept in use during construction. A concrete frame provides a flexible and adaptable structure. Exposed concrete soffits and walls reduce the need for expensive and maintenance-heavy finishes and provide thermal mass to reduce energy needs. The new building generates 20 per cent of its energy from on-site renewable energy installations.



Joseph Chamberlain College, Birmingham

Joseph Chamberlain is a new £29 million college overlooking the city of Birmingham. Fronting onto two busy roads, it has been designed as a crescent around a quiet garden, with concrete providing an effective acoustic barrier. The main buildings have a largely exposed fair-faced, in-situ concrete frame, providing thermal mass and so reducing mechanical heating and air conditioning requirements. Concrete was chosen for the aesthetics of the exposed concrete walls and for the flexibility it gave for services distribution under the flat slab.

Footprint for the future

From l to r: Tyres are a valuable new fuel; Major new investment has reduced emissions; Asphalt industry – working with customers to remove CO_2

Cutting carbon is one of the great challenges for the mineral products industry. It is of particular relevance to cement and lime as energy-intensive operations where extreme heat is fundamental to the production process. The commitment is substantial and the progress encouraging.

LOOK around you and you may not see it. Look again, and cement is pretty well everywhere.

As a critical ingredient in concrete, cement is the stuff on which our modern lives are built and is essential for economic and social well-being. Given its role in our homes, schools, hospitals, roads, bridges and much more, it is no surprise that concrete is second only to water as the most consumed substance on the planet.

But the human benefits that flow from cement are only possible given kiln temperatures of 1,450ºC – equivalent to the heart of a volcano. It is only with such heat that you can bring about the chemical change that transforms limestone into "clinker" – cement before it is ground down to a powder.

By its nature, it is inevitably an energy and carbon-intensive process. Globally, cement production accounts for around five per cent of total CO_2 emissions. Here in the UK, the industry is responsible for about two per cent of the nation's carbon footprint and long ago accepted that it has a part to play in fighting climate change.

> . . . concrete is second only to water as the most consumed substance on the planet

The industry strategy has three key stages: short term to 2015; medium term to 2030; and long term to 2050. The short-term campaign recognises that 60 per cent of the CO_2 arising directly from cement manufacture comes from the decomposition of limestone, a chemical process that is unavoidable. The remainder comes from the kiln fuel. Smaller amounts of CO_2 are produced from delivery of the end-product and the generation of electricity used by the industry.

During the last decade, the industry lowered its CO_2 emissions from 924 to 776 kilogrammes per tonne produced. This means that in absolute terms CO_2 emissions were cut by 3.7 million tonnes in ten years. It has been achieved through heavy investment in new plant and technology and the use of waste-derived fuels.

> In absolute terms, CO_2 emissions have been cut by 3.7 million tonnes in ten years

This trend of investing in energy efficiency and increasing the use of waste derived fuels - particularly biomass - will drive the medium-term strategy. There is a role too for increasing the production of factory-made composite cements which involve replacing clinker with wastes from other industries such as pulverised fuel ash and ground blast furnace slag.

The industry is also investing in research into new low-carbon cements and concretes that have a lower embodied CO_2 content. Crucially, it will also play a more proactive role as a key player in the construction supply chain, and work with designers to increase recognition of the energy efficiency properties of concrete.

It is working particularly closely with MPA The Concrete Centre in promoting concrete's role in creating a more sustainable built environment.

Cutting the industry's carbon footprint in the longer term will necessitate advances in the evolution of carbon capture and storage. There is a long way to go but, in theory, capture and storage could lead to net-zero CO_2 emissions when employed in conjunction with extensive use of biomass and waste-derived fuels. Making that possible depends upon Government willingness to invest in large scale projects to demonstrate the effectiveness of new technologies.

Pal Chana, executive director for MPA Cement, is confident in the course the industry is taking. "But our goals depend upon a public policy framework that is fully supportive of the necessary technology developments and dissemination," he says. "Many components of this strategy remain tantalisingly just out of reach scientifically, but we take heart from the huge progress made in the short term."

TEAM EFFORT

ASPHALT and aggregates are achieving similarly impressive improvements in energy efficiency.

