

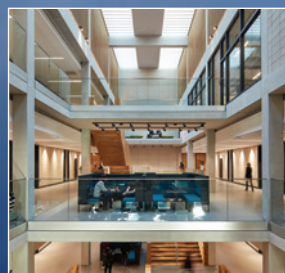
SUMMER 25 ISSUE 29

mineral

products today

Domestic bliss?

UK materials for UK infrastructure



Quarries & nature
Impressive, innovative, inspirational

Concrete future
Cutting out the carbs

Mind the gap!
Planning reform opportunity

CHAIR'S WELCOME



I can hardly believe we're already over halfway through 2025! When I last wrote this piece, I extended my congratulations to all the nominees for the MPA's prestigious Health & Safety Awards 2024, recognising the vital role they play in safeguarding both our colleagues and the wider communities we serve.

This time, I'm delighted to congratulate everyone who was successfully nominated for our Quarries & Nature Awards. While the Health & Safety Awards highlight our commitment to the wellbeing of people, the Quarries & Nature Awards showcase our sector's dedication to the wellbeing of the

natural environment – an area where we perhaps don't receive the recognition we truly deserve.

These awards are just one example of how our industry is contributing to a more sustainable future for the UK. In addition to enhancing biodiversity across the land we manage, we continue to make progress in decarbonising our operations and advancing the circular economy through increased use of recycled products.

The past 18 months have been marked by lower-than-expected activity in our sector, set against a backdrop of political change. In the last year alone, elections have taken place in the UK, USA, France, Germany, Mexico, and Canada, among many others.

Here in the UK, things are challenging. From struggles with the Building Safety Regulator to weak demand and low confidence, construction is struggling and we are feeling the effects. Adding

costs with Employers' National Insurance contributions and business rates has not helped at all. Business needs action to have an impact now.

In the longer term, the recent flurry of announcements in the Spending Review, Infrastructure Strategy and Industrial Strategy indicate encouraging news for the housing sector, renewable energy, UK rail and road networks and school classrooms. For mineral products producers that will supply all these projects, it is the delivery that will bring the growth benefits the Government wants to achieve.

As a sector, we remain fully committed to supporting the UK Government's broader growth ambitions across housing, energy and infrastructure, and following 18 months of decline it's vital that we begin to see an upturn in construction activity and a more positive political and economic climate.

Lex Russell, MPA Chair

Safer by Sharing – good practice guide launched

MPA has published the digital version of the 'Sharing Good Practice Guide 2024' a unique summary of the best entries from the 2024 MPA Health and Safety Awards.

Each good practice includes a direct link to a short video that highlights the health and safety issues addressed by the entry and the benefits that have been delivered.

The guide is an ideal way to quickly review the breadth of outstanding innovations in health, safety and wellbeing and to identify those entries that could be adapted or implemented within workplaces to improve safety for all.

To coincide with the launch of the guide, MPA is now inviting submissions for the MPA Health and Safety Awards 2026 where a new 'Outstanding Contractor

Award' will be introduced. This will recognise the critical role that contractors play in the mineral products industry and celebrate their contributions to improving health and safety in our industry.

Whilst the key theme for the event will remain 'Safer by Sharing' and entries can be on any mineral products industry related health and safety topic. MPA is particularly keen to encourage entries for the 2026 awards in two areas – mental health and wellbeing, and entries related to asphalt, contracting, and the handling of bitumen.

Amy Harris, MPA Head of Health & Safety said: "These entries, which come from all sectors within the mineral products industry, from small, single site operators to larger companies – reflect the

improvements, innovations and practices that have been implemented to make the working environment healthier and safer. Sharing them will enable others to embrace them, and this will make a huge difference."

Entry forms can be downloaded at Safequarry.com



Mineral Products Association
1st Floor, 297 Euston Road
London NW1 3AQ
Tel: 020 3978 3400
Email: info@mineralproducts.org
Web: www.mineralproducts.org
Chair: Lex Russell

Mineral Products Today
Managing Editor: Robert McIlveen
Senior Director, Communications and Public Affairs
Email: robert.mcilveen@mineralproducts.org
Editor: Andi Hodgson
Communications Consultant
Tel: 07972 533728
Email: andi.hodgson@mineralproducts.org

Design and print: www.themegroup.co.uk

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New insights into carbon for new homes

New research by the Future Homes Hub (FHH) shows a negligible difference in whole life carbon emissions between concrete masonry and timber construction.

The FHH report 'Embodied and Whole Life Carbon of Future Homes Standard Options' presents whole life carbon data for different types of construction, testing two different homes with walls made from concrete blocks and another using timber.

The findings challenge common assumptions about building materials. For example, the FHH research shows the whole life carbon for a new mid-terrace house ranges from 571 to 584 kgCO₂e/m² across the various construction specifications, a difference of just two per cent between timber and concrete.

Published as a resource for homebuilders and designers navigating the path to net zero, the report concludes that the different specifications "have broadly

similar upfront and whole life embodied carbon impacts" and there is "no silver bullet solution when it comes to reducing the embodied carbon of new homes."



But many other advantages of concrete – such as fire resistance, durability, longevity, thermal mass and a resilient local supply chain – along with new advancements in low carbon concrete, arguably make it a superior choice for building sustainably.

Overhaul the regs for growth and nature

Recommendations of an independent review into DEFRA's regulatory landscape were welcomed by MPA in April.

If the ideas in Dan Corry's report on environmental regulators and regulations are implemented, MPA says they could pave the way for DEFRA to deliver better outcomes for nature and for the economy. Among the key suggestions in the Corry review are actions to improve cooperation between different regulators on major projects, to reduce duplication and overlap in applying the rules. Also included are proposals to retain staff who have specialist sector expertise and to give trusted organisations greater autonomy to fast-track nature recovery schemes.

Mark Russell, Executive Director of MPA, said: "This review contains lots of ideas that are really welcome, and we hope to see them implemented. The mineral products sector is committed to delivering huge benefits for nature while supplying essential materials for the economy, and this review suggests better ways to encourage both of these. The key challenge is delivery, and we will be pushing DEFRA and the regulators to ensure this review leads to change."

