

AUTUMN 19 ISSUE 20

mineral

products today



Quarries & Nature

Uniquely placed for net gain



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Fighting the floods

Home truths
Climate resilient housing

Hot gossip?
Lower carbon asphalt

WELCOME

As if the infernal chaos surrounding Brexit were not enough, our markets are rapidly chilling. Whether we are teetering on the edge of a technical recession or not, it is perplexing to hear Government on the one hand proclaim that it will become more 'can-do' and will inspire an 'infrastructure revolution', whilst on the other canning major energy projects and converting dither into delay on HS2.

A further deferral on such a major infrastructure project as HS2, which is so dependent on the supply of huge volumes of aggregates, asphalt and concrete, is a double kick in the teeth for our sector. Budget forecasts which had already slipped now have to be torn up, and forward investment in new and improved plant capacity written off over less business.

In an era where industry is screaming for more certainty, it serves no purpose for Government to re-announce previous spending commitments, pushing out headline grabbing numbers, whilst delaying start dates and downplaying the timescale during which the spending may, or may not, take place. Whilst major projects aren't there to benefit the supply chain, after years of Government promises, we at least hoped to be in a position to plan with some confidence. Unfortunately we still can't.

It is hard to retain shareholder confidence when 'normal' business uncertainty is compounded by such shallow politics. The UK desperately needs to renew and upgrade its transport and energy infrastructure. We need more and better housing. Climate change impacts require us to strengthen our resilience

to flooding and other consequences.

Above all we need a steady and competent Government that's sensitive to the realities of what makes our economy tick and grow sustainably. Whilst it is tempting to back the push to 'get Brexit done', in reality we know that, whatever happens, the uncertainty does not end on the first of November – that's merely the end of that beginning. Until we have not only 'got Brexit done' properly but also recovered our national poise and purpose, it feels like industry has to continue to anticipate more downside risk before we can look forward with confidence.

Martin Riley, Chairman, MPA



Over 1.5 million trees in 10 years

More than 1.5 million trees and 100km of hedgerow have been planted by MPA member companies in the past decade.

That's according to new figures collected from British mineral products producers for the MPA's annual sustainable development report.

In the 10 years to 2019, the data shows that the industry created the equivalent of almost 2,000 hectares of woodland – enough trees to cover all of London's eight royal parks – and planted enough hedgerow to stretch from Oxford to Cambridge.

This means that the mineral products sector is making a huge and vital contribution to the Government's national ambitions to plant new woodland to help combat the effects of climate change.

"Mineral products companies are uniquely placed to make a real and substantial contribution to the creation of new woodland and hedgerows as part of quarry restoration schemes," said Nicola Owen, the MPA's Director of Environment, waste and water.

"The industry is planting an average of 150,000 trees every year and in 2018 alone the figure was a massive 203,488 trees.

"This is more evidence that mineral products companies are honouring their commitment to delivering a lasting legacy for the natural environment, alongside their role in providing essential materials for the built environment."



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

Cover: A common tern diving for fish at Cleveland Lakes Nature Reserve, Ashton Keynes, Wiltshire taken by David Soons who works for MPA member company Aggregate Industries.

Printed on FSC paper

BREXIT IS NOT THE ONLY PRIORITY

The MPA has set out its new 'Priorities for Government' in a fresh drive to urge cabinet ministers to refocus and support the delivery of vital infrastructure schemes.

Whilst politicians and commentators continue to be preoccupied with Brexit, the new MPA document is a timely reminder of the responsibility the Government has in setting the conditions for all industry to thrive and invest so that continuing demands for things like mineral products can be met sustainably.

Writing to the Chancellor, Sajid Javid MP, and the Secretary of State for Business, Energy and Industrial Strategy, Andrea Leadsom MP, Jerry McLaughlin, Executive Director at the Mineral Products Association wrote:

"Our members' products are essential to the economy and to quality of life, for building homes and infrastructure projects, and underpin critical industries including agriculture and water.

"Government relies on our members to deliver its priorities, from schools and hospitals to bridges, roads and energy infrastructure. Our members want to see a competitive UK, attracting global investment, with strong supply chains and robust investment in housing and infrastructure.

"This is vital for our members but also for the businesses that rely on the products we provide. The industry provides job opportunities, skills and progression as employers across the country, with 74,000 people employed by our members."

MPA goes on to remind the Government that the industry's economic success goes hand-in-hand with its environmental responsibilities, on which it has a strong track record. Companies have an essential part to play in the transition to a net zero carbon economy by 2050 as well as the circular economy.

For example, the cement sector is a large net consumer of other industries' waste materials, and the UK leads Europe in the use of recycled and secondary aggregates. MPA's members are uniquely placed to deliver biodiversity net gain through quarry restoration. As Brexit unfolds, mineral products will continue to be essential.

'Mineral Products Industry Priorities for Government' can be downloaded from the MPA website: www.mineralproducts.org

The new two-page document, deliberately timed ahead of the Brexit deadline, outlines eight priorities which MPA believes will help deliver continuing prosperity for the UK:

- Building confidence for business investment
- Enhancing industrial competitiveness
- Boosting growth and productivity
- Strengthening UK supply chains
- Making industry taxation fairer
- Improving regulation
- Meeting future demands for mineral products generated by economic growth and development
- Improving the sustainability of UK supply



Everybody needs good neighbours

A new scheme to help MPA members to engage and build trust with local communities will soon be launched.