MPA has been working closely with the Carbon Trust to develop and implement a carbon-reduction programme for the aggregates and aggregates products sectors. With several substantial company initiatives underway, the overall potential is significant.

In the case of asphalt, the industry has looked beyond its own boundaries and is working with key customers including the Highways Agency to develop what is known as the Asphalt Pavement Embodied Carbon Tool (asPECT) which will ensure consistency and transparency in reporting progress.

The first phase of the project has focused on assessment of greenhouse gas emissions from the production and use of asphalt in highway courses. The remainder of the project will see development of further modules which extend to include the full road structure and its whole life. Sustainability issues other than climate change will also be considered.

The commitment to cutting carbon comes despite the fact that current market conditions do not optimise production or emissions efficiencies.

Delivering for the nation
. . . supporting the recovery

MPA has launched an agenda which identifies five key strategic priorities to enable the industry to help deliver the Government's own economic, environmental and social aspirations. In the coming months the association and its members will be taking the MPA's messages shown here to key political audiences across the country to raise awareness that supporting mineral products will help boost the recovery from recession.

Mineral products are essential to our construction and manufacturing industries, to our economy and to our everyday lives. The industry will be in the engine room as the nation recovers from recession but it needs support from Government and a willingness to tackle five crucial issues outlined here.

1: Economic conditions that support investment

A stable economy is now fundamental, as is a less onerous attitude to tax. Only if the Government commits to and delivers long-term investment will MPA members, particularly those with international operations, have confidence to spend in the UK.

2: Better Government support for an essential industry

The industry needs more effective Government sponsorship and a more coordinated policy approach from its many departments. It will deliver sustainable solutions for the built environment in return for a more rigorous science-based evaluation of the credentials of competing materials.

3: A reasonable "licence to operate"

The UK can only enjoy the benefits of its mineral products if the industry has a sound licence to operate. That means an effective, simpler, more consistent and faster planning system based on realistic assessments of future demand.

4: Proportionate legislation and regulation

Proper regulation of industry is important but the industry is faced with an overwhelming and often conflicting volume. The cumulative burden is massive. New legislation must be fit for purpose and not unfairly "gold plated" when transposed from Brussels to the UK.

5: Recognition of progress

The industry is a world leader in the quality of its operations and best in Europe at recycling and resource efficiency. It is also a big contributor to overcoming the challenges of climate change and of sustaining the UK's biodiversity.

Every year, the UK mineral products industry supplies over £5 billion worth of materials, directly and indirectly employs over 60,000 people and underpins the vast £110 billion construction sector.

ANNUAL PRODUCTION: aggregates: 200m tonnes . . . cement: 10m tonnes . . . asphalt: 20m tonnes . . . ready-mixed concrete: 15m cu metres . . . silica sand: 4m tonnes . . . recycled and secondary aggregates: 25% of total demand.

FACT: Every £1 invested in construction generates £2.84 in total economic activity – construction relies on mineral products.

FACT: With the added time taken to have a site allocated in local development plans and gain supporting consents from the Environment Agency, it can take ten years or more to achieve planning permission for a new mineral site.

FACT: Britain is a world leader in recycling not just materials but land for beneficial after-uses. Recycled aggregates now make up 25% of the market – the best performance in Europe.

FACT: On average, MPA members deliver one million tonnes of mineral products every working day – more than oil, gas and coal put together – to support the sustainable development of the UK.

For a full copy of the MPA agenda visit our website www.mineralproducts.org

One man and his mission

Brian Butterfield was one of those few people whose ground-level input to the mineral products industry has made a real difference to its reputation. He was a restoration manager but also forestry manager, farm manager and conservation manager – beyond all else, a countryman. He not just managed land but loved it and recognised the substantial potential offered by quarrying for enhancement. Brian's untimely death in February brought to an end a 48-year association with Lafarge Aggregates' Panshanger operation near Hertford. What he achieved there is quite incredible. Having filmed Brian for MPA *Showcase 09*, we allow him here to take us on a tour of his beloved bit of England.