Decarbonisation not deindustrialisation

The seventh carbon budget from the Committee on Climate Change (CCC) has been welcomed by the MPA amid calls for a reduction in the UK's consumption emissions, rather than decarbonisation through deindustrialisation.

Published earlier this year, the CCC's report recognises that the use of carbon capture will be vital to decarbonising the UK cement and lime sectors due to unavoidable 'process' emissions from the chemical changes in the materials. The use of carbon capture – combined with using waste biomass as fuel – has the potential for UK cement and lime production to go beyond net zero emissions in line with the industry's decarbonisation roadmaps.

Hydrogen could also be an important fuel for decarbonising activities in the mineral products industry, but the MPA says it needs to be both affordable and accessible in sufficient quantities. For quarry sites looking at hydrogen-powered Non-Road Mobile Machinery (NRMM), such as dump trucks and excavators, the CCC suggests the need for a hydrogen supply solution that does not rely on the gas grid, for example generating on site or delivery by truck.

To be truly world leading, MPA has suggested the CCC and Government must set targets based on the total emissions from the consumption of goods in the UK, including the emissions embodied in imported goods.

Radio rewilding

Quarry restoration recently got a mention on BBC Radio 4's long-running countryside soap opera The Archers.

Ambridge businessman Justin Elliott extolled the virtues of quarry restoration as he told Home Farm manager Stella Pryor about his rewilding plans. He was inspired by the restoration of a sand and gravel quarry that had been transformed into a "magical" wildlife reserve, "teeming with nature."

And it's a case of fiction mirroring reality, with MPA members having restored quarries across the country for decades, enhancing landscapes to support nature recovery and leaving a proven legacy of biodiversity net gain.

Crime levy 'unjust'

The Environment Agency's new 10% waste crime levy on compliant businesses has been slammed as "illogical and unjust" by the MPA.

The levy aims to fund efforts against waste crime but the MPA argues it unfairly penalises responsible operators already facing high fees, and it risks deterring investment in the circular economy, calling it a misuse of funds and a burden on legitimate firms.



VIEWPOINT

The first half of 2025 has seen the new Government get into gear with many announcements affecting the mineral products sector. Barely a week has gone by without a new pledge, proposal or policy coming out of Whitehall.

The intent within much of these announcements is broadly right but as always, announcements are one thing, delivery another. MPA keeps reminding Government of this, highlighting the need for support for all parts of our industry, which is struggling with weak demand, heavy tax burdens and sluggish regulation.

Boosting jobs and skills

The Government's stated commitment to prioritise UK jobs and boost skills when awarding major infrastructure contracts is among the most encouraging developments. However, we need to see some firm commitment from Government that the mineral products sector, which employs over 80,000 people, is part of that prioritisation. These are high-value, high-productivity local jobs that not only power the economy but also anchor communities in need of economic opportunity for working people. The Chancellor declared in her Comprehensive Spending Review Speech that *"Put simply: where things are made, and who makes them, matters."* While inspired by steel, this statement could equally apply to mineral products.

If Government is serious about 'boosting British' this approach must extend beyond construction sites. It must run right through the supply chain to include jobs in quarries, cement and lime works, concrete and asphalt plants, precast factories and recycling facilities.

Beyond public procurement of construction, the contribution of our domestic industrial minerals sector must not be forgotten. It underpins all

economic activity supporting a huge diversity of manufacturing and industrial activities, including the growth sectors in the Industrial Strategy.

Long-term direction, short-term struggles

Long-term direction of policy is one thing, but our industry is on its knees due to lack of demand right now. MPA data shows historically low levels of construction activity. Announcements need to quickly turn to action, so while we welcome the recent steps to beef up and refocus the Building Safety Regulator it is vitally important to see a positive impact quickly.

The £725 billion Infrastructure Strategy marked an important signal of intent from the Government, as did announcements on Sizewell C, Lower Thames Crossing, Heathrow and the investment of £28.6 million by the National Wealth Fund into the Peak Cluster, the world's largest cement and lime Carbon Capture and Storage project. But we've been here before, and all too often bold infrastructure commitments have been followed by delays, descoping or outright cancellations. To avoid more false dawns, a realistic project pipeline must be backed by project-specific construction material resource audits, so those in the supply chain, like MPA members, can invest long-term with confidence.

Domestic supply chain

The announcement of a £1 billion investment in offshore wind energy is a great opportunity for the UK to deliver net zero infrastructure and improve energy security while backing domestic industries. Using concrete floating foundations is the best way for the UK to develop its offshore wind capacity, because the UK's geological resources mean that large quantities of concrete can be locally manufactured using domestic materials.

Changes to mineral planning and permitting, plus solid commitment from Government to prioritise domestic

supply are vital for the UK to retain value, boost regional economies and reduce emissions in the process.

Doing so would reveal the need for a more strategic approach to the UK's domestic mineral products supply, something that was overlooked in the Industrial Strategy. Of course, we're pleased with the Government's intent to reduce industrial energy costs, helping to create a more level playing field with overseas competitors. But the omission of aggregates and industrial minerals as foundational industries is a missed opportunity.

At the same time, reforms to the planning system must address the specific needs of the minerals sector to ensure a steady supply of essential mineral products.

Delivery not declarations

Our industry is too often taken for granted. Mineral products are not optional extras; they are essential to delivering every major Government priority from new homes to net zero. This is reflected by the fact that we represent the largest material flow in the economy – over 1 million tonnes of resources and products every day. And when well-intentioned policy inadvertently overlooks our sector, the biggest risk is to the Government's own ambitions for economic growth.

As we look ahead, there are some grounds for hope. Many of the building blocks are there – an ambitious infrastructure agenda, more competitive energy costs, momentum on planning reform and a new focus on domestic supply chains.

Yet it is delivery – not declarations – that will make the difference. If the Government can get this right, the prize is enormous – sustainable growth, secure jobs, and a stronger, greener more resilient UK economy.

Chris Leese
Executive Chair
MPA Executive Management Committee

IMPRESSIVE INNOVATIVE INSPIRATIONAL

Some of the country's biggest and best nature recovery schemes are a direct result of mineral extraction, a fact that's gaining increasing recognition among the UK's leading conservation figures. MPA hopes the Government may finally take note too.

