

Autumn 09 | Issue 1

The magazine of the Mineral Products Association

mineral

products today



Humble beginnings

Kate explores biodiversity



Showcase 09
tributes to the industry

Cement and carbon
no fuel like a new fuel

Sustainable concrete
making the case

WELCOME

WELCOME to this first issue of *Mineral Products Today* and, indeed, to the Mineral Products Association (MPA) itself.



Given the span of the new organisation, our magazine represents a very broad church in terms of both industry sectors and its membership. That, of course, is one of the great strengths of MPA in that it speaks for companies ranging in size from just a handful of employees to thousands.

Many of the issues our members face are, however, common to all and it will be the job of the magazine to reflect that and to take our essential messages to external stakeholders. We also, however, want to provide an opportunity for those around us to have their say about what we are doing, so third-party contributions will be welcomed.

Much of this issue is given over to *Showcase 09*, which was the official launch pad for MPA, and a timely reminder of the many good and important things going on within the industry. We have received overwhelmingly positive comments about the event and it makes good sense to take its content to a wider audience.

I very much hope that you find this issue interesting. We will welcome feedback and ideas about ways in which we can continue to improve *Mineral Products Today*.

Patrick O'Shea
Chairman, MPA

Mineral Products Association
Gillingham House, 38-44 Gillingham Street
London SW1V 1HU
Tel: 020 7963 8000 Fax: 020 7963 8001
Email: info@mineralproducts.org
Web: www.mineralproducts.org
Chairman: Patrick O'Shea
Chief executive: Nigel Jackson



From left to right: Andrew Minson - executive director for MPA The Concrete Centre, Simon van der Byl - executive director for public policy, Pal Chana - executive director for MPA Cement, Nigel Jackson - chief executive.

Three into one

IT represents companies who between them pump over £5 billion worth of essential materials into the UK economy – the new MPA has arrived and, as we report on the facing page, it is already set to grow.

With British Precast affiliated, MPA's membership is by far the largest single supplier to the construction sector. The association already represents the whole of the British cement sector, 90 per cent of aggregates production and 95 per cent of both asphalt and ready-mixed concrete.

MPA was formally launched at *Showcase 09*, when 560 guests were told that the difficult economic climate meant there was a real opportunity to add value to the work of our member companies and to provide a more effective voice for the industry. The aim is to create a dynamic, focussed and efficient association.

MPA has been formed through the merger of the British Cement Association (BCA), The Concrete Centre and the Quarry Products Association (QPA) with its focus across land-based and marine aggregates, recycled and secondary aggregates, asphalt, ready-mixed

and pre-cast concrete, agricultural and industrial lime, mortar, and silica sand.

The executive team is led by Nigel Jackson as chief executive supported by Simon van der Byl as executive director for public policy, Pal Chana as executive director for MPA Cement and Andrew Minson as executive director for MPA The Concrete Centre.

The key roles for MPA are: to secure and maintain the licence to operate for the sustainable supply of essential mineral products; to continue to innovate and deliver sustainable solutions; and to maintain and develop new markets.

INDUSTRY FACTS

- Aggregates: 248 million tonnes pa
- Cement: 13 million tonnes pa
- Asphalt: 25 million tonnes pa
- Ready-mixed concrete: 20 million cubic metres pa
- Leads Europe with 25 per cent of total demand supplied by recycled and secondary aggregates
- Operates from 2,000 locations

The views expressed in *Mineral Products Today* are not necessarily those of the Mineral Products Association.

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Mineral Products Today
Managing editor: Elizabeth Clements
Email: elizabeth.clements@mineralproducts.org
Editor: Barrie Hedges
Daybreak Communications
Venture West, New Greenham Park
Newbury, Berkshire RG19 6HN
Tel: 0845 644 3845 Fax: 0845 644 3745
Email: barrie.hedges@daybreakcomm.co.uk

New chairman appointed

PATRICK O'Shea, chief executive of Hanson UK, has taken over from Lynda Chase-Gardener as chairman of the MPA. He will hold the post for two years as part of a new strategy to rotate the position between board members.

Lynda Chase-Gardener led the team which merged the BCA, The Concrete Centre and the QPA which resulted in the creation of the MPA, having previously been chairman of the Quarry Products Association for four years.

She was at the helm when, in 2006, QPA became Trade Association of the Year and won other industry accolades.

Patrick O'Shea paid tribute to her "immense" contribution to the industry and to the new organisation. "Her stewardship, drive and professionalism over the last two years have been critical in bringing the alignment of the industry from the drawing board into reality," he said. "Lynda can feel a real sense of pride in these unprecedented achievements. We

wish her well with her continuing industry and other business interests."

Lynda Chase-Gardener responded: "I am proud to have led the creation of MPA, which is now going from strength to strength. I leave it in good hands and look forward to seeing it raise its profile, voice and influence with Government and other key audiences and stakeholders."