The estate

"Panshanger Park was regarded as one of landscape architect Humphry Repton's most perfect schemes and incorporated the River Mimram as a main feature. When we bought the estate it was pretty derelict. A lot of rough pasture with birch and thorn scrub - no forestry management for 40 years. But it was, nonetheless, part of the heritage of England. You probably wouldn't get permission to quarry a place like this today but we have carefully worked pockets and probably made it a better estate. You couldn't afford to do that without quarrying because the land isn't really very high grade agriculture. Without mineral working, it had no future."

The Panshanger estate covers 440 hectares, of which 90 hectares is in the local mineral plan and about half is restored to lakes and agriculture. At one time, the quarry produced around 350,000 tonnes of sand and gravel a year.

"Brian was one in a million; someone so special can never be forgotten. We will remember him in every tree that we see in Panshanger Park."

Annie Butterfield (a colleague who shared Brian's surname)

Britain's oldest oak?

Quarrying gave Panshanger a future

Management on the Mimram

Picturesque lakes

River

"The River Mimram runs through the middle of the Panshanger quarry. It's one of the few chalk streams left in Hertfordshire and is known for its brown trout and grayling. We do quite a lot of management on the river with the help of the Environment Agency. We have, for example, put logs into the stream to speed up the flow in places and to create bays in other places. In doing so, we have effectively created a spawning ground for wild trout. Repton diverted the Mimram to make two lakes but we, as part of the quarrying process, put it back on its old course."

Lake and ponds

"We are about half a mile from Hertford town centre, which is hard to believe as you stand here. This was the first of a series of lakes that we dug - it was restored about seven years ago. In the winter time, apart from swans, coots, moorhens and Canada geese, we have a lot of overwintering duck like pochard, mallard and mandarin. We even have two pairs of egrets here. We allow fishing to the island but the area from there to the road is for conservation. I have just put some dragonfly ponds in for the Herts and Middlesex Wildlife Trust and I think it will, with a bit more work, become their top site for dragonflies. There are also Norfolk reeds as an attempt to attract the bittern back."

Agriculture

"This is the last area to be restored; its been drained and is now going into five years of agricultural aftercare by sowing initially with conservation crops which will put the soils back to their original state, and will also attract birds, butterflies and insects. Some will be sown with millet for song birds. The green area over there is American sweet clover, which is good for bees and butterflies and went in last year as a further stage in the aftercare. I contracted with Jordans to produce rye for breakfast cereals from one area; we got 95 tonnes of good quality rye in 2008."

Woodland

"We have about 250 veteran trees in the park and amongst them is what is said to be one of the oldest oaks in the country – 500 to 600 years old. As we go through the woodland you will see a lot of younger planting and views we have left through to the park. To date, we have planted about 65,000 trees – we had to do a lot of replanting after the gales in the 80s. The management of the woodland is time consuming but it's worth it."

Bat cave

"This is the old ice house that supplied ice for the original mansion. With the help of Herts and Middlesex Wildlife Trust, we have made it into what's known as a 'bat hibernaculum'. We have put a door on which has cut-outs to give access to the bats. Inside, we have bat boxes beside the entrance and in the main tunnel. So far, we have two species living here."

"As gravel operators I don't think anyone quite realises how much land management that we do. This estate was laid out by Humphry Repton and Capability Brown but if they came back today they wouldn't be disappointed by what we have done because I think we have enhanced it a lot."

"His knowledge for the land – immense
His feelings towards Lafarge – intense
Truly proud of our reputation
Experience beyond expectation
A truly irreplaceable man
seemingly with us since records began."

Kerry Howard

Brian's video tour of Panshanger is available from the cinema area of www.mineralproducts.org. Go to *Showcase* and look for Kate Humble's biodiversity update.

Cracking up

As one of the partners in the Asphalt Industry Alliance, MPA has been pressing Government to end the perpetual under-funding of highway maintenance. On the day before the AIA published its latest damning report, Chancellor Alistair Darling announced a £100 million emergency fund to help councils deal with potholes after the worst winter for 30 years. But will it be enough?

CHANNEL 4 labelled Britain's pothole plight "streets of shame" and was inundated when it invited viewers to submit their own favourite hole in the road pictures. Such has been the clamour over our pockmarked roads in recent months that potholes now even have their own website where you can report latest eruptions and get help with filing claims.