The superlatives were echoing around the halls of The Royal Society in London in March when more than 200 delegates gathered to celebrate the role quarrying plays in nature recovery and biodiversity gain.

Among them were leading names in UK wildlife conservation who were at the MPA's Quarries & Nature 2025 awards to witness the best current examples of wildlife habitat creation through the sensitive operation, management and restoration of mineral extraction sites.

Over the years the independently judged MPA restoration and biodiversity awards have witnessed hundreds of former quarries transformed into new areas for wildlife. Indeed, many of the UK's most treasured nature reserves and country parks have been created through quarrying, and MPA members continue to bring to fruition new areas of habitat that support some of the UK's rarest and most endangered species.

Representatives from planning authorities, the civil service and wildlife organisations were in for a treat as MPA members showed they are continuing

to raise the bar to progressively restore quarried land and create new landscapes teeming with biodiversity.

The 2025 awards saw almost 40 entries from across England, Scotland, Wales and Northern Ireland in the main Restoration award and four Biodiversity award categories of Innovation, Landscape Scale, Planned Restoration, and Individual & Group Contribution.

"The mineral products industry is unrivalled when it comes to a combination of expertise and on-the-ground delivery for nature"

Lex Russell

Those speaking and presenting awards included Chair of Natural England Tony Juniper CBE, RSPB Chief Executive Beccy Speight and Director of Landscape Recovery at The Wildlife Trusts, Rob Stoneman, along with the day's host, veteran broadcast journalist Sybil Ruscoe, who has a long association with the countryside and rural affairs.

For MPA members, the association between quarries and nature is nothing new. Back in 2021, the MPA celebrated 50 years since the first restoration awards. But as the UK's natural habitats have continued to decline due to modern agricultural practices, land-mismanagement and ill-judged development, the restoration of land that has been effectively temporarily used for mineral extraction is taking on greater significance.

Mark Russell, MPA Executive Director of Planning & Mineral Resources, said: "We are delighted that our achievements continue to be recognised by the UK's leading conservation bodies with whom we have longstanding partnerships. Unfortunately the Government consistently fails to appreciate how our industry is uniquely placed to directly help convert aspirations for nature recovery and biodiversity into leadership and action on the ground.

"We hope that this year's Quarries & Nature event triggers wider recognition and debate. Besides providing essential, domestically sourced materials, we are one of the few industries that has demonstrated time and time again that we can deliver tangible solutions to the UK's nature recovery challenges, and we are ready to work with all stakeholders to protect and enhance biodiversity."



"The minerals industry has a long and proven track record of delivering new areas for wildlife through the responsible management, restoration and aftercare of quarries. In partnership with the leading conservation bodies, our sector has already created more than 90 square kilometres of priority habitat with a further 110 square kilometres planned and committed."

"Some of these restoration schemes are really quite mind-blowing, delivering nature recovery at scale"

Tony Juniper CBE



Chair of Natural England Tony Juniper CBE

Whilst DEFRA and its long list of Ministers of both parties, have barely acknowledged the impressive contribution the industry plays in nature recovery, the MPA is heartened by the

backing of leading conservationists who have for many years recognised the advantages of partnering with industry to deliver better landscapes for biodiversity.

Tony Juniper CBE said: "Some of these restoration schemes are really quite mind-blowing, delivering nature recovery at scale, at the same time as producing the resources we need to build homes and infrastructure, developing landscapes that support climate resilience, while also creating fantastic places for families to get close to wildlife."

"All of this presents a massive opportunity for a country that's struggling to meet competing environmental goals. With better strategic planning, more joined-up thinking and with all stakeholders on board, the mineral products industry could be a famous vanguard in building a truly sustainable society."

Beccy Speight said: "We're facing significant declines in biodiversity and it's crucial we work together to stop and reverse this. The mineral industry really is leading the way, showing how biodiversity can be embraced, and that growth for business and nature can be achieved hand in hand."

"The award for RSPB Langford Lowfields highlights the power of partnerships and how working together for a common cause can create wonderful places for wildlife and people. We've just seen another record-breaking year for Bittern numbers, and quarry restorations have been a big part of this success story, enabling us to create major wetland habitats that support a range of species."

"The mineral industry really is leading the way, showing growth for business and nature can be achieved hand in hand"

Beccy Speight



Lex Russell, MPA Chair, said: "The mineral products industry is unrivalled when it comes to a combination of expertise and on-the-ground delivery for nature. Working with partner organisations, MPA members have a proven track record when it comes to increasing biodiversity through quarry restoration and land management."

"This year's Quarries & Nature awards provide more evidence of the extensive legacy the industry has built over decades. There has never been a more important moment to recognise the essential role of domestic raw materials in the economy and our society, alongside the long-term contribution the industry makes to nature. While others talk about potential, minerals producers have actually been delivering positive outcomes and we are committed to doing so going forward."

Restoration Awards

WINNER



The winners of the coveted Cooper-Heyman Cup for outstanding achievement in quarry restoration were Tarmac and RSPB at Langford Quarry near Newark-on-Trent, Nottinghamshire.

The partnership has transformed an area of 122 hectares of the former sand and gravel quarry into a mosaic of wetlands, lowland meadows, wet woodland and agriculture. The judges said that “this highly impressive site is a key component of the wider landscape-scale restoration works being undertaken along the Trent by the minerals sector” and there was a “high level of expertise shown in the design and delivery in partnership with the RSPB.”

Highly commended in the restoration category were Heidelberg Materials with Smiths Concrete and Warwickshire Wildlife Trust for Bubbenhall Wood and Meadows Nature Reserve, Warwickshire. Also highly commended were Smith & Sons (Bletchington) with Linear Fisheries (Oxford) for Tar Farm Lakes in Oxfordshire.

HIGHLY COMMENDED



Heidelberg Materials with Smiths Concrete and Warwickshire Wildlife Trust, Bubbenhall Nature Reserve, Warwickshire.

HIGHLY COMMENDED



Smith & Sons (Bletchington) with Linear Fisheries (Oxford), Tar Farm Lakes, Oxfordshire.

