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mineral

products today

Full circle

Concrete in a circular economy



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CHAIR'S WELCOME



In the first half of 2026 MPA members have continued to face extremely tough economic conditions, with few signs of that letting up for the rest of the year.

Costs remain elevated, project pipelines are uncertain and there are scant signs of recovery in construction markets (at least not yet!)

Against this backdrop, it's crucial that as an industry we focus on the things we can influence directly and at the very top of that list is the health, safety and wellbeing of our people. I was encouraged to see so many members take part in the recent MPA Health and Safety Awards, an important platform for sharing good practices, innovations and initiatives to keep our people safe and well. I congratulate the winners and thank everyone who took the time to enter. The more we share, the more we

learn, and the safer our industry becomes.

Our commitment to health and safety extends beyond the gates of our operating sites. MPA recently published an updated Drivers' Handbook (MPT p16) reinforcing the importance we place on safe and responsible delivery as much as production. Thousands of professional drivers play a key role in our industry and this new document reflects our determination to set the highest operating standards.

Public safety is also at the heart of our work with the National Water Safety Forum to reduce the number of inland water fatalities. The recent rise in such tragedies is deeply concerning and I encourage everyone to spread life-saving messages to families and communities, especially those near active and restored quarries.

In this edition of MPT you will find examples of an industry continuing to lead and innovate. We explore how concrete is helping to drive greater

circularity in construction (MPT p5), with increasing opportunities for reuse, harnessing concrete's remarkable durability. The growing role of marine aggregates in meeting demand is also covered (MPT p8) particularly in South East England. And the latest findings from the ALARM survey once again highlight the scale of the challenge facing local authorities in maintaining the road network (MPT p12).

Across every part of our industry, exciting and important work is helping to ensure UK mineral products remain economically and environmentally sustainable. Our sector has a long track record of resilience and responding positively to change, and that's being tested right now. Under the leadership of our new CEO Paul Adeleke, the MPA team will continue to work tirelessly, building on our achievements and championing our industry's essential role in the economy and in society.

Lex Russell, MPA Chair

MPA appoints Paul Adeleke as CEO



Paul Adeleke is the MPA's new Chief Executive Officer. He has joined the MPA from his role as Executive Director for Strategy, Policy & Communications at the Global Cement and Concrete Association (GCCA).

With more than 20 years of senior leadership experience, Paul is widely recognised for his expertise in public affairs, strategic communications, sustainable development and industry

advocacy, as well as his ability to build strong relationships with governments, regulators and stakeholders.

Prior to GCCA he held prominent positions at the Royal Institution of Chartered Surveyors (RICS), consumer goods giant Philip Morris International, the UK Government (DBT and HMRC) where he led engagement with UK businesses, specialist property and planning communications agency GKA, and political intelligence service Dods Group.

At the GCCA, Paul was instrumental in advancing the cement and concrete industry's global agenda, shaping policy, promoting innovation and accelerating the sector's transition towards greater sustainability. He fostered collaboration between the industry, governments and the construction value chain, positively positioning the critical role of concrete in the built environment.

"Mineral products are fundamental for the economy, society and the transition to a sustainable future," said Paul. "It's a critical

time for the industry and there's work to be done to secure the recognition and supportive policy landscape the sector needs to play its vital role and remain viable. I'm looking forward to working with our members, policymakers and stakeholders to ensure our voice is heard loud and clear."

Lex Russell, MPA Chair, said: "We are delighted that Paul is joining as CEO. He's an exceptionally capable leader with a genuine passion for our industry and a deep understanding of the challenges and opportunities that lie ahead. His leadership, energy and vision will be invaluable as we build on our successes championing the interests of our members and the essential role they play in supporting the UK economy and society."

Lex also paid tribute to MPA Executive Chair Chris Leese for his leadership and service to both MPA and the wider industry. Chris, who led the MPA's Executive Management Team for the past two years, is stepping back from frontline duties as Paul takes up his role as CEO.

New report shows surging tax burden on industry

New analysis from the MPA shows an alarming rise in the tax burden on UK producers of construction materials and industrial minerals, stripping away business confidence and damaging investment.

The overall tax burden on the industry has grown up to 29% in just four years – a period dogged by a weak market demand across the construction supply chain with sales of aggregates, concrete, asphalt and mortar hitting record lows. This is a direct result of cumulative policy changes that have hampered the industry by increasing employers' National Insurance Contributions, Corporation Tax, fuel duty and business rates.

Government pledges for new homes and infrastructure rely heavily on essential materials from the mineral products

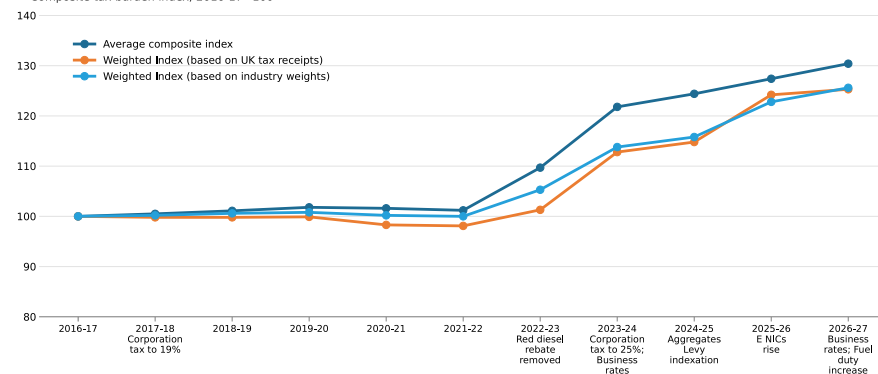
sector, and more tax presents a real and growing risk to delivering these promises.

Aurelie Delannoy, Director of Economic Affairs at MPA said: "The tax burden on the industry has risen sharply since 2021-22, increasing business costs at a time when demand is already weak and economic uncertainty remains high.

"Government must now focus on stability – no further increases in business taxation in the near term, protected infrastructure spending with a clear commitment to delivery, and support for housing demand. Without this, there is a risk to jobs, capacity and future investment across the construction supply chain."

Across the taxes considered, the Industry's cost burden in 2026-27 is 26-29% higher than in 2021-22.

Composite tax burden index, 2016-17=100



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Government ignores the minerals it needs (again!)

Defra's new Land Use Framework takes no account of minerals that are essential for construction and manufacturing.

The new Land Use Framework covers housing, agriculture, nature recovery and other land uses, but ignores the supply of minerals from UK quarries that underpin all these and other industry sectors.

Mark Russell, Executive Director at MPA, said: "It is very disappointing that mineral extraction, a small but important land use that's critical to UK construction and manufacturing industries, and is uniquely capable of delivering incredible nature recovery, doesn't merit a mention.