Affiliation boost

WITHIN weeks of being established, the MPA has already moved to further strengthen its lobbying weight by affiliating with British Precast, the trade federation for the UK concrete products industry.

The agreement incorporates a range of planned collective activities designed to add greater value for the members of both organisations and to improve business prospects along the supply chain. MPA already represents the ready-mixed concrete industry through the British Ready-Mixed Concrete Association, and operates The Concrete Centre as the central market development organisation for the UK concrete industry.

The partnership is a powerful one given that British Precast has 179 full, associate and affiliate members representing over £2 billion turnover, while MPA has 220 members with sales of over £5 billion.

MPA chief executive, Nigel Jackson, said that affiliation was a preliminary step towards a planned integrated corporate structure over the next year. "It is vital that the entire concrete industry speaks with one aligned voice," he said.

British Precast chief executive, Martin Clarke, added: "It is important that we use the opportunity to create a better future for the industry. It is also essential that we pool our strength to lobby harder and more effectively for the interest of the whole concrete industry".



Announcement: Nigel Jackson (centre) and Martin Clarke (right)

Under siege

MINERAL operators under siege from a barrage of new legislation and regulation are asking the Government and its agencies to call a temporary halt in order to "join up their thinking".

The appeal comes as companies struggle to keep pace with the potentially serious implications of consultations such as the transposition of the Mining Waste Directive into national law. Amongst a raft of other issues they are also concerned about water abstraction licences for quarries and plans to impose landfill tax on the quarry waste that is essential to many restoration projects.

MPA says that many issues do not seem to have been coordinated within Government and regulators to avoid disagreement, duplication or unwitting conflict.

"There is a plethora of sometimes overlapping consultation coming to us from different

departments and agencies that require detailed consideration in often impossibly short timescales," says MPA executive director, Simon van der Byl.

"It is particularly frustrating that they have been issued with response deadlines that often include holiday periods and make it very difficult to ensure that members can participate and provide the depth of response that is needed.

There is also a failure to recognise that the great majority of mineral companies have had to down-size over recent months and no longer have the manpower to give the attention needed to such consultations."



One clear voice

The newly-appointed chief executive of the MPA, Nigel Jackson, sets out his vision for the future.



NIGEL Jackson is immensely proud of the industry that, after some 35 years, still gets him out of bed in the morning with enthusiasm for his day. He is especially proud of what it does for the nation and of the huge improvements in performance it has made over the past 15 years.

His frustration is then all the greater that, despite growing recognition from parts of national and local government, the industry remains under-valued and sometimes misunderstood by the wider world.

"The challenge of persuading those who depend upon us to 'make the link' between what they see as a hole in the ground and the house they live in is what drives me," he says. "We have got to get the profile of the industry recognised, understood and valued by all stakeholders. We are essential to the economy and sustaining our way of life.

"There is no doubt that the industry has moved its performance from unsatisfactory to world class in many respects, particularly in regard to restoration and what we contribute to biodiversity and sustainability."

Jackson joined the industry as a geology graduate and worked for five years as a geotechnical engineer before joining Taylor Woodrow for 23 years – nine as MD of Greenham Construction Materials. He then became executive director at Lafarge Aggregates with a remit which included planning, land, property, public affairs and strategy. He has chaired the former QPA's environment and planning committee for 10 years and was a member of its Council and most recently, executive director. He also chairs the CBI Minerals Group and was a founding driver in the formation of the UK Minerals Forum.

The issues facing the industry have never been more oppressive. Jackson is particularly concerned by the impacts of a 'dysfunctional' planning system and by the increasing pace and range of regulation, especially that relating to water licensing, waste management and mine waste management.

He is also unhappy that the industry is 'triple taxed' – on aggregates, landfill and emissions – with more in prospect. "Given what we have achieved in terms of reduced environmental impact and our commitment to continuous

improvement, it is a big ask to impose further financial and regulatory burdens."

So how is the new MPA shaping up to tackle these and other challenges? He believes the next three years will see consolidation for MPA as the leading trade association for the minerals sector. Along the way, it is likely to enter into affiliations that increase its scope and influence. More immediately, he wants a well-developed 'manifesto' in place by the end of this year setting out clear priorities and positions on key issues.

Integration of the constituent parts of MPA is, he says, progressing well with a cross-product standards forum uniting experts on common issues. There is emphasis on sharpening up how public policy issues are driven, and a recognition that sustainable development is a top-down issue and a prerequisite in forming new policy.

"But perhaps the greatest challenge in these difficult times is to ensure that the industry can stay united," he says. "A united industry is a powerful and effective force. Our aim has to be a world-class trade association that speaks with one clear voice."

In safe hands

PREMIER League goalkeepers put their safe hands behind MPA's annual 'Stay Safe' campaign. The aim was to deliver the crucial site safety message to a particular problem age group - teenage boys.

England keeper David James (pictured), Hull's Boaz Myhill, Wigan's Chris Kirkland and Bolton's Jussi Jaaskelainen all gave their support.