In the Biodiversity – Innovation category, which recognises imaginative approaches that advance best practices, the winners were Tarmac with Cranfield University for measuring and integrating biodiversity net gain and carbon sequestration into restoration at Maxey Quarry in Cambridgeshire and Wivenhoe Quarry in Essex. Runner up in the Innovation category was Cemex for the conservation grazing using a ‘virtual fence’ at Rugeley Quarry near Cannock Chase, Staffordshire.

[illegible]

Staffordshire restoration schemes were joint winners of the Biodiversity – Landscape Scale category, which celebrates projects that connect with their surroundings to deliver on the Lawton principles of ‘Making Space for Nature’ – more, bigger, better and joined areas of nature conservation. Holcim at Caudon Cement Quarry and Caldon Low Aggregate Quarry shared the award with Heidelberg at Barton Quarry. Highly commended in the Landscape Scale category were Tarmac for Arcow and Dry Rigg Quarries in North Yorkshire and Holcim for Little Paxton Quarry in Cambridgeshire.

Holcim, Cauldon Cement Quarry and Caldon Low Aggregate Quarry, Staffordshire.

HIGHLY COMMENDED

Holcim, Little Paxton Quarry, Cambridgeshire.

Heidelberg, Barton Quarry, Staffordshire.

HIGHLY COMMENDED

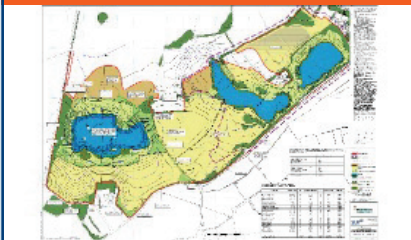
Tarmac, Arcow and Dry Rigg Quarries, North Yorkshire.

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BIODIVERSITY – PLANNED RESTORATION

Winner of the Biodiversity – Planned Restoration category, highlighting schemes that are approved, are yet to be delivered, and will deliver biodiversity benefits in future, was Heidelberg for restoration at Birch Quarry in Essex, with Tarmac highly commended for their work at Wivenhoe Quarry, also in Essex.

WINNER



Heidelberg Materials, Birch Quarry, Essex.

HIGHLY COMMENDED



Tarmac, Wivenhoe Quarry, Essex.

Finally, five individuals received awards for their personal dedication and contribution to enhancing biodiversity at restored quarries, along with awards for a quarry team and a volunteer group that have gone above and beyond, and the 15-year conservation partnership between Cemex and the RSPB.

Landfill Tax Reform and Quarry Restoration

The MPA has raised serious concerns about the potential impact of proposed Landfill Tax reforms on quarry restoration in its response to Treasury's consultation for England and Northern Ireland.

Central to the proposals is the removal of the Landfill Tax exemption for material used in quarry restoration under disposal permits by 2027, with only recovery-permitted operations remaining outside the scope of the tax.

MPA warns this shift could jeopardise the restoration of at least 50 sites, as there is currently no legal route to transition from disposal to recovery permits. Many current restoration projects rely on bringing in inert waste, such as clays and subsoils, delivered under disposal permits – a long-standing practice rooted in planning obligations.

Without the exemption, some restoration projects may become financially unviable, risking non-compliance with planning conditions and potentially leaving landscapes unrestored. The industry also fears that hastily removing the exemption without viable alternatives or transitional support could have broader environmental consequences.

Engagement with Treasury, HMRC and the Environment Agency is ongoing to seek clarity on key issues, highlight the practical challenges and emphasise the need for reform to be aligned with both environmental objectives and operational realities.



CUTTING OUT

About 90 million tonnes of concrete are used in the UK each year, with unrivalled durability, versatility and availability making it the most important material for built development. And acceleration of efforts to reduce concrete's carbon emissions has brought new mixes and design innovations that are delivering impressive results.

What is lower carbon concrete?

Lower carbon concrete has rapidly become an important part of the overall market, with new technologies, mix designs and standards being developed almost continually. Because concrete has such a wide range of applications, with different performance characteristics requiring different balances of ingredients, there is no single agreed definition for low carbon concrete, and no single path to achieving it.

"Concrete's embodied carbon could be reduced by as much as 80%, just by using known technologies and best practice design"

However, given concrete's widespread use, even small changes to its content or application can deliver big carbon savings when scaled up. And a new wave of strategies for reducing the embodied carbon of concrete have emerged in recent years.

As a result, it's estimated that concrete's embodied carbon could already be reduced by as much as 80%, just by using known technologies and best practice design and construction methods. That said, the amount of carbon that can be saved using concrete, compared to a 'build as usual' scenario, will depend

upon various factors, including the client and project team's aspirations.

Where is the carbon in concrete?

Cement makes up 10 to 15% of concrete by volume, but can account for anything from 75 to 90% of its embodied carbon, due to the high temperatures and process emissions during manufacture.

As a result, much of the focus for reducing carbon in concrete focuses on the amount and type of cement used. Portland cement, also known as CEM I, is the original general-purpose cement that forms the basis of most cements used for concrete in the UK, often in combination with 'supplementary cementitious materials' (SCMs, see below).

Aggregates like crushed rock, gravel and sand, the other main ingredient in concrete, are usually inherently low in carbon. In fact, despite making up around 70% of concrete's volume, they typically contribute just 3% of concrete's embodied carbon. Steel reinforcement, usually comprising recycled steel made in electric arc furnaces, accounts for approximately 19% of the embodied carbon of structural concrete.

What are SCMs?

Supplementary cementitious materials (SCMs) have a lower carbon footprint than Portland cement and their use can have a significant impact on concrete's embodied carbon. Common SCMs, with decades of established use in concrete, include:

- **Ground granulated blast-furnace slag (GGBS)** – a by-product of the steel industry;
- **Pulverized fuel ash (PFA, also known as fly ash)** – a residue of the coal-fired power industry;
- **Limestone fines** – essentially quarried limestone finely ground into powder.

Other SCMs permitted in the latest British Standard for concrete (BS 8500) include:

- **Natural pozzolana** – sourced from either volcanic rock or sedimentary clays and shales;
- **Silica fume** – a by-product from the manufacture of silicon metal and alloys;
- **Natural calcined pozzolana (calcined clay)** – clay materials that are heated and ground to become reactive, a process known as calcination.