The problem is not, however, a new one because the AIA's Annual Local Authority Road Maintenance (ALARM) survey is the fifteenth. This time around, it reveals a 40 per cent rise in the number of potholes in local authority roads in England and Wales. During last year, councils filled no fewer than 1.4 million potholes at a cost of £103 million.

The general condition of our roads was not helped by the fact that utility companies dug 2.5 million trenches.

The problem for councils was that, thanks to the problems that appeared after February 2009's snow, they found themselves with a £400 million hole in their maintenance budgets at a time when they were already underfunded to the tune of £800 million. It means that the Chancellor's £100 million emergency fund is welcome but will not solve the long-term structural problems which most concern councils.

The total cost of bringing the country's roads up to scratch has, says the ALARM survey, now risen to £9.5 billion, an increase of 12 per cent on the previous year. Local authorities

. . . potholes now even have their own website where you can report latest eruptions and get help with filing claims

in England estimate that it would take a minimum of 11.5 years to catch up on the backlog of repairs at present rates of funding. In Wales, the backlog would take 15 years to clear.

According to the report, reactive maintenance – the costs of dealing with emergency repairs rather than planned works – consumes a quarter of the average maintenance budget. The work must, however, be carried out if roads are not to become unsafe.

Utility companies with their trenches have become a real issue, with nearly 90 per cent of local authorities saying that they should be charged for knock-on costs. Even if properly reinstated, deep trenches weaken the structure of the road and shorten life by 30 per cent. Charging the utilities would free up around 13 per cent of planned maintenance budgets.

The AIA is calling for a new approach to funding roads maintenance, including sustained, longer-term budgets, which would allow for proper planned maintenance. It also wants the maintenance spend to be better protected within local authorities

AIA chairman Mike Linley said that the increase in government funding over recent years was "a drop in the ocean" compared to what was needed to "stop the rot". "Extreme winter weather would not cause so much damage if our roads were fit for purpose in the first place. The consequences of an underfunded roads maintenance service are now writ large on our road network. These include compromised road safety and wasted time as road-users are held up by unplanned road works."

He added: "Local authorities that prioritise their roads maintenance budgets report higher levels of resident satisfaction and falls in compensation payouts of up to 30 per cent - a real return on investment."

STATS FOR 2009

- **1.4 million potholes**
- **2.5 million utility trenches**
- **Over £100m spent filling potholes**
- **Highways departments 50% underfunded**
- **Catch-up repair estimates now £9.5bn**
- **£30 million paid in compensation**

"Extreme winter weather would not cause so much damage if our roads were fit for purpose in the first place"

BEST AND WORST

THE dubious title of Britain's most potholed county goes to Surrey, where a total of nearly 2,000 were recorded in a recent survey, twice and many as second-placed Hampshire with Kent close behind in third.

The data comes from a survey undertaken for car maker Kia which said that its dealers in worst areas reported a 150 per cent increase in owners reporting damage from broken roads. Suspension failure, damaged alloy wheels and split tyres were widespread, with the average repair bill running at £750.

Tadworth motorist Bianca Lee-Chang said: "You are hard pushed to move a few hundred metres without falling foul of a pothole. I had a nasty encounter with one last week and spent two hours waiting for recovery, followed by a £200 bill for the pleasure."

While the survey lists Carmarthenshire as the place with fewest potholes, Leeds City Council reckons that it too is doing well having upped its maintenance budget by £92 million between 2005 and 2011 thanks to a one-off capital windfall available from the sale of the Leeds Bradford Airport. This allowed the council to invest in "real and lasting improvements" that have already resulted in claims for compensation falling by 30 per cent, and a significant improvement in public perception.

Proving good progress

YOU might be forgiven if, in the wake of the most devastating recession in living memory, you allowed your commitment to the issue of sustainable development to slip a little. The MPA, MPA Cement and BMAPA have each published sustainable development reports which show that real progress is still being made.

As MPA chief executive Nigel Jackson puts it: "This 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."