The new Good Neighbour Scheme, currently at pilot stage, provides site managers with guidance and tools to help them plan, monitor and improve their engagement activity.

The scheme directly addresses one of MPA's Seven Strategic Priorities relating to People – 'to engage fully with local communities and strive to be good neighbours'. It will assist with the delivery of the MPA Charter and realisation of the MPA Vision.

Among the issues highlighted in the scheme are public safety, external appearance, plant and stocking areas, noise and vibration, water usage, dust, traffic, complaint handling, visitor experience and community engagement.



"The industry has an established track record when it comes to operating sites to the highest technical and environmental standards," said MPA Chief Executive Nigel Jackson.

"Businesses work hard to adhere to planning permissions, environmental permits and numerous other statutory and voluntary controls to ensure that operational impacts are minimised and mitigated.

"But it is increasingly important not only to meet the requirements, but to be seen to be doing so, and we are seeing more and more examples of site management teams going above and beyond to meet the expectations of local people.

"Building trust in this way can improve understanding and perceptions of the industry and help operators develop and maintain a good reputation that could be important for future proposals.

"The scheme will also help operators set out what they are able to commit to so they can communicate with neighbours what is reasonable for them to expect."

For further information contact Elizabeth Clements, Director – Communications 07775 894285, elizabeth.clements@mineralproducts.org

Consumption, civilisation and carbon

In the light of devastating forest fires, alarming deforestation, accelerating glacial and polar melting and the recent UN Climate Change Summit, I feel compelled to add 'consumption' into the climate change debate.



VIEWPOINT by MPA Chief Executive
Nigel Jackson

None of what you're about to read is "denialist", far from it. The era of conjecture about whether and why climate change is taking place must give way to the era of how we respond, both by mitigation and adaptation.

Consumers need to admit they share the responsibility. That is all eight billion of us – or at least those of us in richer countries – who have consumption choices. The primary resources needed to satisfy our cumulative demands for food, water, energy and non-energy mineral products are the foundations for civilisation and, like it or not, consumption unlocks carbon. Amongst the calls for carbon to be cut there is barely an acknowledgement of this critical link.

If we aim our wrath solely at those activities we think harm the planet most, we are only tackling part of the problem. We are all responsible for placing demands on essential products, and then we compound the issue by also consuming, frankly, more frivolous products. The inconvenient truth is that there is an environmental cost of our need and desire to be 'civilised'. You cannot separate demand from supply.

We now know about environmental costs and where they arise, but our Government response is ridiculously inconsistent, parochial and misleading. This is where the real denial lies. In the UK we believe we are cutting our carbon footprint more than we truly are because we are excluding the 'too difficult' calculations on consumption of imported goods, shipping, aviation, etc. On this point youth activists have, like our industry, found our Government wanting.

So how does a Government admit the truth and respond properly? More importantly, how does it change its thinking and see the economy as a whole through a clear environmental lens? A good start might be to listen to industry more, understand what we are doing and what we are capable of doing.

Contrary to popular belief, our industry has been making evolutionary, and sometimes revolutionary, improvements in reducing energy and carbon impacts both in production and during products' lifetime. Products such as concrete and asphalt are consumed in homes, schools, roads, railways, hospitals and power plants, without which we cannot operate day-to-day. This essential fabric of our way of life is not negotiable. We have to have it. And that carries an inevitable environmental cost.

This balance between economy and environment underpins the pillars of sustainable development. To understand how to mitigate the environmental effects, we have to appreciate the economic causes. Given that the UK is a comparatively small contributor at the global level, at less than 1.5% of total greenhouse gases, even if we max out on innovative mitigation and influencing other countries – which incidentally we should continue to do – we will see our efforts outweighed by global growth in emissions. This means we will have to adapt quicker and more intensely, and that requires mineral products too.

For example, river and coastal defences require concrete, manufactured from aggregates and cement, both of which ultimately originate from the land like food and water. I often wonder why our products are taxed and heavily regulated, while other activities that use much more land and emit more carbon are subsidised and supported. We need a whole economy 'balanced scorecard' approach which is sensitive to need, demand and supply chains, and a consistent approach which incentivises all sectors to innovate on reduction, mitigation and adaptation.

Why are mineral products taxed and heavily regulated, while other activities that use more land and emit more carbon subsidised and supported?

With the next UN Climate Change Summit headed for our shores in 2020 we must decide whether we want to just feel good by indulging in inconsequential greenwash or change the debate to more action and less hot air. We will make our voice heard and offer practicable, workable solutions. We will engage with all stakeholders with open minds, emphasising the link between consumption, civilisation and carbon.

Quarries & Nature

Gaining ground for biodiversity

By creating new habitats during quarry restoration, mineral products companies are uniquely placed to increase biodiversity. In fact they've been doing it for decades.

Most people who work in the mineral products sector assume that the industry's exceptional contribution to enhancing biodiversity through the restoration of quarries is widely understood.