"The industry is investing heavily to decarbonise the manufacturing process"

Expanding the availability and development of alternative sources of SCMs is a major focus of activity in the industry. Studies show there are potentially abundant sources of SCMs in the UK that could be processed for use in concrete. These include historic deposits of fly ash from former power stations (see Mineral Products Today, issue 21) as well as brick dust and reclaimed clay (see Mineral Products Today, issue 27) and even treated concrete fines from demolition waste.

Research in recent years has highlighted impressive carbon reductions when SCMs are used in combination and, in 2023, BS 8500 was updated to allow for

THE CARBS

'multi-component' composite cements that use more than one SCM. These include up to 20% limestone fines in combination with either GGBS or PFA to replace up to 65% of the Portland cement in total.

Specifying lower-carbon materials

Today many MPA members offer lower carbon concretes as part of their product range. These commonly have up to 70% less embodied carbon than standard mixes with some suppliers able to offer concretes for certain applications with 85% less carbon.

These products typically use combinations of SCMs and smart mix designs to deliver impressive results. Several other innovative cements and binders have been developed in recent years, some of which are coming onto the market, but most are not yet available at scale.

Last year the British Standards Institution (BSI) published a code of practice (called Flex 350) to facilitate the use of binders not yet covered by cement standards, such as alkali activated cementitious materials (AACMs).

This sets out the test methods for assessing their performance. To be defined as a lower carbon binder system according to Flex 350, the concrete's embodied carbon needs to be at least 15% below the average market concrete for the relevant strength class.

How to achieve lower carbon concrete?

It is useful but not essential to know every detail of concrete composition and production to specify a lower carbon concrete. Rather than being too prescriptive about how to lower

emissions in a new structure, developers are advised to set an overall 'carbon budget' for the concrete.

This gives contractors and suppliers the opportunity to tailor the mix to project-specific conditions – for example, the different curing times in winter and summer temperatures – or to adopt new carbon reduction methods that may become available as the project evolves.

"If progress to date is anything to go by, the future for concrete looks as solid as the material itself!"

A revision to the National Structural Concrete Specification (NSCS), available soon, will include new guidance on using benchmarks to specify embodied carbon requirements.

Lower carbon through building design

The embodied carbon of a concrete building can be significantly reduced by choosing the most appropriate structural system and using material efficiently.

Concrete frames can be designed in many different ways, and there are many variables to consider, including span, loading and choice of system. Worked examples show how structural adjustments can reduce embodied carbon by as much as 42% before the concrete mix is even considered.

Furthermore, the size of a structural element can be minimised through the use of stronger concrete, with a greater proportion of Portland cement. It is therefore possible that concrete with higher embodied carbon per volume can actually reduce overall carbon.

Decarbonising Portland cement

In 2020 the UK concrete and cement industry developed a roadmap to beyond net zero by 2050, building on a strong track record that has already delivered a 53% reduction in absolute carbon dioxide emissions since 1990. The industry is investing heavily in five technology levers identified in the roadmap to decarbonise the manufacturing process.

This includes energy efficiency in production and greater use of renewable energy; investment in rail freight upgrades and electric vehicles; greater use of lower carbon mixes; fuel switching; and carbon capture technology.

Significant advancements have been made across all five levers and few industrial sectors have made as much progress as the UK concrete and cement industry to reduce their emissions. If progress to date is anything to go by, the future for concrete looks as solid as the material itself!

Elaine Toogood is Senior Director of Concrete at the Mineral Products Association (MPA). She is a qualified architect with 30 years' experience of working as a construction professional in the built environment. She regularly contributes to groups and committees related to environmental sustainability.

MPA The Concrete Centre provides a range of resources, including guidance documents, webinars and tools to assist construction professionals in the design and specification of concrete. It has recently published a new suite of guidance documents for specifying sustainable concrete, available to download at:

www.concretectre.com/specifying



Breaking records

(and not in a good way!)

It's 30 years since the ALARM survey first shed light on the country's failing local road network. And despite short-term funding boosts, the story remains the same – a lack of long-term investment is exacerbating the economic, environmental, social and safety impacts of our deteriorating roads.

A pothole has been filled the equivalent of every 18 seconds, every day, for the last 10 years in England and Wales. And the backlog of carriageway repairs has reached new heights at almost £17 billion.

That's according to the 2025 Annual Local Authority Road Maintenance (ALARM) survey, commissioned by the Asphalt Industry Alliance (AIA). It reveals that one in every six miles of the local highway network – equivalent to 34,600 miles of roads – is reported to have less than five years' structural life remaining. And yet the survey reports that roads are only resurfaced, on average, once every 93 years.

ALARM is an independent survey of local authority highway departments in England and Wales based on information from those responsible for its maintenance. This year's survey received a record 78% response rate from local authorities.

Besides the obvious impacts such as vehicle damage and road safety, poorly maintained roads are recognised as having impacts on local economies and access to essential services.

David Giles, Chair of the AIA, said: "Over £20 billion has been spent on carriageway maintenance in England and Wales over the last decade. However, due to the short-term allocation of this funding, it has resulted in no quantifiable uplift in the condition and resilience of the network. In fact almost all (94%) local authority highway teams who responded said that there has been no improvement to their local network over the last year: a view no doubt shared by the majority of road users."

"There needs to be a complete change in mindset away from short-term to longer term funding"

Over the past three decades ALARM has reported a repeated pattern of short-term cash injections in an effort to stem the accelerating decline in road conditions, followed by longer periods of underfunding.

"There needs to be a complete change in mindset away from short-term to longer term funding commitments," added David. "Local authorities do their best with the resources available.

Nevertheless, they have told us they need their budgets to more than double for the next five to 10 years if they are going to be able to address the backlog of repairs.

"Local authorities do their best with the resources available"

"That is why we are calling on Government to set a minimum five-year funding horizon and a substantial, sustained increase in investment with budgets ring-fenced specifically for local roads maintenance."