"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's sustainable development report is its first since the new organisation was launched and is noteworthy because it brings together the full range of products that now fall under the umbrella of mineral products. With cement and concrete now running alongside aggregates, asphalt, industrial sand, lime, mortar, recycled and secondary materials, there is a much bigger picture of performance in critical areas.

MPA draws particular satisfaction from the rapid acceleration in resource efficiency over recent years. The use of recycled and secondary aggregates in Britain climbed to a Europe-leading 25 per cent of the market by 2005 and has remained broadly stable.

Restoration of quarried land has enjoyed similar success and has helped to transform the image of the industry. Long term success is, however, now threatened by difficulty in attracting sufficient clay-type inert materials to fill the voids created by extraction. MPA is, nonetheless, pleased that the Government has accepted its representations and confirmed it will not extend the scope of landfill tax to include materials used for quarry restoration.

The report also comments on the ground gained in terms of stakeholder accountability, with widespread community engagement helping to resolve issues and release positive benefits for society. The experience has enabled companies to shift from compliance and crisis-driven engagement to an approach based on partnership.

HIGHLIGHTS FROM MPA

- Since 1999, MPA members producing aggregates and mineral products haven reduced HSE-reportable injuries by 80 per cent
- The cement industry recorded a 40 per cent reduction in absolute CO_2 emissions between 1990 and 2008
- MPA members planted 129,799 trees and built 3.5k of dry stone walls
- Recycled and secondary materials now make up 25 per cent of the GB aggregates market - the highest rate in Europe
- The concrete industry already significantly exceeds the Government's 2012 target for the responsible sourcing of construction materials
- 700 Sites of Special Scientific Interest (SSSIs) were originally mineral operations.

Cement vision

EMISSIONS are the big challenge for cement operators who, in their latest "Performance Report", reveal that targets have been not just met but exceeded in 11 our of 15 sectors, including the key emissions of CO_2, oxides of nitrogen (NO_x), sulphur dioxide (SO_2) and dust.

"Once again, our members have risen to the environmental challenge and beat many of their 2010 targets two years early," says Pal Chana, executive director for MPA Cement. "This is testament to their commitment to minimising the impact of operations on local communities and the environment as a whole.

"Even in these recession-burdened times when production is down, our members are looking to the future and ensuring that their essential products continue to be produced to the benefit of the economy and society in general."

The industry and the Environment Agency have agreed new objectives which are set out in the report. They have also mapped out a five-point vision for 2020:

1. Increase the use of waste used as raw materials or fuel in cement works
2. Reduce waste disposal from cement manufacturing
3. Reduce air pollution from cement manufacturing
4. Reduce emissions of greenhouse gases per tonne of cement
5. Improve regulatory compliance and stakeholder perception of sites.

Smaller footprints at sea

MARINE aggregate operators are making substantial inroads into both their carbon and dredging footprints, according to the latest sustainable development report from the British Marine Aggregate Producers Association (BMAPA).

Latest data shows that although reported production fell by just over four per cent in 2008, CO_2 emissions reduced by more than 14 per cent overall and by 10 per cent per tonne landed. Meanwhile, the area of seabed licensed for dredging fell by nearly five per cent. Another significant figure revealed by the report is that hours dredged reduced by nearly 13 per cent, which suggests that onboard screening or processing was less intensive. That in turn means less sediment being returned (flowing) back into the sea.

The report relates to a year in which the industry landed just over 13 million tonnes of sand and gravel in England and Wales, of which some seven million tonnes went to London and the Thames corridor. The total sand and gravel market in England and Wales was 64 million tonnes.

BMAPA chairman John Miller says that while carbon represents a major challenge, the industry starts with an important advantage because it delivers large volumes close to the point of demand, with minimal lorry miles to complete deliveries.

Another key issue is the recent royal assent for the Marine & Coastal Access Act. A wholehearted supporter of what it regards as a long-overdue system for managing the seas, BMAPA believes it will help deliver new certainty for marine industries while enabling them to fulfil their roles for society.

Copies of the reports referred to here can be downloaded from:

MPA Sustainable Development Report 2009
www.mineralproducts.org

BMAPA Sustainability Report December 2009
www.bmapa.org

Performance 2008: A sector plan report from the UK cement industry
www.cementindustry.co.uk

HEALTH & SAFETY

Targets getting harder

MPA members have once again beaten their increasingly "hard targets" on health and safety with a five-year reduction of 65 per cent in reportable injuries. But no-one will be resting on their laurels because the association is now setting its sights higher still.