"While our members' quarries account for a relatively modest land area it is deeply frustrating that Defra doesn't seem interested in either their contribution to the rural economy nor their capacity to deliver biodiversity net gain."

The MPA – representing an industry which directly contributes £6.7 billion GVA to the economy – offered a detailed response to the Defra consultation in 2025 highlighting the lack of reference to minerals and the sector's contribution to the economy and nature.

Carbon capture could cut emissions by 75%

New data from the MPA shows that carbon capture, usage and storage (CCUS) in cement manufacturing could cut emissions by 75 per cent by 2035.

CCUS will be critical to delivering the UK's infrastructure ambitions without breaching legally binding Carbon Budgets, according to the research which concludes that emissions limits risk hindering construction delivery if action is delayed.

The analysis indicates that CCUS could cut construction emissions by up to 3.8 million tonnes of CO₂ a year. And this reduction would create the carbon headroom needed to deliver housing and infrastructure at scale within the UK's emissions limits.

By enabling and supporting a decarbonised domestic cement industry, carbon capture reduces both the risk of Carbon Budgets constraining delivery and the UK's growing dependence on imported materials which would leave the UK more exposed to volatile global supply chains.

Martin Casey, MPA Senior Director for Cement & Lime, said: "If we want to deliver the homes, energy and digital infrastructure the country needs, we must remove carbon as a limiting factor from construction. Cement carbon capture does that – but only if projects move quickly from the commitment to invest to spades in the ground. Acting now will keep investment, jobs and emissions reductions here in the UK."

VIEWPOINT

The UK has no shortage of ambition when it comes to housing, infrastructure, energy security and economic growth. The challenge is achieving the right policy conditions to turn ambition into reality.



It's no secret that construction activity remains deeply depressed, demand for materials is at historic lows and confidence is almost non-existent.

If current trends continue, our sector will face a fifth consecutive year of decline, with big implications for the UK's ability to meet future demand due to the loss of industrial capacity, let alone the impact on jobs and local economies. Bold steps are needed, right now, to reboot construction and the wider economy.

Urgent action, forward-looking

Housebuilders are hesitant to start new developments, even as affordability is improving, because confidence in demand recovery is simply not there. Financial support for new home buyers would help restore confidence and stimulate activity.

In infrastructure too, cash for projects in the pipeline should be accelerated, along with a boost in maintenance funding. Local highways departments, for example, face a multi-billion-pound road maintenance backlog. With contracts already in place, any extra funding would be put to good use, particularly if it is time-limited and ring-fenced. What government wouldn't want to solve the pothole crisis?

For privately funded infrastructure, a super-deduction would help kickstart urgently needed growth in critical sectors such as water. In fact, any incentives to initiate projects now – whether through a super-deduction, a reduction in employer NI contributions, wider VAT exemptions or something else – would encourage investment.

Rapidly reverse deindustrialisation

Besides stimulating demand, the government must address the core reasons why so many foundation industries are facing existential challenges. UK industrial energy prices have been uncompetitive for years, and we have been outpaced by the EU on key policy areas such as the Carbon Border Adjustment Mechanism (CBAM) and carbon capture, leaving domestic markets vulnerable to higher-carbon imports.

The country desperately needs to reverse the conveyor belt of deindustrialisation, the inevitable result of governments allowing foundation sectors like cement production to struggle against rising imports. A robust CBAM is critical to stemming carbon leakage and preventing more high-quality industrial jobs from being put at risk, as well as unlocking regional opportunities for young people in rural locations.

Government must also address industrial energy costs by expanding access to support schemes available to all energy-intensive industries, not just a select few. And it's a no-brainer that government procurement policy should support strategically important sectors. Again, without such action, we risk losing the productive capacity that's essential to deliver long-term housing, infrastructure and growth ambitions.

Conditions to invest

Around 89,000 people work in the UK mineral products industry – planning, developing, extracting, processing and delivering the materials that literally shape our built environment. Arguably the very definition of a foundation industry! Yet the current policy environment, compounded by dismal economic conditions, have been further exacerbated by tax hikes, regulatory burden and cost pressures in recent years. Businesses want to grow and invest, to create jobs and prosperity, but that's harder to do now than it has been for decades.

We are not a lone voice in calling for a competitive policy environment that supports domestic industries, encourages investment and enables businesses to plan for the future with confidence. Thus far our collective voices have fallen on deaf ears, but the status quo is simply not sustainable.

Maintaining momentum

Despite everything, one priority overrides all others – the health, safety and wellbeing of people in our industry. Six years on from its launch, Vision Zero still provides a clear and practical framework to deliver on that priority.

Built around 6 core values, 6 strategies and 'The Fatal 6' hazards responsible for 94% of serious incidents, Vision Zero has helped drive meaningful change. Our members have invested in numerous initiatives of their own, while our 'Safer by Sharing' ethos has enabled cross-industry learning and collaboration. Ensuring people go home safe and well every day remains a shared responsibility and maintaining momentum will require strong leadership, effective improvement plans and continued commitment to Vision Zero's principles.

Challenge and opportunity

Finally, I would like to extend a warm welcome to Paul Adeleke as MPA's incoming CEO. Paul has a passion for our industry and extensive knowledge of the issues we face. He will bring fresh ideas and energy to address the challenges and seize the opportunities.

Paul's arrival signals the end of my time as Executive Chair. It has been a privilege to serve this remarkable sector which has such a positive impact on our economy and society. As I step down, I would like to pay tribute to the excellent team at MPA, whose hard work contributes so much to our industry.

Looking ahead, the challenges are significant, but I urge industry colleagues to have faith – recovery will come eventually and so too will opportunities, so be prepared. With the right conditions, a competitive framework, and continued collaboration and innovation, our industry will remain central to delivering the homes, infrastructure and economic growth the country needs.

**Chris Leese, Executive Chair,
MPA Executive Management Committee**

CONCRETE AND CIRCULARITY

Concrete has long been the backbone of the built environment, shaping our homes, places of work and leisure, public amenities and national infrastructure. Already contributing to an increasingly circular economy, this enduring material is a true enabler in future circularity and climate resilience.

Policymakers, developers, designers and manufacturers are increasingly looking to circular economy principles as a way to address some of the country's biggest sustainability challenges, from resource security to carbon emissions.

For the UK concrete industry this is not a new concept – concrete is already playing a key role in improving circularity in construction. Almost infinitely recyclable, virtually no concrete goes to landfill in the UK. Instead, the majority is crushed and recycled for use as aggregate.

And MPA members are continuing to pursue new approaches to closing the circularity loop with an array of innovations already commercially available, and several others being developed to ensure market viability.