Investment is the watchword, especially since figures from the Department for Transport, published in September 2024* indicate that for every additional £1 invested in roads, there is a minimum return of £2.20, with analyses identifying typical returns of up to £9.10 at a national level.

"Investing to save in local roads would allow authorities to plan and provide better value for money for taxpayers and deliver a more resilient network while helping kickstart the Government's economic growth plans," David continued.

According to findings of ALARM 2025, some £16.81 billion is now required, as a one-off, for councils to bring the network up to their 'ideal' conditions. And with 52% of local roads – more than 106,000 miles – having less than 15 years' structural life remaining, that would need to be immediately followed up with further long-term investment.

The full ALARM survey report is available to download from www.asphaltuk.org. The Asphalt Industry Alliance (AIA) is a partnership between the Mineral Products Association (MPA Asphalt) and Eurobitume, the voice of the European Bitumen industry.

*Source: Department for Transport Economic appraisal for investing in local highways maintenance, September 2024





"The AIA's report lays bare the inadequate repairs happening on our local roads, where despite spending billions on filling

potholes, the backlog costs are increasing. Moreover, if drivers are swerving to avoid them, they are risking a collision. While filling a pothole provides temporary respite and a brief improvement in the safety of the road surface, it is essentially a sticking plaster. We need to start properly resurfacing our roads to ensure we're not throwing good money at bad roads, but most importantly to ensure smooth and safe journeys."

**IAM RoadSmart Director of Policy and Standards
Nicholas Lyes**



"A dismal 'two steps forward, three steps back' picture of the UK's pothole plague has emerged in ALARM's latest

report. The UK is nowhere close to getting out of this rut. However, pothole-related breakdowns recorded by the AA, the UK's biggest motoring organisation, showed a very slight year-on-year dip in incidents. While that doesn't guarantee that the UK has turned a corner, it offers some hope that increased funding will eventually make a difference. Unfortunately, ALARM's increasing £17 billion backlog of road repairs once again underlines the size of the task ahead."

AA President Edmund King



"It is no surprise to councils that the local roads repair backlog continues to rise, given inflation and huge demand pressures on

local government statutory services. The funding increase in the last Budget was positive and must now be followed by a commitment to a long-term financial package to tackle this backlog. Investing in local roads now makes them more resilient and last longer, with direct benefits to road users, business, wider society and the environment. Councils have long called for a five-year funded package for maintaining our local roads, ensuring they are treated on a par with our motorways and major trunk roads."

LGA Transport Spokesperson Cllr Adam Hug



"This year's ALARM findings highlight the ongoing challenges faced in maintaining the local road network. Budget

cuts of 4.1% in real terms, have led to the continuing deterioration of what is our most valuable asset. The only viable option is long-term investment in order for local authorities to carry out essential works. The reported £16.8 billion one-off payment would take 12 years to complete, to adequately prevent further deterioration. However, with 52% of local roads now having less than 15 years' structural life remaining, this continued shortfall in funding risks worsening surface failures and network decline."

IHE Chief Executive Lyle Andrew



"Once again, these figures paint a bleak picture of the state of the nation's roads and confirm what a majority of drivers have known

for a long time – that in far too many parts of the country, road surfaces are simply not fit-for-purpose. The lack of investment in our roads is a false economy as it just leads to bigger repair costs in the future. In the meantime, all road users continue to pay the price with uncomfortable journeys, avoidable breakdowns and repair bills that they only incur because potholes are so bad. Councils need to have certainty of resources to look after one of their most valuable assets – the roads millions of us use every day."

RAC Head of Policy Simon Williams



"This year's ALARM survey results once again expose the stark consequences of years of sustained underinvestment,

extreme weather and rising traffic – pushing the UK's roads into a state of accelerating decline. Our research makes it clear: short-term funding and ad hoc funding pots is trapping the sector in a cycle of reactive fixes, stifling innovation and leading to outdated maintenance strategies that ultimately cost the economy more in the long run. Without bold, long-term financial assurances for councils, the situation will only worsen."

LCRIG CEO Paula Claytonsmith



"The ongoing deterioration of local roads is increasingly a question of life or death for far too many motorcyclists. The Motorcycle Action Group fully endorses the recommendations made in this year's Annual Local Authority Road Maintenance (ALARM) survey report. We too want to see a substantial and sustained increase in highway maintenance budgets. The National Highways model of frontloaded investment with full delivery across two five-year investment periods has been proven

to work. We also agree with the report's recommendation that this investment must be ring-fenced for local road maintenance with targeted and accountable budget allocations."

MAG Director of Campaigns and Political Engagement Colin Brown

MIND THE GAP!

Planning reform is a golden opportunity to close the gap between ambition for housing and infrastructure, and the supply of minerals to build them – but only if the Government chooses to seize it!

And that's not the only gap in the sector, with hundreds of vacancies for planning professionals creating a recruitment crisis for companies, councils and consultants alike.

These were among the key topics of discussion at the 2025 Minerals Planning Conference in June, co-hosted by MPA with the Royal Town Planning Institute (RTPI) and attended by 250 delegates representing all parts of the sector.

Opening the conference, RTPI Past President Lindsey Richards set out the importance of planning and its positive impact, and how it supports industry and supply chains to encourage local growth and local economies.

"We've seen planning reform at the top of the political agenda, streamlining of processes, with promises around resources," said Lindsey. The Government's support to recruit and train more planning professionals was welcome, she added, but it wasn't enough and didn't cater for specialisms such as minerals and waste.

"Mineral planning is an exciting career and it's essential for growth and housing delivery, as without future supply we face lower quality materials, increased costs and increased uncertainty in the supply chain."

Keynote speaker was seasoned consultant Catriona Riddell who is National Strategic Planning Specialist for the Planning Officers' Society, Vice Chair of the Town and Country Planning Association and a Fellow of the RTPI.

She explored the evolving picture for strategic planning in England, emphasising the shift from planning being seen as a problem to a solution for national growth. Exploring the Government's commitment to planning

reform, including the introduction of strategic planning authorities and spatial development strategies, she stressed the importance of the plan-led system and underscored the need for a more cohesive 'bigger than local' approach, including minerals, to ensure effective growth and infrastructure planning.