But in reality there is still little appreciation of the long-term legacy that quarrying companies achieve – in partnership with local authorities and conservation organisations – once the essential minerals have been extracted, processed and used in construction and elsewhere.

The industry's unique ability to create areas for nature to thrive has taken on a whole new meaning since the arrival of the Government's Environment Bill which – amongst other things – will oblige all new developments to increase biodiversity.

This mandate for 'biodiversity net gain' means that the delivery of much-needed infrastructure, commercial development and housing cannot take place at the expense of wildlife. For the first time net gain will require developers to ensure biodiversity is left in a better state than it was before.

They must assess the type of habitat and its condition before submitting plans, and show how they will improve biodiversity. Net gain on the development site itself would be the first priority, but where that's not possible, developers will need to deliver or pay for habitat creation elsewhere.

Announcing the plans, then Environment Secretary Michael Gove MP said: "Mandating biodiversity net gain will ensure wildlife thrives at the same time as addressing the need to build new homes. Whether it's through planting more trees or creating green corridors, developers will be required to place the environment at the heart of new developments."

Quarrying is the best placed industry to deliver an overall net gain in biodiversity.

This is nothing new for companies involved with mineral extraction. MPA senior planning advisor David Payne said: "Quarrying is probably the best placed industry to deliver an overall net gain in biodiversity."

"Being a temporary development, the land is effectively borrowed whilst the mineral is removed. And because these days quarrying typically takes place on agricultural land with relatively low biodiversity, the breadth and scale of what can be created during and after the land is worked for minerals is incomparable to any other type of development."

This is no better exemplified than through the entries into the long-running MPA Restoration and Biodiversity Awards – an impressive legacy of land stewardship schemes proven to deliver biodiversity net gain decades before the term was even coined.

The 2019 awards were presented as part of the recent MPA Quarries & Nature Conference attended by a wide-ranging audience from the worlds of minerals and nature conservation.

Guest speakers included Tom Butterworth, technical director of biodiversity for consultants WSP; Prof David Hill CBE, chairman and founding owner of biodiversity offsetting specialists The Environment Bank; and Kirsty Kirkham, partner with BSG Ecology who specialise in ecological impact assessment and wildlife legislation. Dr Rob Simmons, associate professor in sustainable soil management at Cranfield University presented his work with Tarmac to trial new metrics to measure biodiversity net gain on quarries.

"Quantifying biodiversity before and after development will be crucial," said David Payne, "but it's safe to assume the net gain after quarrying will usually exceed what could be typically achieved through other developments."

The Environment Bill will be reintroduced in the 2019/20 parliamentary session.

MPA Restoration & Bi

RESTORATION: Cooper Heyman Cup

This year the judges decided that two sites merited the recognition afforded by Britain's top award for outstanding achievement in quarry restoration – the Cooper Heyman Cup.

TARMAC – BROOM QUARRY, BEDFORDSHIRE



**JOINT
WINNER**

Broom Quarry near Biggleswade in Bedfordshire is a former sand and gravel quarry that has been restored to a mixture of wildflower meadows, wetlands, woodland and farmland.

A cluster of fishing and conservation lakes have been created with a series of islands and wildlife-friendly shallow margins on the shoreline. Reed beds and wet woodland have been added – ideal habitat for waders, invertebrates and amphibians. Red clover and grassland are helping to improve soil quality and rare breed dexter cattle are adding some vital organic matter! Hedgerows, woodland and a wildflower meadow are all contributing to make Broom a site especially significant for bird life with 117 different species recorded on site – including lapwing, little plovers and redshank. Local people can learn about Broom's wildlife and mineral history thanks to a network of information boards – and enjoy the beautiful landscape by walking the 10km of footpaths.

According to the judges, this is a 'massive transformation' on what was originally typical, uninteresting, agricultural land. The result is of great value to both the community and to wildlife.

AGGREGATES INDUSTRIES – VENN QUARRY, DEVON

Venn is a former gritstone quarry where good local relationships and collaboration has helped shape the restoration from working quarry to wildlife haven and – eventually – an eco-resort.

Venn will eventually become a world-class resort with conservation at its heart. It'll create around 100 jobs and is set to inject around

£3.9m a year to the local economy.

Already peregrine falcons have been seen, encouraged by strategically placed nesting boxes. Bat roosts have been preserved and the famous Tarka Trail footpath has been enhanced by tree planting. The judges say that Aggregate Industries have secured a financially viable end use for the quarry by working with the local community, the planning authority and the developer in an exemplary manner.

**HIGHLY
COMMENDED**

Biodiversity Awards '19

AGGREGATE INDUSTRIES – RIPON CITY QUARRY, NORTH YORKSHIRE

Ripon City restored sand and gravel quarry opened as Ripon City Wetlands earlier in 2019. Working with Yorkshire Wildlife Trust, Middlemarch Environmental, Greenfields Countryside Ltd and the local community has enabled a diverse mixture of priority habitats to be created.

Green hay was key here – it was spread across the site to form 6,500m³ of

botanically rich fenland planting – including plants indigenous to the area. Three thousand reed plugs were bought locally and planted to create an abundance of reedbed habitat while 280 metres of hedges were laid alongside the canal reed bed. An 11-hectare open water sailing lake features slipways, jetties and a boat park. There's a picnic and parking area and a new footpath loop

links the River Ure with the Ripon Canal with screens and hides to watch the wildlife.