Before demolition is a consideration, concrete's long service life, structural resilience and low maintenance requirements allow buildings and structures to remain in productive use for decades, reducing the need for frequent replacement and avoiding the repeated consumption of new materials.

Indeed, the retention, adaptation and reuse of concrete structures are already recognised as representing some of the highest value applications of circular economy principles and are also shown to deliver the greatest whole-life carbon benefits.

What's more, the concrete sector's contribution to circularity extends well beyond the reuse of its own products – a whole host of by-products and other recovered materials can be used as

supplementary cementitious materials in concrete, preventing them from going to landfill too.

As the UK's most widely used construction material, concrete has a vital role to play in the transition to a more circular economy

Meanwhile, cement manufacturing contributes to circularity through the use of waste-derived fuels and alternative raw materials. In 2023, more than half of the fuel used by the UK cement sector came from non-recyclable waste materials. Through co-processing, the industry is able to recover both energy and mineral content from materials that would otherwise have to be landfilled. The result is a sector that not only recycles its own materials but also provides a valuable destination for wastes from elsewhere in the economy.

Evidence-based framework

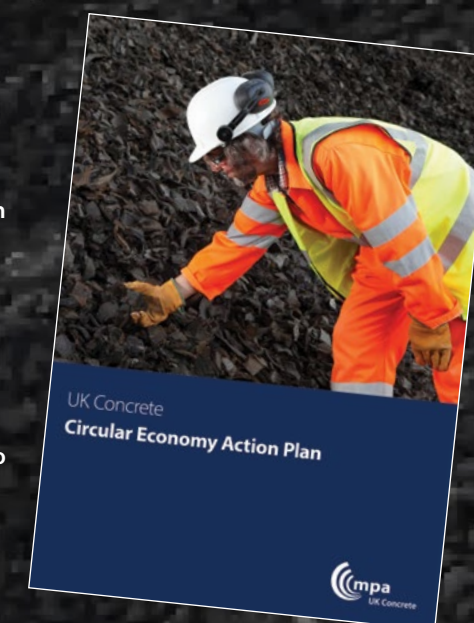
The recent launch of the new MPA UK Concrete Circular Economy Action Plan (CEAP) marks a significant shift in circular economy thinking, not just among concrete producers but for the entire built environment sector.

In line with government circular economy strategies, the CEAP sets out the concrete industry's commitment to retaining the highest possible value of the material throughout its life cycle. Importantly, the plan positions

circularity not as a constraint, but as an opportunity to innovate, collaborate across value chains and deliver better outcomes for clients, communities and the environment.

"The transition to a circular economy is becoming central to how the built environment responds to the climate, nature and resource challenges of the future. Across the UK, governments are increasingly recognising circularity as a pathway to long-term economic growth, improved resource security and faster progress towards net zero," explains Andrea Charlson, Head of Sustainability, UK Concrete & The Concrete Centre.

According to its authors, the new CEAP represents a step change in the way decisions are made across the design, manufacture, use and end of life of concrete and concrete products, supporting wider built environment goals and emerging government priorities.





The vast majority of waste concrete is reused as aggregate in construction.

"The CEAP sets out a clear ambition: to enable greater circularity across the built environment while retaining the value of concrete throughout every stage of its life cycle," Charlson continues. "It provides an evidence-based framework of objectives, actions and measurable outcomes designed to help the industry continue leading by example and respond positively to evolving policy and market expectations."

Building on more than a decade of industry collaboration the CEAP has been developed by UK Concrete's Circular Economy Task Group in collaboration with circular economy experts from Net Positive Solutions, Green Thinking and the University of Leeds.

From manufacturing and transportation through to design, construction, demolition and reuse, it covers ready-mixed concrete, precast structures and facades, as well as concrete paving, drainage products and masonry.

And while in the past, circular economy discussions have often focused on

waste reduction, the industry argues that the conversation needs to be much broader and more nuanced covering the material's entire life cycle.

"As the UK's most widely used construction material, concrete has a vital role to play in the transition to a circular economy," says Charlson. "When designed, specified and managed effectively, concrete can support long service lives, adaptability, reuse and high-value recycling, delivering significant whole-life carbon and resource efficiency benefits."

Concrete is already playing a key role in supporting a more circular economy

Is recycling downcycling?

One of the key aspects of the CEAP is the recognition that circularity cannot be reduced to simple assumptions. For example, for many years, discussions around concrete and circularity have been reduced to the concept of 'downcycling' – describing how

crushed concrete is mainly reused in lower-value granular fill applications, rather than reused in concrete.

Charlson believes such debates deserve closer examination. "There's no formal technical definition for downcycling, but what's meant is not using that material to its full original utility," she says.

"When you're crushing it and using it in unbound applications, the material has effectively become 'fill' rather than the structural material that concrete is produced for. It is circular, it's just lower down the circular hierarchy. So the question is whether the industry needs to preserve more of concrete's structural utility in recycling and reuse for it to be considered 'more' circular.

The answer is not straightforward: "Many people who are passionate about circularity in construction say that if we could recycle it at a higher value, we could avoid more raw material extraction, but the evidence so far suggests that's not the case," she explains.

"From the data we have available, around 31% of construction aggregates are sourced from recycled or secondary materials. If we diverted waste concrete into other recycling operations, the materials for those unbound applications would have to come from another source.

"This also highlights the need for better national data around the flow of resources across our economy, as our work is based on the best estimates by the MPA. We really need the Government to coordinate an up-to-date nationwide survey on materials recovery and reuse to inform key decisions in areas like circular economy strategy, planning policy and landfill tax reform."

This perspective reflects one of the CEAP's central themes: decisions should be based on evidence and whole-system thinking. "We're not yet in a position to join all the dots, but what we're seeing is that higher-value recycling methods are not necessarily going to displace raw material extraction, and one aspect of the action plan is to get a good handle on that to support better decision making."