"People don't understand what the sector is all about so it's important we get that message across and inspire young people"

"Planning reforms are very much about getting back to a strategic plan-led system," she continued. "An awful lot has already happened in planning since last July ... there's real momentum behind it, and we've got a lot more to come."

She outlined some of the opportunities and uncertainties of the local government restructuring, which over half the country is currently going through, and recognised the potential benefits: "It means having unitary authorities planning for minerals as well as their wider spatial planning; bringing these closer together, bridging that gap, is a really good thing, a really important thing. But we need to understand how that will work in practice, and how it will be managed."

In the Environment session, RSPB's Minerals Business Advice Manager and Nature After Minerals lead Catherine Cullen was joined by Land Use Framework

Policy Lead at DEFRA Max Heaver and two Restoration Managers from Tarmac, James Rhodes and Ed Brightman who shared their award-winning restoration work.

Catherine started with the importance of nature and the crisis facing the UK. She discussed the role of RSPB in land management, policy and partnerships with MPA members, highlighting real world examples with Cemex, Heidelberg and Tarmac.

"Habitat restoration is not just good practice, it's actually necessary, and we recognize that minerals have been delivering in this space for a very long time," she said, emphasising the need for collaboration.

"Mineral sites are usually not the problem when it comes to nature, and with careful planning they can very much be a great opportunity for habitat creation and species recovery."

Max explained how DEFRA's land use framework, published for consultation in January, aimed to balance multiple demands on England's 13 million hectares of land, including food production, nature conservation, climate targets, housing, infrastructure and minerals.

Highlighting the unique temporary nature of quarrying, he added: "Minerals is interesting to consider, where the land can deliver minerals over a certain period and then later be put back to agriculture or nature."

Tarmac's speakers James and Ed highlighted the company's growing commitment to biodiversity and sustainable land restoration. James used Langford Lowfields, Nottinghamshire to show how species-led design, such as focusing on bittern habitats, can yield outstanding results.

Ed explained Tarmac's use of digital mapping for real-time site monitoring,

planning, and alignment with broader conservation goals which, he said, and helped to deliver habitats that are “bigger, better, and more connected” across the UK landscape.

The second session saw Christina Davey, MHCLG’s Head of Planning Policy for Sustainable Development and the Environment, take the stage along with Director of Housing and Planning at Northumberland County Council Rob Murfin and Director General of the Rail Freight Group, Maggie Simpson.

Christina laid out the scale, ambition and pace of the Government’s planning reforms, acknowledging the strategic role of minerals in the UK’s growth agenda. The return of strategic planning represented a real opportunity for minerals producers, she explained.

“The Government has embarked on a really ambitious package of planning reforms aimed at providing more confidence in the system, and creating a simplified and more streamlined system,” she said, recognising the essential role of MPA members, “because you can’t build homes and infrastructure without minerals.”

Rob Murfin provided a personal perspective that explored the challenges and opportunities posed by new housing targets. “The Government’s planning reforms are significant and necessary to reach the housing targets and build the associated infrastructure,” he said.

Exploring the difficulties and costs associated with minerals planning he said that mineral provisions are often overlooked in Government consultations despite the necessity of aggregates. He went on to call on those in minerals planning to be bolder about the link between minerals, economy and society.

Maggie Simpson reiterated the critical role of rail freight in the UK’s mineral supply chain, highlighting its £2.5 billion annual contribution.

She said mineral products accounted for about 40% of all UK rail freight but the sector faced perpetual challenges of urban development encroaching on rail

terminals. The recent changes to the National Planning Policy Framework now meant freight was included, she said, adding: “We need far more than that but it’s a really good place to start.”

The afternoon sessions began with Richard Kimblin KC, Barrister at No5 Chambers who discussed the legal implications of the 2042 ‘sunset clause’ for mineral permissions.

He also reviewed the ability to amend planning conditions under Section 73 of the Town and Country Planning Act 1990, despite some misconceptions, and addressed questions on the scope of non-material amendments (NMAs).

“Minerals form the bedrock for growth, and mineral planning is the only way those minerals are made available”

Considering Green Belt policies, he said that mineral extraction was generally not considered inappropriate development if it does not impact openness or conflict with Green Belt purposes.

In the final session of the conference the focus was firmly on skills and training, Kicked off by Lisa Kirby-Hawkes, Head of Development Management & Flood and Water Management at Hampshire County Council with Dr Alan Thompson of Cuesta Consulting and Lisa Saunders of Minerals Matter, an industry-wide campaign to promote careers in the quarrying and minerals sector.

Lisa explored recruitment and retention challenges in minerals planning, sharing highlights of a survey by The Planner magazine revealing that 74% of respondents found resources (or the lack of them) their biggest challenge. The perception of minerals planning, shortage of planners, loss of experience, and lack of pathways into the sector were all key issues.

She presented work with the Planning Officer’s Society to address specific issues for minerals in terms of recruitment and retention, and outlined a series of successful examples.