The long-term future of the site is secured in an agreement with the land owners, Yorkshire Wildlife Trust and North Yorkshire County Council. The judges said the entry was a well-researched and implemented scheme and a great asset to the area.



JOINT WINNER

HILLS – SHORNCOTE QUARRY, GLOUCESTERSHIRE / WILTSHIRE

Shorncote sand and gravel quarry is part of the Cotswold Water Park in the Upper Thames Valley.

The restoration work has turned this site, part of which was previously used for sewage disposal by Thames Water, into a first-class home for wildlife. Shorncote has nine of the Cotswold

Water Park's 150 lakes and is a haven for wading, migrating, feeding and nesting birds – it's thought Shorncote will be the first site in the park to host breeding bittern and great white egret.

Where the quarry has been restored to non-agricultural dry land – the land's been left without topsoil and those un-manicured areas are loved by the stonechat, kingfisher, sand martin and marsh harrier.

HIGHLY COMMENDED

COMMENDED

Raymond Brown – Binnegar Quarry, Dorset; **Hanson** – Horcott Quarry, Gloucestershire; **Tarmac** – Loudounhill Quarry, Ayrshire; **Hanson** – West Knighton Quarry, Dorset; **Island Barn Aggregates** (CEMEX UK & Tarmac) – Molesey Reservoirs, Surrey

MPA SPECIAL AWARD

George McDonic – For his lifetime contribution to restoration and commitment to the MPA Restoration Awards

MPA Restoration & Bi

BIODIVERSITY: Innovation Award

Imaginative approaches to nature conservation that advance best practices and 'go beyond' statutory requirements.

HANSON – FLOOD PLAIN FOREST, BUCKINGHAMSHIRE

WINNER

The Floodplain Forest at Milton Keynes, in partnership with the Parks Trust MK, involves the restoration of gravel pits to a mix of habitats.

These include streams, ponds, reedbeds, wet woodland and hedgerows, and a dynamic river floodplain system. Multiple braided channels and pools at different levels, connected to the main River Great Ouse, allows for periodic inundation and flow depending on water levels. The habitats attract a wide variety of birds as well as otter and water voles. The judges were impressed by what they said was ambitious scheme going beyond requirements and realising the opportunities presented by the location to ensure the habitats are an integral and active part of the floodplain. This benefits a wide range of wildlife, landscape enhancement and other ecosystem services including flood and water management.



HANSON – 'IN AT THE START', RIPON QUARRY, NORTH YORKSHIRE

HIGHLY COMMENDED

Hanson's 'In at the Start' initiative at Ripon Quarry, North Yorkshire engages the community including the local High Batts Nature Reserve group and a local school – to assist in monitoring wildlife within the quarry, as well as volunteers undertaking habitat management outside of the quarry boundary.

Monitoring will help inform restoration and management decisions, and ensure these benefits are appreciated by the community. The judges were impressed by the fantastic engagement with the community in a long-term partnership, with volunteers undertaking monitoring to inform management, helping to build understanding and relationships.

COMMENDED

Hanson – Batts Combe Quarry, Somerset; **Aggregate Industries** – Callow Rock Quarry, Somerset; **CEMEX UK** – Dove Holes Quarry, Derbyshire; **CEMEX UK** – Raynes Quarry, Conwy; **CEMEX UK** – Taffs Well Quarry, Cardiff; **Atkins** – Crown Farm Quarry, Cheshire

MPA SPECIAL AWARD

Tarmac and Cranfield University – Implementation and critical evaluation of the Defra Biodiversity Metric on sand and gravel quarries

BIODIVERSITY: Planned Res

Restoration schemes that have yet to be biodiversity-led restoration is set to deliv

CEMEX UK – DIVETHILL, NOR

Divethill Quarry in Northumberland is a fantastic example of progressive restoration of a rock quarry to create an attractive landform and a mosaic of species-rich, locally important and distinctive 'Whin' grassland, agricultural grassland, woodland and hedges, and a waterbody.

The amount of Whin grassland has declined dramatically over the last 30 years, and restoration of the quarry offers the opportunity to re-create



AGGREGATE INDUSTRIES – TOPLEY PIKE, DERBYSHIRE

Topley Pike limestone quarry in Derbyshire has a restoration scheme developed in collaboration with the Peak District National Park Authority as well as Natural England, Environment Agency and Derbyshire Wildlife Trust.

Permission was granted for a revised working and restoration plan involving re-profiling of a large historic tip to re-create a valley feature, watercourse and footpath, with substantial environmental benefits. Habitats to be created – informed by a detailed ecological management

COMMENDED

Tarmac – Dolyhir Quarry, Powys; Har

Biodiversity Awards '19

Restoration

...realised but where progressive
...er major biodiversity benefits.

NORTHUMBERLAND

WINNER

this regionally important habitat
on whinstone rock, linking fragments
and helping to deliver the
Northumberland Wildlife Trust's contribution
to the 'Save our Magnificent Meadows' project.