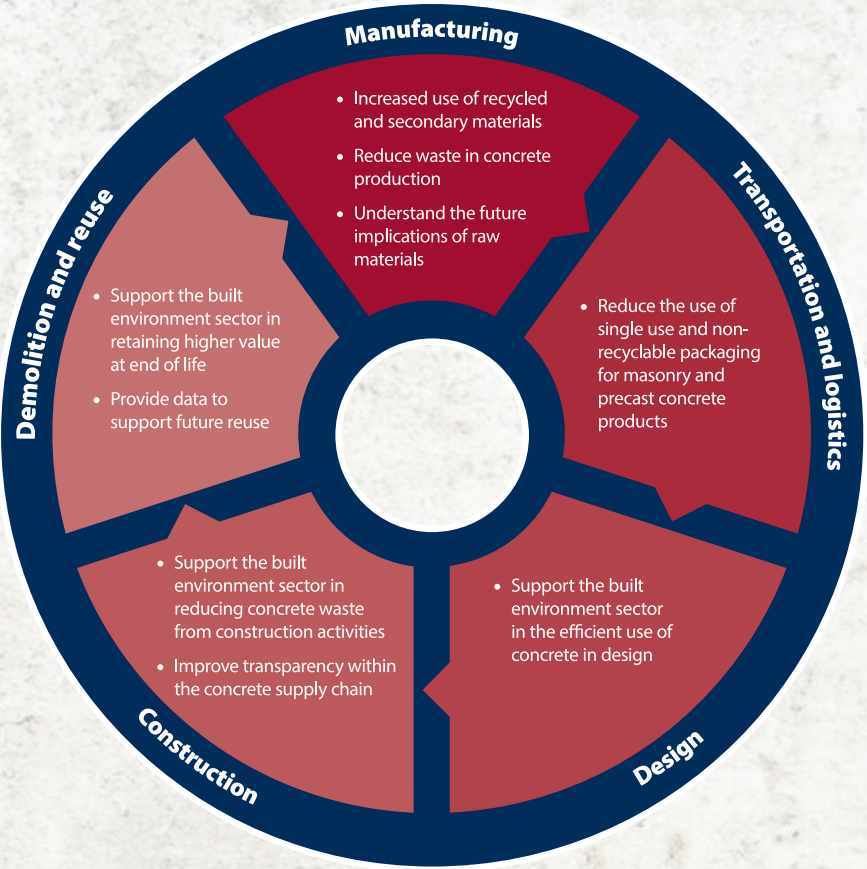
Calculating the carbon

The relationship between circularity and carbon reduction is another area where the industry is encouraging a more informed debate to enable smarter decision-making. That's particularly the case given the ongoing progress on the UK concrete and cement industry's Roadmap to Beyond Net Zero.

It's a common assumption that increasing recycled content will always reduce embodied carbon. However, Charlson cautions that's not necessarily the case: "There's a lot of confusion around embodied carbon, with a misunderstanding that using recycled concrete in new concrete will automatically reduce carbon, whereas that's not guaranteed. In fact, depending on a number of variables, it could even increase it."

The new CEAP therefore seeks to move beyond common misconceptions and towards a better understanding of the trade-offs involved. "We're starting to

BELOW: The actions and metrics in the CEAP are structured around five lifecycle stages of concrete and concrete products: manufacturing, transportation and logistics, design, construction, and demolition and reuse.



get beneath the surface to build a much better understanding of the dynamics and the nuances through the five lifecycle stages," Charlson says.

Collective action and collaboration

The CEAP represents the latest chapter in a long-standing industry commitment to resource efficiency.

Since the launch of the UK Concrete Resource Efficiency Action Plans in 2014, the sector has worked collectively to reduce waste and improve resource use across manufacturing, construction and end-of-life stages.

Andy Spencer, the newly-appointed Independent Chair of UK Concrete said: "The new plan positions circularity not as a constraint, but as an opportunity to innovate, to collaborate across value chains and to deliver better outcomes for clients, communities and the environment. And as technologies emerge, policies evolve and stakeholder expectations change, the plan will continue to develop.

"Achieving this transition will require collective action," he continued. "Greater circularity depends not only on concrete producers, but also on developers, designers, contractors, demolition specialists and policymakers working together towards shared goals.

Circularity is an opportunity to innovate, collaborate and deliver better outcomes

"With the right policy support, consistent market signals and a shared commitment across the value chain, the UK concrete industry can help deliver a more circular economy, supporting a low-carbon, resilient and nature-positive built environment for the future."

To download a copy of the MPA Concrete Circular Economy Action Plan visit thisisukconcrete.co.uk/CEAP

SEA CHANGE

Recent global supply chain disruptions highlight the strategic importance of domestically sourced materials to sustain economic growth. British marine aggregates have an increasingly critical role to play.

Over 1 billion tonnes of marine sand and gravel have been extracted from licensed areas in UK waters since the 1950s, and marine aggregates meet a growing proportion of Britain's demand for essential minerals.

The latest statistics published by The Crown Estate – owner of most non-energy mineral rights on the UK continental shelf – show that 18.5 million tonnes (Mt) of aggregates came from licenced areas of the seabed around England and Wales in 2025.

Of this, 12.5Mt was landed at wharves for use as construction aggregate (mostly for concrete) with 9.6Mt into London and the South East, the region where a third of British construction activity happens. Marine supplies also go into the North East, North West, South West and South Wales. Beach replenishment accounted for a further 1.5Mt while the remaining 4.2Mt was exported to France, Belgium and the Netherlands for use as concrete aggregate.

"The ability to deliver large volumes of sand and gravel close to the point of demand by sea brings significant environmental benefits," said Mark Russell, MPA Executive Director for Planning, Mineral Resources and Marine Aggregates. "With a single 5,000 tonne capacity dredger able to carry the equivalent of 250 lorry loads, marine supplies allow sand and gravel to be cost effectively transported over long distances to supplement land-based resources, with lower emissions per tonne of material landed and fewer road miles."

The most striking example of this can be seen with the various wharves along the River Thames, which between them received over 17,000 tonnes a day in 2025. Many wharves are also rail linked or connected to barge loading facilities, allowing efficient lower carbon onward distribution.

The planning and permitting framework that surrounds land-based mineral extraction has an equivalent for marine extraction, but the political dynamics and physical constraints are quite different, explained Russell: "While the declining reserves for land-based sand and gravel could be partially addressed by a more supportive and efficient mineral planning system, there is no doubt that relatively unconstrained resources are becoming harder to access. This may require a shift in the balance of supply, with marine resources likely to play a greater part in the solution."

Many of the resource and capacity constraints that apply in land-based mineral planning and permitting also apply in a marine setting

Commercial rights for marine aggregate extraction are awarded by The Crown Estate but extraction can only take place if an operator secures a marine licence issued by the Marine Management Organisation in England or Natural Resources Wales in Welsh waters. Marine licences are predicated on

environmental protection, with consent awarded only if the environmental consequences of the activity proposed are considered acceptable. The licensing process typically takes 2 to 3 years and involves a thorough environmental assessment informed by a variety of resource assessments, benthic (seabed life) surveys and coastal impact studies.

"The area of seabed licensed for marine aggregate extraction totalled 1,185km² at the end of 2024 – that's 0.1% of the UK continental shelf area," Russell continued. "Every vessel involved in marine aggregate extraction is required to have a 'black box' Electronic Monitoring System (EMS) which records the time and location of any dredging operations, and this data shows that 130km² was dredged that year, of which 90% of activity was concentrated in an area of just 53km²."