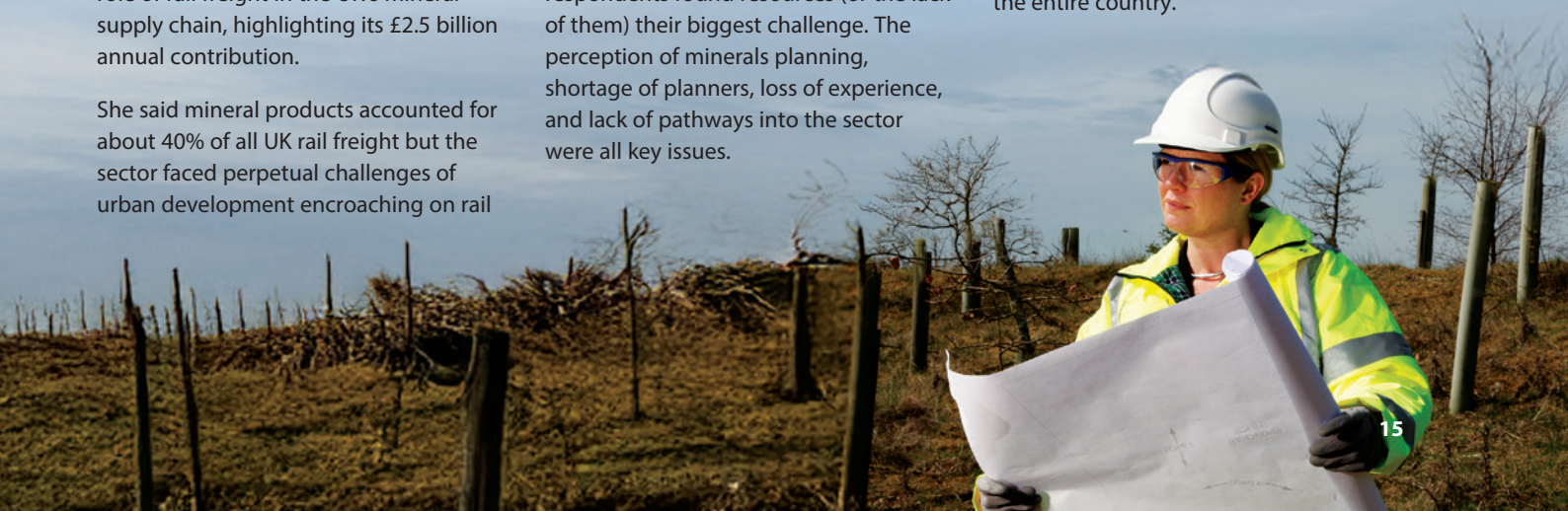
Dr Alan Thompson described the CPD training delivered by Cuesta Consulting for the RTPI to introduce minerals planning to planners and others who might be interested in the specialism, with a focus on understanding the role of minerals in everyday life and the balances that must be struck.

Boiling down the objectives of the profession he said: “You’re there as a mineral planner to ensure future supply... and encouraging applications in the right places is an important part of the job.”

Then Lisa Saunders highlighted the work of Minerals Matter to address skill shortages, promote diversity and ensure future competency in the sector. She explained that Minerals Matter engages with around 19,000 students annually through ambassadors, resources and events.

“People don’t always understand what the sector is all about,” she said. “So it’s important that we get that message across... and try and inspire young people.”

Concluding the event, Mark Russell, MPA Executive Director for Planning and Mineral Resources said: “One of the things that came through loud and clear is the need to raise awareness – mineral planning and why it matters,” he continued. “Minerals form the bedrock for delivering growth and development, and mineral planning is the vehicle – the only vehicle – by which those minerals are made available. Given the Government’s agenda, that fact places minerals planning as a top priority for the entire country.”



MEMBERS

A snapshot of recent news stories from MPA members

Coffee-concrete anchors whale sculpture

Holcim developed a special concrete mix using recycled coffee grounds and biochar to support a 12-metre-high blue whale sculpture at London's Canary Wharf.

The sculpture, The Whale on the Wharf by StudioKCA, is made entirely from plastic waste recovered from the sea and now stands in Wood Wharf's wet dock. To ensure the stability of the towering installation required a 32-cubic-metre concrete base that incorporates biochar produced from UK-sourced wood and spent coffee grounds collected from local cafés. The project marks the UK's first use of coffee-based biochar in construction.



Quarry goes electric with green grant

Suttle Stone has received a boost after being awarded funding from the UK government's Industrial Energy Transformation Fund (IETF).

The grant will support the installation of a fully electric crushing and screening plant at Swanworth Quarry in Dorset – reducing the site's carbon emissions by nearly 130 tonnes of CO₂ annually.

The IETF, managed by the Department for Energy Security and Net Zero, supports industries in adopting low-carbon technologies. The grant makes it possible for Suttle Stone to replace diesel-powered equipment with a more efficient, electric alternative – an upgrade previously out of reach due to high capital costs.

Brick waste into low-carbon cement

Forterra has partnered with LKAB Minerals to transform waste brick dust into a sustainable cement alternative.

The initiative repurposes crushed bricks from Forterra's Kings Dyke site near Peterborough into calcined clay, a supplementary cementitious material (SCM).

Unlike traditional calcined clay, which requires carbon-intensive heating, Forterra's method avoids high-temperature processing since the bricks have already been fired – cutting emissions significantly. Processed at LKAB's UK facilities, the clay is a lower-carbon material that supports circular economy goals.

Milestone for UK carbon capture

Heidelberg Materials has the green light to build a carbon capture plant at its Padeswood cement works in North Wales with the granting of planning permission.

Once operational the plant will capture up to 800,000 tonnes of CO₂ each year, which will be transported via the HyNet North West pipeline for permanent storage under Liverpool Bay.

Not only does the project help to position the UK cement industry at the forefront of industrial decarbonisation, but it will also deliver economic benefits, creating around 50 full-time roles and up to 500 jobs during construction.

Inspiring students

Tillicoultry Quarries has partnered with Alva Academy in Clackmannanshire, Scotland, to introduce students to careers in the mineral products industry.

The initiative began with a school workshop, where team members shared industry insights and challenged stereotypes about quarrying. Students later visited Tillicoultry's Northfield site, experiencing quarry operations first-hand and hearing from current apprentices.

The close relationship has been praised by pupils and staff alike for sparking interest and revealing the wide range of roles available in the extractives sector.

Library donation

Two MPA members joined forces for a donation of materials to help a new school lending library get off the ground in Kent.

Brett Aggregates and Day Aggregates at Cliffe answered the call for gravel from St Helen's C of E Primary School for their new library and learning space.

It will be run by Year 4 and 5 pupils and includes an electronic system to allow children to easily borrow books, and has space for small group workshops and will provide an area for new joiners to take part in summer 'settling in' sessions.

It's a RAP

Tarmac has announced plans to ramp up its use of Recycled Asphalt Planings (RAP), aiming to hit 70% RAP content in new road surfacing by 2030 – doubling current rates.

The move is part of a wider push to cut carbon emissions and embed circularity across UK road construction. Already reusing over one million tonnes of RAP each year, the firm is investing in equipment and technology to scale up its efforts.

Recent trials within parent company CRH have achieved up to 90% RAP content in Ireland – a benchmark Tarmac now aims to replicate in the UK, signalling a step change in sustainable road building.