The judges were impressed by the clear plan to
deliver a range of habitats and realise the unique
opportunity presented by quarrying to deliver
regional priorities and wider landscape-scale
benefits.



HIGHLY COMMENDED

plan – include calcareous grassland
and native broadleaved woodland as
well as scrub, rock outcrop and river
habitats – reflecting the character and
features of adjacent designated areas of
conservation and scientific interest. The judges
were impressed by the review of restoration
plans to go above and beyond requirements
to remove the tip to benefit landscape and
biodiversity, reflecting the lengthy discussions
with a range of stakeholders.

son – Newington & Mission Quarries, Nottinghamshire

BIODIVERSITY: Landscape Scale

Creating bigger, better, more and joined habitats that connect
with and are part of the wider landscape.

AGGREGATE INDUSTRIES – VENN OTTERY, DEVON

WINNER

Venn Ottery in Devon is a 30-hectare sand and gravel site in the early
stages of restoration predominantly to lowland heathland with areas of
woodland, meadows and ponds.

The site is in one of the largest heathland areas remaining in the UK, and sits next to
designated lowland heathland SSSI and European sites, and within the East Devon AONB.
The restoration involves partnership with RSPB with heathland and meadow creation,
plus specific features including an orchard and bat roost. The site is already attracting
breeding nightjar, a key heathland species, plus other wildlife such as dormouse and
greater and lesser horseshoe bats. The judges were impressed by the overall concept and
plan, extending the link between Special Areas of Conservation (East Devon Pebblebed
Heaths) and meeting Lawton principles as well as producing a landform appropriate to
its location. Staff knowledge of the site
and its importance in the wider landscape
is apparent, and delivery is above and
beyond required restoration. Particularly
impressive was the connectivity of
habitats both within the site and beyond
into the surrounding countryside. The
collaborative partnership with RSPB
was strong, as was involvement of local
communities in decision making.



IMERYS – MEETH QUARRY, DEVON

HIGHLY COMMENDED

Meeth, located on the northern edge of Dartmoor, is a ball clay site
restored to a mosaic of habitats including lakes and ponds,
broadleaved woodland, wet woodland, acid grassland and reedbeds.

The site attracts a range of wildlife, and is particularly important for long-eared
and horseshoe bats. Managed in partnership with Devon Wildlife Trust, it forms part of a
190-hectare reserve and has excellent public access being on the Tarka Trail. The judges
were impressed that learnings from this site are being applied to other Imerys restoration
sites. The sensitive restoration and connectivity to the wider landscape has resulted in
a naturalised and biodiverse site crammed full of priority plants, birds, invertebrates
and bats, and it introduces 'natural' habitat into an area of predominantly farmland,
contributing more wildlife-rich land under Lawton principles. Engagement with the local
community is also strong and plans for the site are exciting.

COMMENDED

Sibelco – Headon & Shaugh Quarries, Devon;
Brett – Lydd Quarry, Kent / East Sussex

MPA SPECIAL AWARD

Mary Lane, Sibelco – For personal commitment and driving mire
restoration at Headon and Shaugh Clay Quarries

MPA Restoration & Biodiversity Awards '19

Individual Achievement

Personal commitment, drive and enthusiasm demonstrated by an individual or small group.

Martin Crow, National Sustainability Manager, Hanson

Martin has been instrumental in the development of restoration techniques and built an in-house team of specialist landscape architects, ecologists, foresters, geologists and engineers, and designed a wide range of quarry developments and restoration schemes in Southern England.



He was Hanson UK 'Achiever of the Year' in 1994 for a paper expounding the virtues of good quality restoration and public engagement and developed the pioneering Hanson National Biodiversity & Geodiversity Action Plan in 2004, a format that is now widely used. Prior to his recent retirement he was an active participant and contributor to MPA work, chairing the Sustainable Development Committee, and leaves an impressive legacy and fond memories.

MPA SPECIAL AWARD

John Vine, Mineral Planning and Waste Recycling Manager, Imerys, Cornwall

John's personal drive and commitment has been instrumental in steering Imerys' conservation work in the West Country, notably in the award-winning landscape-scale restoration of china clay workings.

A naturally gregarious and friendly character, building relationships with the community and partners has been second nature for John, and has helped to achieve outstanding results.

MPA SPECIAL AWARD

Martin Layer, Planning and Estates Manager, Smiths of Bletchington, Oxfordshire

Martin has made significant contribution to MPA work over the years, including being a founding member of the Biodiversity & Nature Conservation Group.

He has personally driven a number of award-winning restoration projects. He is engaged in local and national conservation charities, particularly the Freshwater Habitats Trust, gaining him the nickname 'Pondy'.

MPA SPECIAL AWARD

JOINT WINNERS

Brian Beales, Site Manager at CEMEX UK's Wangford and Flixton Quarries, Suffolk;
Dave Helliard and Alan Knight, volunteers at Aggregate Industries' Chard Junction Quarry Nature Reserve, Somerset;
Vaughan Gray, Foreman at Tarmac's Halecombe Quarry, Somerset.

THE MPA RESTORATION & BIODIVERSITY AWARDS

FACT FILE

■ WHAT ARE THE AWARDS FOR?