While the UK continental shelf is over three-times its land area (c.870,000km²), the potential for interactions with other activities and areas is a key consideration, from marine conservation to pipelines and power cables, particularly in the shallower water areas (<50m) where marine aggregate activities are concentrated.

"The most significant offshore developments are wind farms and the network of sub-sea cables that bring the energy generated to shore. As an example of the scale of these developments, the Hornsea Two windfarm, located 89km off the Yorkshire coast extends to 462km² and contains 165 turbines. The combination of protected areas and offshore energy infrastructure reduce the spatial area and environmental headroom for marine aggregate extraction and require detailed assessments to determine whether potential cumulative and in-combination impacts are acceptable."

Current marine licences for sand and gravel extraction have a maximum term of 15 years, but the industry is seeking to extend that to 20 years to give a longer-term horizon for material availability and improve certainty for operators who make vast capital investments in specialist dredging vessels.

The total reserves permitted at the end of March 2026 amounted to 372Mt, of which a maximum of 39.46Mt can be removed in any single year. "In reality the annual tonnage removed will often be less than half of this, with the additional permitted capacity enabling competition between operators and the flexibility to respond to new market needs," said Russell. "The permitted reserves will rarely reflect the total commercially viable sand and gravel resource that is actually present in the licensed area, therefore at the end of a licence term it is common for operators to seek new marine licences to allow extraction to continue."

Through the British Marine Aggregate Producers Association (BMAPA), an affiliated body of the MPA, the marine aggregate industry has developed a strategy to support the next round of re-licensing that will be required between 2027 to 2032. As a relatively small sector, the industry has adopted a collaborative approach to address common regional scale environmental assessment, management and monitoring issues that apply to all licence areas. This work is coordinated through BMAPA, and allows costs and risks to be shared by 11 industry

operators. The approach also enables more timely and consistent engagement with regulators and statutory advisors, which in turn drives more proportionate regulatory outcomes.

In an effort to manage this and de-risk the delivery of the re-licensing programme, through BMAPA the sector has proactively entered into Service Level Agreements with Natural England, the Joint Nature Conservation Committee and Historic England.

Marine planning also provides an important mechanism to support the long-term viability of the sector. "The priority for the marine aggregate sector is to ensure the safeguarding policies that protect resources and wharf infrastructure are retained. We also need to reinforce the strategic importance of marine sand and gravel – both as a component of the overall supply portfolio but also as a platform for the delivery of other policy priority areas."

Russell cites Sizewell C nuclear power station, currently under construction on the Suffolk coast, as an example of how marine resources can support the delivery of major energy projects. Nearly 1.5 million tonnes of marine aggregates were used in the construction of neighbouring Sizewell B between 1987 and 1994.

And the move towards floating offshore wind to allow access to deeper water sites (>100m) opens up huge potential for marine aggregates in concrete bases – with each structure potentially weighing up to 15,000 tonnes. "The initial 4.5GW offer in the Celtic Sea is likely to require

264 floating platforms across three projects, representing an opportunity to use domestically produced floating concrete foundations rather than relying on structures made overseas and imported," explained Russell.

"This has a significant economic benefit in terms of GVA (Gross Value Added), supporting domestic manufacturing, and new jobs and skills, as well as securing employment for others in associated sectors. That would also reduce dependence on overseas suppliers, shortening and derisking critical supply chains.

That means increasing deep water port capacity and new infrastructure in the right coastal locations,

but that would again support local jobs in both manufacturing and construction. Events in Ukraine and the Middle East have reinforced the strategic importance of robust domestic supply chains to underpin sustainable growth – marine aggregate producers, much like the wider mineral products industry, have a critical role to play."

For more information visit www.bmapa.org

Below: The trailing suction hopper dredger Anchorage unloading marine aggregate at the Port of Ipswich in Suffolk.



Carbonation in the limelight



IMAGE: Chalk quarry at Melton Ross, Lincolnshire (Singleton Birch)

For thousands of years, lime has been one of humanity's most important and influential mineral products. Now, a growing body of research is shining a light on another remarkable trait of industrial mineral lime – its ability to naturally absorb a lot of carbon dioxide.

From steelmaking and water treatment to construction, agriculture, environmental protection and a whole lot more, lime's versatility is truly remarkable.

And while lime production inevitably releases CO₂ during the calcination of limestone, scientists and industry experts recognise that the story does not end at the kiln.

Throughout its service life, lime is known to undergo a process known as

carbonation, in which it reacts with any available CO₂ to convert back into stable calcium carbonate – effectively returning to its original mineral form.

Lime has been indispensable to societies for thousands of years

This natural process has emerged as an important part of the industry's carbon

footprint, because, through recent studies, there is evidence that carbonation of lime can occur far more quickly than previously believed in some applications.

Research commissioned by the European Lime Association (EuLA) – of which MPA Lime is an active member – indicates that across 80% of all modern lime applications, approximately a third of the 'process CO₂' released during lime manufacture can be naturally reabsorbed¹. In addition, much of this

uptake occurs within the first year after production, although some applications are seen to continue absorbing carbon dioxide over much longer periods.

This recarbonation means that whilst production tonnage and emissions monitoring are used to determine the carbon dioxide emissions of lime production, in effect the net emissions are much less. This impacts not only on the perception of the carbon footprint of the lime sector, but also the carbon footprints of its applications and therefore the industries that use it.

In all cases, the result is the permanent storage of carbon in a stable mineral form where release of the carbon dioxide would only occur if it were heated to above 900°C.

MPA Lime argues that the permanence of carbonation should be recognised and adjustments made to the costs the lime industry faces for carbon emissions at the point of manufacture.

Studies examining global lime use between 1963 and 2020 estimate that lime products absorbed more than 4 billion tonnes of CO₂ over that period², demonstrating that carbonation is not a niche phenomenon but a globally significant carbon sink.

For a British energy-intensive industry under increasing pressure to decarbonise, these findings are particularly important because they reveal that lime is not simply a source of emissions – it is also a part of a natural carbon cycle.

"The CO₂ released in the kiln when limestone is transformed into lime is reabsorbed, at least partially, as the material is used in its multitude of applications," says Mike Haynes, Director of MPA Lime. "And more recently we've been appreciating the scale and speed of that reabsorption, so measuring what's happening is vital to accurately assess and communicate the lime sector's true carbon footprint."

That understanding is core to the British lime industry's ambitious Net Negative 2040 Roadmap. Published by MPA Lime in 2023, the roadmap sets out how the sector could go beyond net zero a decade ahead of the UK's wider 2050 climate target.