This year's campaign covered the whole of the UK and included school visits by managers. Six quarries with serious trespass issues ran special media briefings and attracted substantial coverage.



An industry that leads the world



The newly established MPA represents an industry that leads the world on environmental issues, according to Environment Agency chairman, Lord Smith. He told *Showcase 09's* 560 guests that the industry's thinking on carbon reduction and sustainability issues was "way ahead of the rest of the world and many other industrial sectors".

LORD Smith's was one of two powerful endorsements at MPA's Showcase 09 which was hosted by broadcaster Krishnan Guru-Murthy (pictured above) at the QEII Conference Centre in Westminster. The other came from another influential source – Natural England's acting chairman, Poul Christensen, who said the industry's stance on restoration and the natural environment was "inspirational and an example to so many other industries".

Lord Smith said: "We are living through a period of economic and political turmoil, but there are two challenges that we face that are greater still. The first is the recognition that the resources of our fragile planet are not infinite. We have to think carefully and wisely about how we use those resources.

"The second challenge is the increasing awareness of the impact that climate change is going to have on us all. We need to do everything we possibly can, not just to cope with the consequences of climate change,

but also to play our part in helping to stop it happening in the first place.

"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."

Before presenting a special 40th anniversary restoration award (see next page) Poul Christensen congratulated MPA on its work.

"What the quarrying industry has achieved over the last century, in terms of what it has

"You are way ahead of the rest of the world"

Lord Smith, Environment Agency

"You are not just restoring, you are putting a lot more back - there is a net gain"

Poul Christensen, Natural England



Lord Smith: two key challenges

done for the environment, is legion," he said. "You are not just restoring, you are putting a lot more back - there is a net gain."

Driving the big issues

Showcase 09 cameras took to the road to record what MPA members are doing around the UK to tackle four key issues of the moment. Here's a summary of the *Newsround* items that can also be viewed as video at www.mineralproducts.org.

Health & safety

SOME of the world's big mobile plant manufacturers are responding positively to a vital safety initiative led by MPA. The 'Safer By Design' project was launched in response to growing concern that poor plant design is often a root cause of injury in the industry.

The MPA has won a £55,000 grant from the Aggregate Levy Sustainability Fund to support the initiative and is teaming up with quarry operators and manufacturers to produce a voluntary code that sets out clear recommendations to build in safety at the design stage. Involvement of plant



manufacturers is key to the success of the project.

CPI Mortars has instigated a company-wide programme designed to ensure that the whole of its operational workforce is adequately protected from silica dust.

Everyone from tanker drivers to lab technicians was included in the study, which produced a range of new or improved control measures. Plant and vehicles have been checked for leaks, ventilation systems improved and vacuum systems installed to eliminate sweeping. Even face masks have been checked for fit!

Such projects are in the front line of MPA's commitment to a ground-breaking Europe-wide agreement with the trade unions, helping to protect the health of two million workers who could be vulnerable to inhaling silica dust.

Community

AT Broadway in Worcestershire, the community is itself helping to determine the future of an old limestone operation as it reaches the end of its working life.

The operator, **Smiths Bletchington**, has set up a focus group of interested stakeholders to look at a variety of ideas that will allow the quarry to realise its wildlife potential and its fascination to local people.

The ideas include a geological walk through time, an outdoor classroom for local schools and a visitor centre.

Part of the playing field at the local school at Salsburgh in Lanarkshire is being re-modelled to create an eco-garden. It's happening with enthusiastic input from **Aggregate Industries'** nearby Duntilland quarry.

With the company providing both funding and practical support, a design has been produced which will become reality for Kirk O'Shotts Primary School over the coming months. The garden will include an outdoor classroom, a variety of wildlife features and space to grow vegetables.

They are even building a greenhouse made out of recycled plastic bottles!



Eco garden in Lanarkshire



Low drag hull paint

Sustainability

AN **Aggregate Industries** site at Barton-under-Needwood in Staffordshire is the first in the UK to be awarded a responsible sourcing certificate from the Building Research Establishment.

Expert assessors have established that it is doing a good job in terms of issues like emissions, minimising use of raw materials, caring for its workforce and impacts on its neighbours. The system drills into the sustainability credentials of every product and even covers suppliers.

Responsible sourcing is a major issue for MPA, which has launched its own guidance for members. The aim is to ensure that specifiers' needs are met and that the industry contributes to Government targets.



Responsible sourcing in Staffordshire

Given the urgent need for affordable homes, one of the big challenges is to show that they can be built quickly and to high

standards without compromising on their environmental credentials.

Tarmac has taken on the challenge by participating in Nottingham University's Creative Energy Homes project. The aim is to show that low-carbon affordable homes can be built using tried and tested masonry products combined with renewable technologies.

"There is a misconception in the construction industry that the only way to achieve sustainable housing of the future is with timber frame," said a Tarmac spokesman. "We are aiming to dispel that myth and demonstrate that traditional masonry products with traditional building practices can meet equally high sustainability values."