They recognise exceptional achievement and future potential of the mineral products industry in protecting and enhancing the nation's biodiversity. The awards reflect the fact that the industry is uniquely placed to benefit nature.

■ HOW OLD ARE THE AWARDS?

Industry awards for quarry restoration have been around for more than 50 years. They have evolved over time and helped to drive healthy competition that makes the UK a world leader in restoration.

■ WHAT ARE THE CRITERIA?

Each category has its own specific,

measurable and rigorous criteria. Projects demonstrating long-term benefits to priority species and habitats are encouraged.

■ WHO IS ELIGIBLE FOR THE AWARDS?

Minerals sites of all types, including operational, restored and part-restored quarries, manufacturing plants and even areas of seabed that have been dredged for aggregates.

■ WHO ARE THE JUDGES?

The independent judging panel comprises eminent professionals with specialist knowledge of nature and biodiversity, including representatives

from Natural England.

■ HOW DOES JUDGING TAKE PLACE?

Entries are invited in the spring with judging taking place during the summer months, involving site visits, analysis of planning documents and discussions with those involved, including third parties.

■ HOW MANY ENTRIES ARE THERE?

The awards typically attract up to 40 entries from companies large and small, reflecting a wide and diverse range of innovative restoration schemes at former mineral products sites.

Hot gossip?

Why do authorities seem reluctant to specify lower-carbon asphalts on their roads?

Asphalt is the best product for ensuring a safe, smooth and durable road network. Yet lower-temperature, lower-carbon innovations have so far received a lukewarm reception in the UK.

Now, a new report 'Working for better roads' commissioned and published by the All-Party Parliamentary Group (APPG) on Highways seeks to reiterate both the lower carbon emissions and efficiency benefits of warm-mix asphalt (WMA) on UK highway projects.

Production temperatures for hot-mix asphalts can range from 120 to 190°C, while WMA is made at temperatures between 100 and 150°C. This means less energy is used and significant carbon savings can be achieved without compromising performance.

With WMA, CO₂ emissions from production can be reduced by around 15%, with reductions of 25% possible in some cases, depending on product and plant. The use of WMAs also improves conditions for road workers through steam and fume reduction and, because less cooling time is required, carriageways can be re-opened earlier, minimizing disruption for road users.

Such benefits have long been recognised – the product already accounts for

around 40% of production in the US and more than 15% and growing in France. Yet it represents less than 4% of asphalt production in the UK.

Sir Christopher Chope OBE MP, chairman of the APPG on Highways, said: "Everyone has a part to play in tackling environmental issues for future generations and the majority of UK councils have already declared 'climate emergencies'.

The use of warm-mix asphalts will reduce the carbon footprint of road surfacing.

"This report aims to encourage those authorities which have responsibility for highways to put their support for environmental measures into practice without delay."

Rick Green, chair of the Asphalt Industry Alliance said: "Warm-mix asphalts can provide solutions to deliver long-lasting roads that also help to meet lower-carbon objectives.

"So far, take-up in the UK has been frustrated by contract specifications and guidance which require prolonged processes for approvals and departure

– it's time to cut through these impediments so that highway authorities can seize the WMA opportunity."

Richard Hayes, chief executive of the Institute of Highway Engineers, said: "The use of warm-mix asphalts within the UK will support the reduction in the carbon footprint of road surfacing. However, this is not the only benefit, as WMA allows the new surface to be returned to traffic use much earlier, thus reducing delays – a benefit that will be well received by road users."

Responding to the report the Local Government Association's transport spokesman Cllr David Renard said: "Councils are already working with the private sector to adopt innovative practices and technology which maintains and improves the country's roads, and are keen to implement any new methods which can help to reduce carbon emissions, and disruption from potholes and damaged road surfaces.

"Only with adequate funding can councils pay for local services such as road maintenance. That is why we urge the Government to invest in councils and give them the financial certainty they need to plan for the future."

The APPG on Highways seeks to increase knowledge and awareness of issues concerned with the proper provision and maintenance of our highways, with a focus on Local Authority roads. The Asphalt Industry Alliance is a partnership between the Mineral Products Association and Eurobitume UK. The report 'Working for better roads – Warm Mix Asphalt: reducing carbon emissions and improving efficiencies' was researched and funded by the Asphalt Industry Alliance (AIA), which jointly supports the APPG on Highways in conjunction with the Institute of Highway Engineers (IHE). The report can be downloaded at highwaysmaintenance.org/?p=247.

FIRST DEFENCE

From the ravages of coastal erosion to flooding from freak weather, aggregates are yet again proving their worth as the first line of defence against the elements.

It's not often that aggregates make the news headlines in the mainstream media. Yet this most basic of materials has had its fair share of the limelight through the summer of 2019.

That's because when homes and infrastructure are threatened by the relentless action of water, aggregates provide the most versatile, fit-for-purpose and cost-effective solution both in the short-term and over the long-term.

Climate change scientists are in broad agreement that flooding and coastal erosion will increase, as will the need for more and better defences in most circumstances.

So with the devastating impacts that flooding can have, it's more important

than ever to protect homes and livelihoods, preserve vital infrastructure and take urgent action to prevent risks from becoming disasters.