Carbonation is one of the five key levers that will enable the transition. When combined with fuel switching, carbon capture, lower-carbon electricity and reduced transport emissions, the evidence assures that zero carbon emissions lime production will become a net remover of atmospheric carbon.

Measuring what's happening is vital to accurately assess and communicate the lime sector's true carbon footprint

Since 2005, British lime producers have reduced absolute carbon emissions by around 25% through investment in energy efficiency and best available technologies. The next phase of decarbonisation will focus on replacing fossil fuels with alternatives such as hydrogen, biomethane and biomass, alongside the transport sector being on a trajectory to zero emissions solutions and the essential deployment of carbon capture, utilisation and storage (CCUS) technologies.

As a result, the sector could be removing around 250,000 tonnes of atmospheric CO₂ a year by 2040. That would make British lime one of the few industrial sectors capable of delivering a genuinely net negative outcome ten years ahead of the 2050 target.

The same chemistry that makes lime invaluable in manufacturing, construction, water, agriculture and environmental protection could also be helping to address climate change

"Lime has been indispensable to societies for thousands of years," says Haynes, "and its capabilities are amazing. What we're now seeing is that the same chemistry that makes lime invaluable in

manufacturing, construction, water, agriculture and environmental protection could also be helping to address climate change."

And the industry's interest extends beyond simply measuring carbonation. EuLA's latest research programme is exploring ways to accelerate carbonation processes, improve methodologies for calculating CO₂ uptake and integrate carbonation with carbon capture technologies.

Although carbonation is not unique to lime – concrete is also known to absorb CO₂ throughout its life – it is the potential offered by lime that has gripped researchers.

Pioneering businesses are working on projects using the lime cycle to find other ways to remove carbon dioxide, including what's being termed 'calcium looping' where lime is seen as a means to return atmospheric CO₂ into geological storage.

There is also research into the impacts of 'ocean liming', where changing the pH of the water through the addition of limestone and lime allows the water body to absorb more carbon dioxide than it naturally does.

Researchers believe that more accurate whole-life carbon accounting would help to ensure the full climate benefits of lime products are recognised and harnessed. For the industry the implications are significant, not least because carbonation is a naturally occurring process that is already happening in millions of tonnes of lime products every year.

As the industry continues to develop new technologies and lower-carbon production methods, this previously overlooked characteristic will become increasingly important.

¹ Pietro Campo et al, "Natural and enhanced carbonation of lime in its different applications: a review" *Environmental Technology Reviews* 10:1 Pp 224-237 <https://doi.org/10.1080/21622515.2021.1982023>

² Bing et al, "An investigation of the global uptake of CO₂ by lime from 1963 to 2020" *Earth System Science Data* (2022) <https://essd.copernicus.org/preprints/essd-2022-327/essd-2022-327.pdf>

NO QUICK FIX

Road users should not expect a quick fix to the condition of local roads, despite a reported increase in funding, according to the latest Annual Local Authority Road Maintenance (ALARM) survey from the Asphalt Industry Alliance (AIA).

Once again, the findings of ALARM 2026 paint a bleak picture of a local road network under increasing strain, with authorities in England and Wales now facing a record £18.62 billion backlog of carriageway repairs.

Despite additional investment from both central government and local authorities, only half (51%) of the local road network is reported to be in good structural condition, while almost one in six local roads has less than five years' structural life remaining.

The condition of our local roads has become a national disgrace

The ALARM survey, relating to the 2025/26 financial year, found that local authorities would each have needed an additional £8.1m in carriageway maintenance funding to maintain their road networks to current target conditions and prevent further decline. This is a shortfall in annual funding of £1.37 billion – an increase of 9.6% on last year – notwithstanding the reported increase in highway budgets.

Highlighting the scale of the challenge, the survey revealed that roads are resurfaced only once every 97 years on average, while 1.9 million potholes were filled during the last year – equivalent to more than 5,200 every day across the England and Wales.

David Giles, Chair of the Asphalt Industry Alliance, comments: "There's no polite way to put it – the condition of our local roads has become a national disgrace. With this year's ALARM survey reporting that the backlog of carriageway repairs in England and Wales has increased to

another record high, it's clear that any noticeable improvements lie a long way off."

The survey shows highway maintenance budgets in England and Wales increased by 17% for 2025/26 to an average of £30.5 million per authority, with more than half of spending directed towards the surface and structure of roads. However, the increase has so far delivered only marginal improvements.

"Tracking ALARM data over the last decade shows that the amount needed to bring the carriageway up to scratch has increased dramatically," says Giles, adding that inconsistent funding levels and an ageing network have left local roads increasingly fragile.

The AIA has long advocated sustained investment supported by a long-term funding horizon, arguing that this would give council highway engineers the certainty needed to deliver the right maintenance at the right time.

According to Giles, recent government commitments represent "an important step forward". These include £1.6 billion for local highway maintenance in England during 2025/26 – £500 million more than the previous year – alongside a pledge to allocate £7.3 billion over the next four years. Nevertheless, he cautions that increased funding alone will not resolve decades of underinvestment.

"Local authority highway engineers told us they are cautiously optimistic that the increased funding will help them stem further decline, but it is not the silver bullet that will clear the backlog of repairs any time soon."

The impact of recent extreme weather has further compounded the problem. "Last winter was one of the wettest on

record and the continuing impact of adverse weather events on a consistently underfunded, and increasingly fragile network are coming home to roost," Giles states.

The concerns are echoed by key voices representing road users including AA President Edmund King OBE, Local Government Association Chair of the Inclusive Growth Committee, Cllr Tom Hunt, RAC Head of Policy Simon Williams, Motorcycle Action Group Director of Campaigns and Political Engagement Colin Brown and IAM RoadSmart Director of Policy and Standards, Nicholas Lyes.

Highway engineers are cautiously optimistic that the increased funding will help them stem further decline

Looking ahead, the AIA believes faster progress could be achieved if future funding commitments were brought forward. Giles argues that frontloading investment would help authorities move away from the "seemingly endless cycle of pothole patch and repair" and instead focus on proactive maintenance programmes that prevent defects from developing in the first place.

The ALARM report reinforces the importance of sustained, long-term investment in infrastructure, and the mineral products industry stands ready to play its part. With more than 100,000 miles of local roads now reported to have less than 15 years' structural life remaining, the message from ALARM 2026 is clear – increased funding is welcome, but rebuilding the condition of the country's local roads will require a long-term commitment rather than a quick fix.

The full ALARM survey report can be accessed at www.asphaltuk.org



AA President, Edmund King OBE: "The ALARM 2026 report starkly warns us how much more needs to be done to eradicate this plague of potholes. We have been seeing with our own eyes, and feeling with our wheels, how record wet weather linked to substandard roads has led to many local roads becoming patchwork obstacle courses. "The AA has been called out to 137,000 pothole-related incidents in the UK in January and February this year - 25,000 up on last year. Extra funding needs to be maintained and spent on more permanent repairs to prevent extensive vehicle damage and potentially fatal injuries to those on two wheels."