Energy & emissions

A NEW system for drying its materials helped industrial sand specialist **Sibelco** pull off one of the great feats of the year by finishing second from 140 entrants in the National Energy Efficiency Awards.

Over the past five years, the company has slashed carbon emissions by more than 25,000 tonnes through a series of energy-saving initiatives and investment in new technologies. It was an approach that also helped it to win the coveted Carbon Trust Standard.

"The energy campaign to date has been a great success and we are proud of what we have achieved but we are determined to keep the momentum going," says Sibelco's Rob Sproston. "We will continue to invest in new technologies, we will look at different ways of working and we are confident that there are further fuel savings to be gained."

Marine aggregate operators are investigating a variety of new ways to cut fuel and carbon. The latest initiatives even include a new low-drag hull paint being used by **Hanson Aggregates Marine**, which is also trying new propellers. Meanwhile,

United Marine Dredging has installed new fuel-efficient engines on two of its larger ships and **Britannia Aggregates** has instigated more efficient transit speeds.

But dredgers can also score when they come to shore because they deliver close to urban centres - and to London in particular. Thameside wharf facilities like that run by the **Brett Group** at Cliffe in Kent receive over seven million tonnes of aggregate a year, which is equivalent to 1,000 lorry loads every day substantially taken off the roads.

At Cliffe, Brett achieves further major reductions in carbon by grouping three concrete product factories and a ready-mixed concrete plant within a few hundred yards of the wharf. While about half of the sand and gravel is moved on by rail, the company is also looking at deliveries of both aggregate and concrete products into the heart of London by barge.

BEST OF THE BEST

A FORMER sand and gravel site in Surrey that has been transformed to grow gourmet vegetables was named at *Showcase 09* as the UK's best quarry restoration of the past 40 years.

Laleham Farm originally won the MPA's coveted premier restoration award, the Cooper-Heyman Cup, way back in 1984. The new 'best of the best' accolade, awarded to the Kent-based **Brett Group**, came in a special review of all cup winners

to mark the 40th anniversary of the scheme.

The farm is a former sand and gravel quarry between Staines and Shepperton. The 45-hectare site was chosen because of its careful restoration to immaculate farmland. A variety of exotic produce, such as fennel, coriander and giant spring onions, is now grown there.

The site is now farmed by B.E. Bransden and Sons. Managing Director, Charles Bransden, says: "My father, Barry, was restoration manager when the quarry first started. He was ahead of his time in his approach and developed what was then a pioneering system for protecting the topsoil as the land was progressively restored.

"The result is that the site is extremely fertile. The proof is that we can now grow jumbo-sized vegetables and herbs which are used extensively within London's top restaurants.

"The site looks good - you would never know that there used to be a quarry here."



Laleham Farm: exotic vegetables

Our cup runneth over

Seven sites were in the running at *Showcase 09* for the accolade of best quarry restoration in 2009.



WINNER

The National Memorial Arboretum, Staffordshire

Lafarge Aggregates with the National Memorial Arboretum Company

148 acres

THE Cooper-Heyman Cup for the best restoration of 2009 was awarded to Lafarge Aggregates and the National Memorial Arboretum Company for the outstanding restoration of the Alrewas site.



The project has created a historic, peaceful place of national, international and personal significance for visitors, where the Armed Forces Memorial commemorates servicemen killed on duty since 1948.

Biodiversity has been promoted through hedge laying, willow sculpture, willow hedge construction and the building of an artificial otter holt.

The wooded parkland, lakes, ponds, riverine habitat, grassland, reedbeds and wetland also provide a broad range of habitats.

Charing Sand Pit, Kent

Lafarge Aggregates

37 acres

AFTER being worked for sand for nearly 30 years, a restoration scheme was designed at Charing Pit to create woodland on the landscaped slopes of the excavation, with open pasture in the base.

Wet grassland and grazing have been created in the 'bowl', which becomes a lake in winter.



Irthlingborough Quarry, Northamptonshire

Hanson UK

153 acres

DESIGNED to be a watery landscape, the restoration site not only acts as a flood plain protecting Northamptonshire's towns and villages along the Nene Valley but also provides a home to 150 species of birds.

Recognised with SSSI status, the lakes feature spits and small islands, making them attractive to amphibians and dragonflies.

A circular footpath walk has been created around the site, providing public access for walking, fishing and bird watching.

Ringwood Quarry, Hampshire

Hanson UK with Hampshire & Isle of Wight Wildlife Trust and Bournemouth & West Hampshire Water Company

190 acres

THE restoration at Ringwood Quarry is now part of a wider complex of international significance for lakeland birds. In particular, there is a large population of wintering wildfowl for which much of the site is designated as an SSSI.

The lake has been restored with sensitively shaped margins and varied underwater

gradients, to achieve shallows, islands and shingle spits.