Figures to the end of 2009 show that MPA has achieved its ambition to halve reportable injuries when compared with 2004. The cement sector has posted even more impressive figures by reducing its injuries over the same period by 81 per cent. Tracking back still further, the industry as a whole has managed an 83 per cent cut in work-related injuries over ten years.

MPA has now rationalised its data gathering and its new five-year targets carry an overarching "expectation of zero harm". The new five-year target is based on a "lost-time injury frequency rate" for direct employees. With the rate for 2009 calculated at 3.59 lost time hours per million hours worked, the target for 2014 has been set at 1.79 or less.

Meanwhile, accidents for contractors are being calculated simply as "lost time injuries" with a target of 20 or less compared with last year's figure of 41.

MPA's chief executive, Nigel Jackson, said: "The easier wins are no longer there - success in the coming years will require ingenuity and resolve, the likes of which other industries will find hard to match."

RECYCLED

Image under threat

THE reputation of recycled aggregates is being harmed by some producers who are failing to follow a quality protocol developed by the Waste & Resources Action Programme (WRAP) to ensure that inert demolition waste is converted into aggregates that comply with European standards.

The concern comes from MPA's Aggregates, Asphalt, Recycled and Slag Product Groups which says that less reputable non-MPA producers are failing to follow guidance designed to provide a benchmark and to ensure uniform standards.

The protocol is currently undergoing a five-year review and MPA has expressed concern that insufficient site visits are being made to operators whose standards are questionable.

Quality protocols are also being considered for other materials such as pulverised fuel ash, furnace bottom ash, incinerator bottom ash and steel slag that can be used as aggregates.

AGRICULTURAL LIME

Sustaining our soils

LIME supplied by the mineral products industry has an important role to play in a new Government strategy designed to protect soils across England from a series of modern threats.

The Agricultural Lime Association is championing the cause, working with farming, environmental and academic bodies on the "Safeguarding our soils" strategy as part of the new Soils Advisory Forum. It has stressed that acidification is a significant threat in the breakdown of soil structure and that the maintenance of the correct pH levels is fundamental in sustaining and protecting UK food production.

The ALA says that the importance of regular liming is often understated. It points out that if acidity increases above neutral levels,

it will eventually lead to a considerable reduction in fertility, crop yield and profitability. While mineral soils will naturally turn acidic, lime losses are accelerated by leaching due to rainfall, crop off-take, use of fertilisers with high ammonium nitrate concentration and pollution due to acid rain and other pollutants.

CONCRETE INDUSTRY

Concrete evidence

THE concrete industry's second annual sustainability performance report sets out a bold vision for 2012: to be recognised as being the leader in sustainable construction.

The new report builds on the benchmark data first published in 2009 when 14 performance indicators were identified. This year, there is not just a data update but 12 clear targets (plus some in development) for achievement by 2012.

Notably, they include a reduction of 17 per cent in the level of CO_2 emissions as a proportion of concrete output against a 1990 baseline figure. The industry also aims to further increase the use of material diverted from the waste stream for use as fuel from 17.3 per cent in 2008 to 21 per cent by 2012. And it is setting out to increase the percentage of by-products, such as fly ash from power stations and ground granulated blast furnace slag from the steel industry, used as a proportion of cementitious materials to 33 per cent.

"These are real targets that the concrete industry is committed to achieving and, where possible, exceeding," says Andrew Minson, executive director of MPA The Concrete Centre. "They are not vague promises but commitments to action that will build upon the good work already achieved and on the inherent sustainable performance benefits of concrete."

TARGETS FOR 2012 INCLUDE:

- Increase production sites covered by a UKAS-certified environmental management system from 72% to 85%
- Reduce CO_2 emissions as a proportion of production output from 88.1kg to 85.5kg per tonne
- Increase material diverted from the waste stream for use as a fuel source from 17.3% of total energy use to 21%
- Reduce convictions for air and water emissions per year from six to zero
- Increase percentage of relevant production sites that have site-specific biodiversity action plans from 94% to 100%
- Reduce reportable injuries per 100,000 direct employees per year by 50% between 2009 and 2014 with an aim of zero harm.