Local Government Association Chair of the Inclusive Growth Committee, Cllr Tom Hunt: "More funding being directed towards fixing roads, alongside some longer-term certainty is positive. However, the fact that councils still face an £18.62 billion backlog of local road repairs, shows more action is needed for councils to bring roads up to scratch. "Local authorities work hard to fix potholes swiftly to prevent people's journey from being impeded. The scale of the backlog and the many factors that affect repair rates, from the type of road and traffic levels, to changing weather patterns, means local government is having to do more with less, and find innovative new ways to respond to the issue."

Motorcycle Action Group Director of Campaigns and Political Engagement, Colin Brown: "Local authorities are telling us something important: if the repair backlog was cleared, it would actually cost £1 billion less per year to maintain the network properly. That's the case for frontloading investment in a single sentence. "For MAG, though, the argument goes well beyond balance sheets. Government data consistently shows that road surface conditions contribute to twice the proportion of motorcycle killed or seriously injured (KSI) casualties compared to both car occupants and cyclists – 4% versus 2%, every single year for a decade. Riders aren't complaining about cracked roads because of the damage to their tyres – it's the added risk of dying on them. The Government needs to frontload this funding."

RAC Head of Policy, Simon Williams: "As drivers testify, decades of underinvestment have left many roads in a woeful state of disrepair – something that's been even more noticeable since the beginning of the year with our teams receiving hundreds of breakdown reports every day mentioning potholes. We hope new record levels of funding from central Government and a commitment to longer term investment that allow councils to plan highways maintenance will mean we start to turn a corner – although it will be some time before drivers notice a real difference. "The path to better roads isn't complicated: ensure water always drains off the roads, fix potholes as permanently as possible, seal roads against water ingress through preventative maintenance, and resurface those that have gone beyond the point of no return."

IAM RoadSmart Director of Policy and Standards, Nicholas Lyes: "The embarrassing state of our local road network is fast becoming a national scandal. Around one in six local roads are effectively on life support with less than five years of structural integrity remaining. What was once deemed an irritant with expensive consequences, poorly maintained local roads now represent a real road safety hazard. Our research suggests drivers are taking risky actions to avoid hitting potholes, while for those on two wheels, they can cause serious injury or worse. We need a long-term approach that invests in proper surface maintenance, rather than the all-too-often 'patch and dash' repairs that crumble at the first sign of bad weather."

About ALARM - The Annual Local Authority Road Maintenance (ALARM) survey report is produced by the Asphalt Industry Alliance (AIA), a partnership between the Mineral Products Association and Eurobitume, the voice of the European Bitumen industry. Now in its 31st year, ALARM is widely respected as the most authoritative and comprehensive study into local road maintenance funding and conditions in England and Wales. ALARM 2026 was completed by 79% of authorities responsible for roads in England and Wales and was carried out between December 2025 and February 2026. Submissions into the ALARM survey are made confidentially.

The 2026 ALARM survey's findings relate to roads maintained by local authorities only and excludes those forming the Strategic Road Network (SRN) managed by National Highways. The ALARM survey is commissioned by the AIA on behalf of the producers of the raw materials used for road construction, maintenance and repair – aggregates and bitumen. The survey includes the findings of both quantitative and qualitative research and the results have been independently analysed by a registered member of the Royal Statistical Society.

Sand and sustainability

The strategic importance of aggregates to global economic development and nature recovery has been highlighted in a new UN study revealed in Geneva in May.

As the world's most extracted solid material, sand remains a critical yet undervalued resource, according to a new UN Environment Programme (UNEP) report Sand and Sustainability: An Essential Resource for Nature and Development.

In the report, endorsed by the MPA, UNEP acknowledges that sand resources – encompassing all primary aggregates including sand, gravel and crushed rock – are essential for built development and infrastructure and that their supply cannot be assumed.

Equally, the report contends that sand is a key part of many active ecosystems, contributing to natural habitats, food and water security, climate resilience, flood risk reduction and tourism.

The UK aggregate industry is cited by UNEP as demonstrating examples of good practice, highlighting the country's structured regulatory and licensing approach for marine extraction, its science-led monitoring system and a responsible approach to land-based extraction and restoration.

That's in stark contrast to many developing countries where extraction activities can be poorly controlled and regulated, allowing sand to be removed from active geological systems like rivers and beaches, with little consideration of the impacts on local communities or natural ecosystems.

The UNEP report also calls for greater use of sustainable alternatives such as secondary aggregates (by-products from other industrial processes) and recycled aggregates (made from construction, demolition and excavation waste). That's

another area in which the UK is a global leader with almost 30% of aggregate demand already being met from secondary or recycled sources.

Other areas addressed in the report include the importance of responsible sourcing in the supply chain. Here, UNEP recommends embedding responsible sourcing standards into public tenders, requiring transparency, environmental safeguards, long-term material planning, and international standards, while moving beyond lowest-cost procurement to include environmental and social impacts in decision-making. In the UK, 96% of domestic concrete production is certified to BES 6001, the standard for responsibly sourced construction materials.

For all the attention on critical minerals, there needs to be equal recognition of the importance of sand

Mark Russell, MPA Executive Director for Planning & Mineral Resources said: "In this report UNEP recognises sand resources – including sand, gravel and crushed rock – as a strategic mineral that's absolutely essential for economic development.

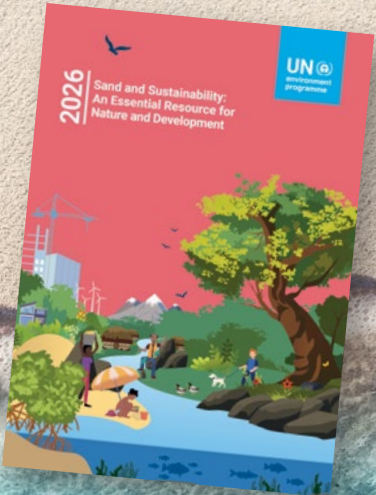
This represents a truly global issue as even in developed economies like the UK, the need for - and supply of - essential minerals that underpin our built environment and wider economic activity can be taken for granted. UNEP has once again highlighted that, for all

the attention on critical minerals, there needs to be equal recognition of the role and importance of sand.

"The report also stresses the role of sand in nature, especially in sensitive ecosystems, and the importance of strong governance and responsible extraction to ensure supplies can be met sustainably. MPA appreciated the opportunity to contribute to this UNEP study, sharing the experiences of the UK's strong track record in operating to the highest standards and delivering outstanding quarry restoration schemes that can significantly increase biodiversity. We hope our approach can help inform and inspire practices elsewhere in the world as a result of the report.