The introduction of bird hides, access routes and interpretation boards makes the site very popular with the local community and a large screening bank is welcome pasture for New Forest ponies.



Hell Pit, Bittering Quarry, Norfolk

Tarmac

54 acres



NOW restored to agricultural land, water and woodland, the landlord uses the site for grazing his highland cattle, as well as fishing and picnicking.

The water body has an interesting shape and complements the surrounding landscape. With shallows, reed beds and a duck feeder, this provides a habitat for a diverse range of waterfowl and other birds.

The waters themselves are inhabited by a variety of fish, including include carp, roach, tench and silver bream.

Swanton Morley, Norfolk

CEMEX UK with the Norfolk Fly Fishing Association

153 acres

RESTORATION had to be carried out sensitively to complement the River Wensum, Special Area of Conservation (SAC) that flows through the middle of the site.

A series of reed or tree-fringed lakes were constructed, providing cover to wildfowl, and a variety of other habitats have been formed including lowland mixed deciduous woodland, wet woodland, reed beds and riverside vegetation.



A footpath and bridleway network links into local communities, opening the site up to the public.

Cauldon Cement Works, Staffordshire

Lafarge Cement with the Staffordshire Wildlife Trust

42 acres



THE site has been restored into four zones; a shale lake, grazing land, reedbeds and a post-industrial biodiversity area.

As part of the restoration, a former waste tip has naturally re-colonised to become a very biodiverse area, with many plant species commonly found in hay meadows.

The lake and reedbeds attract many birds, including heron, little grebe and kingfisher.

Watch the *Showcase* restoration videos
www.mineralproducts.org



Humble beginnings

Wildlife presenter Kate Humble (pictured above) took *Showcase 09* guests on a fascinating video quarry tour that preceded the launch of a new biodiversity award to be run for the industry by Natural England. Here, we explore the Lancashire site where Kate enjoyed a day rich with nature.

FROM a ledge high on the dark limestone rock face a peregrine falcon swoops in pursuit of an unfortunate pigeon. The hunter bird is a familiar sight at Lanehead quarry on the outskirts of Clitheroe as it is at others around the UK - a creature that is happy in habitats made by man and comfortable there, even during blasting.

Those who know it will tell you that Hanson Cement's Lanehead quarry is better than many nature reserves. Experts estimate that it is populated by over 100 different bird species and more than 150 types of plant.

Its most fascinating bird inhabitant is probably the peregrine falcon, which nests on inaccessible ledges where it considers itself safe from intrusion and from egg collectors. A few years ago,



members of the quarry team set up a 24-hour watch to ensure that resolute egg thieves, thought to be active in the area, could not get to the nest. Ravens similarly appreciate the comparative isolation of the older parts of this 70-year-old quarry.

One of the delights for *Springwatch's* Kate Humble was to be shown an oyster catcher's nest (with three eggs) on the quarry floor within yards of a route used all day by dump trucks. Like the little ringed plover, they enjoy mutual respect with quarry drivers who have a panoramic view of the birds and alert others to their presence.

On the mammals front, Lanehead boasts deer that are often around early in the morning, while at night badgers forage around two live setts. Foxes are another frequent sight, drawn by rabbits which include a number of the black melanistic variety.

Plants that favour the Lanehead environment include yellow bee, early purple and marsh orchids, birds foot trefoil, wild strawberry and thyme. Butterflies love the exposed limestone because it warms up quickly in summer, and there is an array of banded snails, which vary in colour according to the vegetation they are feeding on.

"It's part of being a quarryman to appreciate and look after the wildlife ... You work amongst it all every day and you can't help but be fascinated."



Quarry supervisor Sam Wrathall was Kate Humble's host. "It's part of being a quarryman to appreciate and look after the wildlife," he told her. "You work amongst it all every day and you can't help but be fascinated."

Kate also met John Zamorski, a now retired employee who has the company's permission to keep bees within the quarry. The great significance for the company is that the bees, which will not tolerate anything but pure air, live within yards of a cement works which has had to work hard to convince some neighbours that its alternative fuels are not causing pollution.

"The air quality around here is actually fabulous and the bees are thriving at a time when honey bees generally are having a difficult time," says John. "What helps is that there is an amazing array of wild flowers within the quarry - the insect life is hugely varied as a result."