SURFACING

Getting a grip

MOST of us aren't aware of the extra grip beneath our wheels as we approach roundabouts and other potential accident blackspots - but the aggregates with which the road has been built have a major part to play in how quickly we stop. Ultimately, it can save lives.

Measuring the skid resistance (or polished stone value) of different aggregates is an important issue for road builders and was a concern when the Midlands quarry which provided supplies of stone as a benchmark closed.

The good news is that the Transport Research Laboratory has now been able to identify on behalf of the Highways Agency a new "control stone" around which the vital system can continue to operate.

Aggregates are tested for PSV according to a European Standard comparing every test result with the control stone. The aggregate PSV must meet minimum requirements specified by the Highways Agency for motorways and major trunk roads and by local authorities for the local road network.

PLANNING

Planning or politics?

MPA has voiced a "serious note of caution" over a decision by the West Midlands Regional Assembly to change the way future supplies of sand and gravel are provided for. Under new proposals, the balance of provision would shift away from Staffordshire with increases for all other parts of the region, notably for Shropshire and Herefordshire.

"We believe that this approach has been motivated more by politics than by sound technical assessment or mineral planning," said MPA chief executive Nigel Jackson. "The recommendations of the Regional Aggregate Working Party have been rejected but it is not clear why. We believe that the new proposals have the potential to cause shortages of construction materials in the future in some parts of the region."

The planning system allows for assessments to be made of the ability of each area to meet potential future demands and for that apportionment to be reduced if necessary.

Photo courtesy Alison Hopewell

Quarries jump into ponds campaign

THE mineral products industry is wading enthusiastically into a project that aims to reverse the decline in British ponds.

While most countryside ponds are now badly damaged by pollution (notably from farming fertilizers), quarrying is one of the major land-uses with the capacity to create new sites with clean, unpolluted water. The project adds a further strand to the industry's own campaign to promote and extend the biodiversity potential of its sites. It is already able to show that some 700 UK Sites of Special Scientific Interest originate from quarrying.

The new campaign, part of the national *Million Ponds Project*, comes from Pond Conservation, a national charity dedicated to protecting freshwater wildlife. Based in Oxfordshire, it has recognised the particular potential for clean water ponds on aggregate sites from initial studies involving restored gravel quarries in the Lower Windrush Valley around Witney.

Of 20 ponds on gravel extraction sites surveyed for wetland plants and invertebrates, all but two were found to be UK Biodiversity Action Plan Priority Ponds supporting important species. They ranged in size from just a few square metres to long linear ditches dug to monitor ground water, and included temporary ponds that dry up for parts of each year.

The work in the Lower Windrush Valley has received close support from MPA member Smiths Bletchington, which is currently incorporating the pond creation advice into the restoration of recently worked areas of its Gill Mill quarry at Ducklington.

Smiths planning and estates manager Martin Layer believes that ponds will complement the wider restoration scheme. "It is early days but we have created new ponds and scrapes and the early signs are that we are adding biodiversity value quickly and easily," he said. "We shall certainly be adopting this advice in future nature conservation schemes."

> "We believe we can produce a lasting legacy of pond creation on minerals sites"

Photo courtesy Fred Holmes

The mission now is to spread the word across the industry with the aim of creating up to 200 clean water ponds on aggregate sites by March 2011, around half of which are to be designed for Biodiversity Action Plan species, such as stoneworts, Reed Bunting and Common Toad. The project involves a dedicated minerals project officer within Pond Conservation, Madeleine Ryan, who is funded by Natural England through Defra's portion of the Aggregates Levy Sustainability Fund (ALSF).

"The minerals industry has responded enthusiastically to the project, and several clean water pond creation schemes are now planned at quarry sites in Oxfordshire, Gloucestershire and Cambridgeshire," says Madeleine. "We believe we can produce a lasting legacy of pond creation on minerals sites."

Pond Conservation's pond creation kit for the industry can be downloaded from www.pondconservation.org