Authors of the report have called for stronger governance, better integration of environmental considerations, and sustainable sand management to balance development needs with long-term ecological and societal resilience.

"The UNEP report identifies 24 recommendations which provide practical solutions to support the sustainable supply of this strategic resource. Taken collectively, the measures identified can help to ensure the essential sand, gravel and crushed rock that every society around the world requires can be planned, managed and extracted responsibly with a net benefit to the natural environment as well as the built environment," Russell concluded.



MEMBERS A snapshot of recent news stories from MPA members

Sandstone for the Sagrada Família

Stone from two MPA members has been used in the construction of the Basilica de la Sagrada Família in Barcelona, helping to complete critical façades of the iconic landmark.

Marshall's and Armstrong have both supplied dimension stone from the north of England to the UNESCO World Heritage Site, one of the world's most significant and complex architectural projects.

More than 2,000 tonnes of Stanton Moor buff sandstone from Marshall's Dale View Quarry in Derbyshire has been used in the Glory Façade, the largest and final of the basilica's three principal façades.

With at least a further 750 tonnes still to be supplied, the Stanton Moor stone was chosen for its colour consistency, carving suitability and proven durability, including resistance to frost and salt.

Armstrong's Brinscall Quarry in Lancashire was chosen to supply sandstone for several of the basilica's frontages after a worldwide search to match material with the long-exhausted Montjuïc quarries in Barcelona which was used for much of the structure.

The distinctive sandstone from Brinscall was identified as a close match, structurally and aesthetically, allowing construction to continue in line with Antoni Gaudí's original vision. Work on the Sagrada Família began in 1882 with completion expected around 2036.



Image: Purya Gehari

Hydrogen-fuelled asphalt first

Hydrogen has been successfully used to decarbonise asphalt production on an industrial scale for the first time in the UK.

Heidelberg Materials' pioneering project at Criggion asphalt plant in Powys, mid Wales is part of the government's Industrial Hydrogen Accelerator programme and received part-funding from the Department for Energy Security and Net Zero (DESNZ).

During the trial, hydrogen was used to replace liquid fossil fuels to produce more than 1,300 tonnes of asphalt, without any impact on the quality or performance of the material.

The project demonstrated hydrogen as a viable alternative to fossil fuels in asphalt production, achieving a 76 per cent reduction in Scope 1 (direct) emissions equating to a 23 per cent reduction in the overall carbon footprint of the asphalt produced. If scaled across the UK asphalt industry, savings are estimated to be around 450,000 tonnes of CO₂ a year.

Biodiversity banks

Tarmac has announced new biodiversity net gain (BNG) habitat banks to give housebuilders access to BNG units.

In partnership with local organisations, the firm is putting forward sites where biodiversity is being enhanced, allowing local developers to purchase BNG units to help fulfil their planning requirements.

The first site, in Bedfordshire, has already received approval from the local authority and is formally registered with Natural England to provide a developer with 35 BNG units.

Plug-in power

Holcim is introducing 20 electric loading shovels at aggregate and asphalt plants around the UK.

Weighing over 24 tonnes, the LiuGong 870HE wheel loader is one of the largest pure electric vehicles of its type. It has a fast charging capability of 80 minutes and can run up to nine hours.

The machines are being introduced after year-long trials at the company's Callow Rock Quarry in Somerset.

Lofty friends

Brett Group has become the first member of 'Lofty Friends', an initiative helping young people from disadvantaged backgrounds develop skills and prepare for the workplace.

Launched by Lofty Heights, a non-profit social enterprise, the scheme allows businesses to sponsor places at its Ipswich Skills Academy.

Brett will provide educational talks, workplace insight opportunities and keep abreast of student progress.

Landmark tonnage

GRS Group, in partnership with Holcim and Tarmac, recently celebrated the successful delivery of 20 million tonnes of aggregates to HS2.

Representing more than 80% of the bulk fill aggregates used along the route, most materials have been transported by rail, avoiding around 700,000 vehicle journeys.

GRS is coordinating the supply of materials to the majority of HS2 contractors, with total deliveries expected to exceed 25 million tonnes by project completion.

SAFETY DRIVE

Mineral products represent the biggest flow of materials in the UK economy. With road haulage still the most flexible and efficient way to move most materials from A to B, ensuring drivers have access to the latest best practice guidance is key to safe, responsible transport.

Driving an HGV is one of the most important and potentially hazardous work activities undertaken across the mineral products industry, with upwards of 100,000 vehicle movements delivering materials every day across the country.

And as part of its Vision Zero health and safety strategy, MPA has long sought to ensure companies and their drivers have access to the very best guidance and advice to operate their vehicles fleets safely and responsibly.

That includes its dedicated MPA Driver's Handbook, which brings together best practice guidance covering every aspect of driving and operating HGVs – and the 5th edition of the Handbook has just been published (June 2026).

Developed by the MPA Transport Committee, the document is a practical reference tool to help HGV drivers understand, manage and address the risks associated with driving and operating vehicles for work.

Containing more than 150 pages of essential advice, the document is the most comprehensive document of its kind, supporting safe decision-making and promotes positive driving behaviours.

It outlines what is expected of drivers in relation to vehicle safety, journey planning and driving standards, while also providing useful information on emergency situations and practical steps to help prevent avoidable harm.

New features for 2026 include mental health and wellbeing guidance, details of TfL's Direct Vision Standards (DVS), vehicle isolation and recovery procedures and defined minimum vehicle safety standards.

Dave Hart, Chairman of the MPA Transport Group, said: "We are delighted to share the updated MPA Driver's Handbook, which has been reviewed and refreshed by the MPA Transport Committee.

"Available in both hard copy and digital formats, the Driver's Handbook is designed to help drivers understand and manage the risks associated with driving and operating vehicles for work, while helping to prevent avoidable incidents and injuries. It is intended to support MPA member organisations' policies and procedures.

"This is one of the most important documents to be produced by MPA and we encourage members to promote widely it across their own fleets and throughout the wider supply chain to

ensure anyone delivering material drivers can benefit from the guidance.

The Handbook will also continue to play a key role within driver training courses delivered by MPQC (Mineral Products Qualifications Council) and will be accessible digitally via MP Connect, a digital platform for industry operatives and drivers.

The MPA and its members work closely with other organisations to raise standards through schemes including FORS (Freight Operator Recognition Scheme), CLOCS (Construction Logistics and Community Safety), Driving for Better Business (DfBB) and the BSI Road Traffic Safety Management standard ISO 39001.