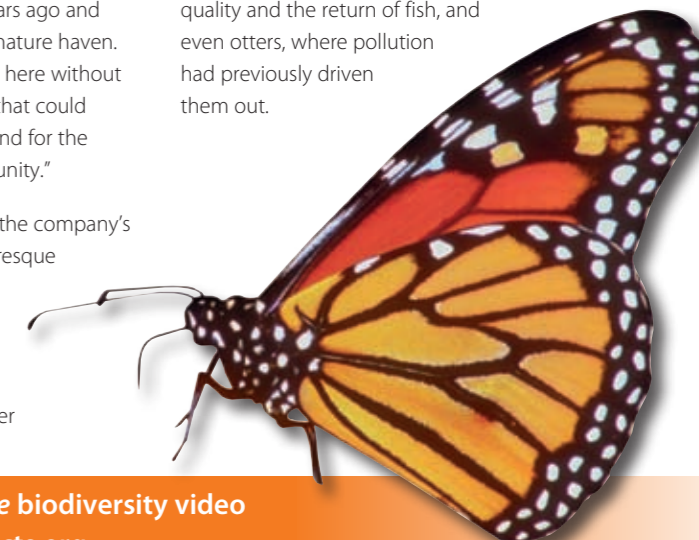
Children similarly love Lanehead because Hanson has set aside a restored area on its edge as a wildlife garden. The site is naturally rich in limestone habitats which have been further enhanced by the creation of a pond and nature trail through woodland. The site is managed as an educational resource by the Lancashire Wildlife Trust, which works closely with schools and with youngsters of all ages on a variety of projects.

"It's a fantastic place with absolutely loads of habitats," says the Trust's Phil Dykes. "It was quarried until eight or nine years ago and yet now we have a complete nature haven. None of this would have been here without quarrying, which left habitats that could then be managed for nature and for the enjoyment of the local community."

Another cause that is close to the company's heart is the purity of the picturesque River Ribble, which runs past its boundary. While the local stretch of the river is in good health, there are parts not too far away that have suffered over

the years from industrial pollution, inadequate sewage treatment, water abstraction and changes in farming practice. The result has been severe damage to both the main river and its tributaries.

Leading the fight to reverse the damage is the Ribble Catchment Conservation Trust, which enjoys substantial support from Hanson in the form of office space and also rock used to improve the flow of the river in key places. The result of the trust's work to date is a significant improvement in water quality and the return of fish, and even otters, where pollution had previously driven them out.



Watch the *Showcase* biodiversity video www.mineralproducts.org

No fuel like a new fuel

Alternative fuels have a big part to play in achieving a sustainable future for the UK cement industry. Overall, MPA Cement members are currently replacing around 26 per cent of fossil fuels with waste-derived alternatives such as scrap tyres, sewage pellets and processed household refuse. Some plants have gone substantially further still.



IT WENT largely unheralded, but in the spring of this year a cement works in Lincolnshire set a significant new record when it managed to satisfy nearly three quarters of its kiln fuel needs from wastes.

CEMEX UK's South Ferriby plant achieved that feat as a result of a determined drive to replace fossil fuels with industrial liquid wastes such as residues from paint and printing ink manufacture, and with processed household and commercial waste. The good news for its neighbours is that, over seven years since such fuels were introduced, emissions have reduced significantly – by 43 per cent in the case of sulphur dioxide.

If you judge it on carbon, the plant managed in the first few months of this year to save the CO₂ equivalent to that produced by 3,300 cars in a full year.

Elsewhere in the UK, cement plants are now routinely using scrap tyres, pelletised sewage sludge and meat and bone meal. The common factors are that each of these alternatives has a high calorific value; each would otherwise have gone to landfill or been incinerated without energy recovery; and that burning them in the highly controlled

conditions of a cement kiln is safe and has no negative impact on the environment.

The reality, as at South Ferriby, is that there are often notable benefits to the environment. Alternative fuels, coupled with £240 million of investment in new technology, helped MPA Cement members to reduce each of its key emissions between 1998 and 2008 – 75 per cent for sulphur dioxide, 51 per cent for oxides of nitrogen and 68 per cent for dust. Meanwhile, carbon dioxide emissions were 5.2 million tonnes lower in 2008 than they were in 1990.

The cement industry has agreed as part of the Environment Agency cement sector plan a target of 30 per cent replacement of fossil fuels by alternatives by 2015.

Diverting wastes from landfill sites is a strong element of the industry's case as it is now using over 449,000 tonnes of waste fuels in its kilns. In doing so, it also avoided burning around 370,000 tonnes of traditional fossil fuels like coal.

In addition, the growing trend towards using other wastes as fuel and raw materials adds up to over one million tonnes avoided

from landfill. In that case, the wastes include pulverised fuel ash from power stations, crushed concrete, plasterboard and moulds



Alternative fuel: pelletised sewage sludge

from the ceramic industry. While combustion emissions account for around 40 per cent of the industry's CO₂, the remainder is as a result of decomposition of limestone in the kiln. Upping the proportions of biomass fuels would not, therefore, cut total CO₂ emissions to nil.

In the long term, carbon capture and storage (CCS) is seen as one of the few remaining opportunities to make further large-scale CO₂ emission reductions. Some early exploration work has been undertaken which shows that there are two types of technology that could do the trick, but additional research is required, and the heavy investment needed will not be justified until the Government resolves the practical issue of transport and storage and the political issue of unequal global carbon prices.