In recent cases, when urgent remedial action has been essential, MPA members and their supply-chain partners responded quickly and decisively, working alongside authorities, emergency services and even the military to get aggregates to where they were needed.

But in an emergency situation, how can authorities be certain that the right materials will be readily available in the right place and in the right quantity?

"Where there's a need for flood and coastal defences – either for a short-term emergency or longer-term scheme –

it is fundamental to ensure the potential demand for materials can be met," said Mark Russell, the MPA's Executive Director for Planning, Mineral Resources and Marine Aggregates.

Where there's a need for flood defences it is fundamental to ensure the demand for materials can be met.

"A guaranteed supply must not be assumed under any circumstances but in a crisis, when speed is essential and the need for aggregates is urgent – as is often the case with severe weather – it would be wise for authorities to have a plan in place with their local aggregates suppliers."

AVERTING DISASTER: Whaley Bridge, Derbyshire

In August, Whaley Bridge was thrown into the spotlight after heavy rains caused a torrent of water to damage the spillway of the Toddbrook Dam, prompting fears of a total collapse.

Whilst 1,500 people were being evacuated from the Derbyshire town, a team from CEMEX UK's Dove Holes Quarry was working around the clock to supply 2,500 tonnes of limestone to support the efforts to shore-up the dam.

Some of the aggregate was bagged by CEMEX UK business partner TCA for delivery by Chinook helicopter to the dam itself, whilst the rest was delivered by lorry to build the temporary roads for pumps and vehicles to access the reservoir.

Work to repair the dam could take several years and will require hundreds, if not thousands, of cubic metres of concrete.



RAPID RESPONSE: Wainfleet, Lincolnshire

In June, two months' worth of rain poured across Lincolnshire in just two days. As a result, many communities faced the threat of flooding and some were directly impacted.

In response Aggregate Industries' Woodhall Spa Quarry initially supplied the village of Kirkby-on-Bain with 450 sand bags to barricade roads and divert rising water into lakes and rivers, as well as lining doors to protect homes and local businesses.

Two days later the team received a request from Lincolnshire Police for emergency aid in Wainfleet where the River Steeping had burst its banks prompting the evacuation of more than 500 homes.

The first loads of bulk ballast bags were delivered soon after, with a Chinook helicopter deployed to place them into the breaches of the river. In total more than 400 bags were supplied and more material has since been supplied as part of a more permanent fix to the river bank.



LONG-TERM PROTECTION: Bacton, Norfolk

This summer, 2.7 million tonnes of sand were deposited on a stretch of eroding Norfolk coastline in an innovative 'sandscaping' scheme to protect nationally important energy infrastructure.

The new 6km-long 'dune' will help to defend Bacton gas terminal, which imports around a third of the UK's gas supply but, after decades of coastal erosion, lay just metres from a receding cliff edge.

The sand, which comes from a licenced dredging area in the North Sea, is expected to be shifted by waves and tides to keep the gas terminal and nearby villages protected for 20 years. The project is the first of its kind in the UK but the concept could work elsewhere.

In the past two decades, almost 30 million tonnes of marine sand and gravel has been used for coastal defence purposes around the British isles.



HOME TRUTHS

Delivering resilient, durable high-quality homes depends on the performance credentials of brick, block and concrete.

We expect a lot of the humble house these days. Far from being a 'roof over our heads' we want our homes to be cost-effective, energy-efficient, low-maintenance and long-lasting.

They need to be resilient to weather extremes, outbreaks of fire and noisy neighbours. Even better if they're made with materials that are locally sourced, part-recycled and 100% recyclable. Only homes built with concrete and masonry can deliver all these things.

This month, the Resilient Housing Conference provided the latest guidance and technical expertise to enable the design and delivery of long-lasting and high performance homes using concrete and masonry.

The event – a collaboration between Modern Masonry, Brick Development Association and The Concrete Centre – looked at how our housing can be designed and delivered to address key resilience issues such as:

- Warming climate and overheating risk – greater need to keep our buildings cool as well as warm
- Changing weather patterns and flood risk – increased risk of flooding and storm events
- Changing demographics – to accommodate an increasing elderly population and more urban living
- Energy availability and fuel poverty – improved energy efficiency and thermal performance
- Sustainability credentials – traceability of material supply, lower carbon and recyclability

- Occupant safety and comfort – fire resistance, health and wellbeing, thermal comfort

Alongside the event, guidance to deliver resilient housing is available which includes basic design advice on reducing the associated risks and impacts.

The inherent properties of concrete and masonry can go a long way to addressing many of the challenges of building resilient homes to ensure long-term viability:

- Flood resilience
- Thermal mass
- Fire resistance
- Acoustic performance
- Durability
- Robustness

"The resilience of a new home can be enhanced simply and effectively through the selection and detailing of appropriate material components," said Claire Ackerman, Director of The Concrete Centre.

"While some design decisions may have a significant impact on the look of the property, this is not always the case and quite simple interventions can make significant improvements to long-term performance, addressing a range of risks and with minor cost implications.

"Concrete and masonry construction and components have a major contribution to make. Truly resilient homes will address both cradle-to-grave impacts of the building, in terms of the selection of materials, their design, construction and in-use performance, and their anticipated reuse and end-of-life potential."