... the industry reduced each of its key emissions between 1998 and 2008 – 75% for sulphur dioxide, 51% for oxides of nitrogen and 68% for dust ... carbon emissions were 5.2 million tonnes lower in 2008 than in 1990.

THE FUELS

Alternative fuels permitted for use or undergoing trials by UK cement works.

CEMEX UK

Rugby, Warwickshire (pictured right and above): tyres, refuse-derived fuel

South Ferriby, Lincolnshire: waste-derived liquid fuel, refuse-derived fuel.



HANSON CEMENT

Padeswood, North Wales (pictured right): waste-derived liquid fuel, tyres, meat & bone meal, paper and plastic wastes

Ketton, Rutland: waste-derived liquid fuels, tyres, meat & bone meal, paper and plastic wastes, scrap tyres

Clitheroe, Lancashire: waste-derived liquid fuels, tyres, meat & bone meal, wood waste.



LAFARGE CEMENT

Aberthaw, South Glamorgan: meat and bone meal



Cauldon, Staffordshire

(pictured below): tyres, processed sewage pellets, pelletised solid recovered fuel

(trial), waste-derived liquid fuel (consultation)

Cookstown, Northern Ireland: tyres, liquid waste derived fuel

Dunbar, East Lothian: liquid waste-derived fuel, tyres

Hope, Derbyshire: meat and bone meal, tyres.

TARMAC

Buxton, Derbyshire (pictured right): tyres, meat and bone meal (trial).



ASPHALT

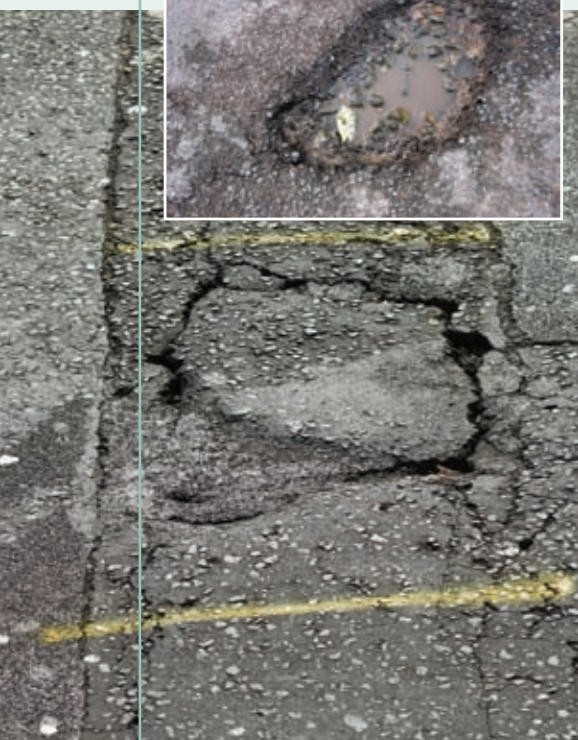
Pothole blight

NEARLY a million potholes blight the roads of England and Wales according to the new ALARM survey from the Asphalt Industry Alliance (AIA) which is a partnership between MPA and the Refined Bitumen Association. And they cost the public purse £35 million in compensation claims from road users.

As widely featured in national media, the AIA says the problem is spiralling out of control with investment of £8.5 billion needed to bring the country's roads up to scratch.

"Allowing our roads to deteriorate into such a condition is irresponsible on several levels," said Mike Linley, chairman of the AIA. "The situation could be resolved relatively swiftly by finding funding solutions that bring the bonus of creating more jobs around the country."

He added: "Highway maintenance work provides the 'shovel ready' projects the Government is looking for to stimulate the economy with immediate effect."



CEMENT



New carbon challenge

ALREADY amongst the world leaders in cutting carbon, UK cement makers are facing several potentially costly new challenges.

The first comes from a new phase in the EU greenhouse gas emissions trading scheme which starts in 2013 and promises wider use of the facility to buy and sell emissions rights. The fear is that if the bar is set too high in terms of performance-based benchmarks, global operators will opt to move their production (and their emissions) to other parts of the world.

MPA is working with UK and EU authorities to ensure that, pending a global climate change agreement, the benchmarks are set at a level that keeps the sector on a low-carbon trajectory without damaging its competitiveness.

Meanwhile, energy-intensive UK industries like cement and lime are waiting uneasily to see what new carbon reduction measures may emerge in the run-up to the next general election. The Opposition is now promising a new carbon tax but has yet to clarify how it would work.

Operators are also concerned that carbon trading could be followed by similar EU measures for their other major emissions – sulphur dioxide and oxides of nitrogen.

MPA Cement has been campaigning against the inclusion of cement manufacture in such a trading scheme because the amounts the industry can emit are already strictly limited through a permitting system.

More info: www.cementindustry.co.uk

LIME

Web update

THE British Lime Association (BLA) has gone live with a new website designed to raise awareness of a vital product and of the key issues facing the UK operators that produce it.

First recognised as a construction material some 10,000 years ago, lime now has a vast range of industrial as well as agricultural uses. An estimated 200 million tonnes is used around the world each year, notably in steel-making and construction. Growing markets include environmental clean-up, where it can be used to remove or 'lock-in' pollutants from soil water and air.

The new website includes a comprehensive assessment of current issues including the progress the industry is making in reducing its carbon footprint. Led by BLA, the sector aims to achieve and exceed its targets under the Climate Change Agreements, in particular by investing in new technology. **Visit the new website at www.britishlime.org.**

CONCRETE

Here's the proof

CONCRETE has a significant role in providing a built environment that is both sustainable and improves quality of life, according to a new publication from The Concrete Centre.

'Concrete Proof' comes at a time when an increasing number of Government departments and agencies are recognising that concrete has benefits that go beyond its acknowledged strength and durability.

The brochure assesses the part concrete can play in achieving energy-efficient buildings, sustainable housing and flood-resilient construction. It also demonstrates how it can make schools fire-resistant and secure, and provide the infrastructure that is needed for renewable energy, plus improved motorway barriers for our road network.

Available from www.concretecentre.com/publications, 'Concrete Proof' includes a number of case studies that show how the material can provide a total solution, offering long-term performance and sustainability.

See also Sustainable concrete, page 16.

MARINE

Sustainable sea

THE British Marine Aggregate Producers Association (BMAPA) has formed an alliance with organisations representing other sea-based industries to make a united case to Government on the Marine Bill.

The Seabed User & Developer Group also includes the oil and gas industry, offshore wind and other renewable energy industries plus ports, cables, shipping and leisure boating. All have a common interest in supporting the principles of a Bill which they say is needed to ensure an integrated approach to planning and managing the future of the marine environment.

There is a common belief that sustainable win-win solutions are possible from what are sometimes seen as competing needs. The partners are calling for clear policy objectives that embrace economic and social, as well as environmental needs. They also want planning and management decisions based on science and knowledge.



READY-MIX

New guide

THE British Ready-Mixed Concrete Association has produced a do's and don'ts guide for contractors and the DIY market.

The document covers all aspects of the process from ordering to quality control and is being used as a training aid within the industry itself. It offers practical advice on laying concrete and how to prevent problems such as cracking.



AGGREGATES

Lobby success

NEARLY two years of hard lobbying paid dividends for MPA when the Government made only a minimal reduction in the national and regional aggregates production guidelines that are the backbone for the managed aggregates supply system in England and underpin the allocation of future sites in local plans.

It had been feared that the recession would prompt a hefty cutback in the guidelines originally produced in 2003. MPA argued that further reductions were unjustified and not in the long-term interests of a steady and adequate supply of aggregates in the period to 2020.

It also pressed for a realistic view to be taken of the scope for substitution of primary aggregates by secondary and recycled materials and there is now a general acceptance that the total contribution will be no more than 65 million tonnes a year.



Images: © David Barbour/BDP



Sustainable concrete

Strong, durable and hugely versatile, concrete is widely appreciated as the world's most prolific building material. But, as *Showcase 09* guests were told, the advent of sustainability has put a fresh new complexion on its face.

FOR the youngsters who go there for pioneering paediatric care, the Royal Alexandra Children's Hospital in Brighton (pictured) is a place filled with comfort and reassurance. The fact that it also presses all the right buttons in terms of sustainable use of concrete may perhaps mean more to them in years to come.

The £37 million ark-like structure is a strong advertisement for concrete, with sparkling white precast window panels broken by a rainbow of coloured bands. Underpinning the good looks and the inherent fire-resistance of concrete is a series of benefits arising from the way in which concrete naturally absorbs and releases heat. The result is reduced energy to keep the building warm in winter and cool in summer.

Underpinning the good looks and the inherent fire resistance of concrete are a series of benefits arising from the way in which concrete naturally absorbs and releases heat.

The sustainability argument is equally strong at the new Westminster City Academy in west London, where the concrete has been purposely left exposed to provide a robust finish that can withstand the rigours of school use. The extent of the concrete means that its thermal heat sink properties are strong – and there is even a sedum roof as a further boost to the insulation.

You would expect concrete to be at its greenest in a garden environment but MPA member Marshalls took that a step further at this year's Chelsea Flower Show. The centrepiece of its display was a 'Living Street' using a range of hard landscaping products as part of a campaign to inspire town and city communities to green up their gardens and public spaces for a low-carbon future.

Health and safety is an important element of sustainability, and nowhere is that more fundamental than on the UK motorway network. Concrete offers a solution there too with a life-saving new generation of concrete barriers that help prevent cross-over accidents. While steel barriers bend under impact, the revolutionary concrete alternative stands firm and is virtually maintenance-free for up to 50 years. The saving over that time in both public money and congestion is huge.



Concrete barriers – saving lives and reducing congestion

The sustainability blows that concrete is now successfully landing on the chins of its rivals are hefty. Most importantly, it is a local material rather than imported.