The Concrete Centre is part of the Mineral Products Association, The Concrete Centre's aim is to enable all those involved in the design, use and performance of concrete to realise the potential of the material. The Concrete Centre provides design guidance, seminars, courses, online resources and industry research to the design community. For more information and downloads, visit: www.concretecentre.com

INFRASTRUCTURE

Concrete record set at Hinkley Point

A new record for the largest continuous concrete pour in England has been set at EDF Energy's Hinkley Point C nuclear power station in Somerset.

Hanson supplied the materials to make the concrete for the 9,000 cubic metre, five-day pour to build the last of five reinforced segments that make up the giant cross-shaped foundation for the first nuclear reactor. The record-breaking pour beat the

previous record set at the Shard in London.

Materials supplied by Hanson to other aspects of Hinkley Point C include 51,000 cubic metres of concrete, 2.5 million tonnes of aggregates, 210,000 tonnes of marine sand, 65,000 tonnes of cement, 105,000 tonnes of slag cement and 125,000 tonnes of asphalt.

And thanks to a new 500-metre-long jetty, thousands of tonnes of aggregate will be



transported by sea to the project, helping to remove tens of thousands of lorry journeys, and the associated emissions and traffic from roads in the area.

RECYCLING



Driving up resource efficiency in London

A central London street is believed to be the first in the country to be resurfaced with asphalt containing 80 per cent recycled materials.

FM Conway worked with Westminster City Council to challenge accepted norms and push up the percentage of reclaimed asphalt in the new road surface on Sutherland Avenue in Westminster.

The project builds on the company's work on the A40 in west London which was resurfaced with asphalt containing 50 per cent recycled 'high-PSV' surface aggregate. That was the first time a top layer containing such a high proportion of recycled material has been used on a busy main road outside of trial conditions.

Traditionally, the amount of recycled asphalt has been limited to 50 per cent for the lower layers of roads and just 10 per cent for surface courses on main roads.

EDUCATION

Vids for kids

The creators of fun, educational videos for pre-school children recently visited two Hills Quarry Products sites for their latest films. Kids Trucks TV visited Shorncliffe Quarry in the Cotswold Water Park, Gloucestershire and Newbury concrete plant to make films that will give children an insight into the mineral products industry with eye-catching visuals, songs, sounds and spelling.

MARINE

Investments all at sea?

Two MPA members have made long-term commitments to British marine aggregates by investing in new state-of-the-art ships.

CEMEX UK has become the first company to launch a new marine aggregates dredger for more than 20 years. And Hanson has also given the go-ahead for a new aggregate dredger to join its marine fleet in 2021. The vessels are the first of a new generation of dredgers designed to extract sand and gravel from the seabed in the most efficient way possible.

Mark Russell, the MPA's Executive Director for Planning, Mineral Resources & Marine Aggregates said: "Marine aggregates meet a significant proportion of the total demand, with almost 20 million tonnes of sand and gravel extracted from licensed areas around England and Wales in 2018.

"Each new-build vessel can cost upwards of £30 million, so these are significant long-term investments based on confidence in the important role of marine aggregates in meeting the demand for materials over the next 15 years and beyond."



INNOVATION

Motorway is tired out

A new road surface using recycled tyres is being trialled on the M1 motorway by Highways England. A section of the southbound carriageway near Leicester has been laid with rubberised asphalt, developed by Tarmac, that uses granulated waste tyres in the mix. The trial will test the durability of the surface on a busy part of the road network. Tarmac estimates that up to 750 waste tyres could be used in each kilometre of road surfaced with the new material. Hopes are high that the innovation could be a solution to tackling the millions of disused tyres piling up every year.

Uniquely placed



Mineral products companies are uniquely placed to increase biodiversity by creating new habitats for wildlife through quarry restoration.

To celebrate the industry's achievements in creating amazing spaces for nature, the MPA hosted its third biennial photo competition for member company employees and conservation volunteers at restored mineral sites.

Hundreds of entries were received from all over the UK – the judges' task was tougher than ever with some truly outstanding

photographs capturing the ecological diversity on operating and restored quarry sites.

The winners in the two categories – employees and volunteers – were announced at the MPA's Quarries & Nature conference and awards in October 2019. Winners receive vouchers for photographic equipment.

Employees MPA member companies

Volunteers For conservation organisations

1st Place



Dave Soons, Aggregate Industries, hobby, Cotswold Water Park, Wiltshire

1st Place



Roy McDonald, Beds, Cambs & Northants Wildlife Trust, short-eared owl, Totternhoe Knolls Nature Reserve, Bedfordshire

2nd Place



Linda Thompson, Irish Salt Mining & Exploration Co Ltd, common lizard, Kitroot Quarry, Co Antrim

3rd Place



Dave Barnes, Hanson, stoat, Alington Quarry, Staffordshire

2nd Place



John J Kaczanow, Devon Wildlife Trust, whiskered bat, Sourton Quarry Nature Reserve, Devon

3rd Place



Malcolm Jarvis, broad-bodied chaser dragonfly, Blackhill Quarry, Devon