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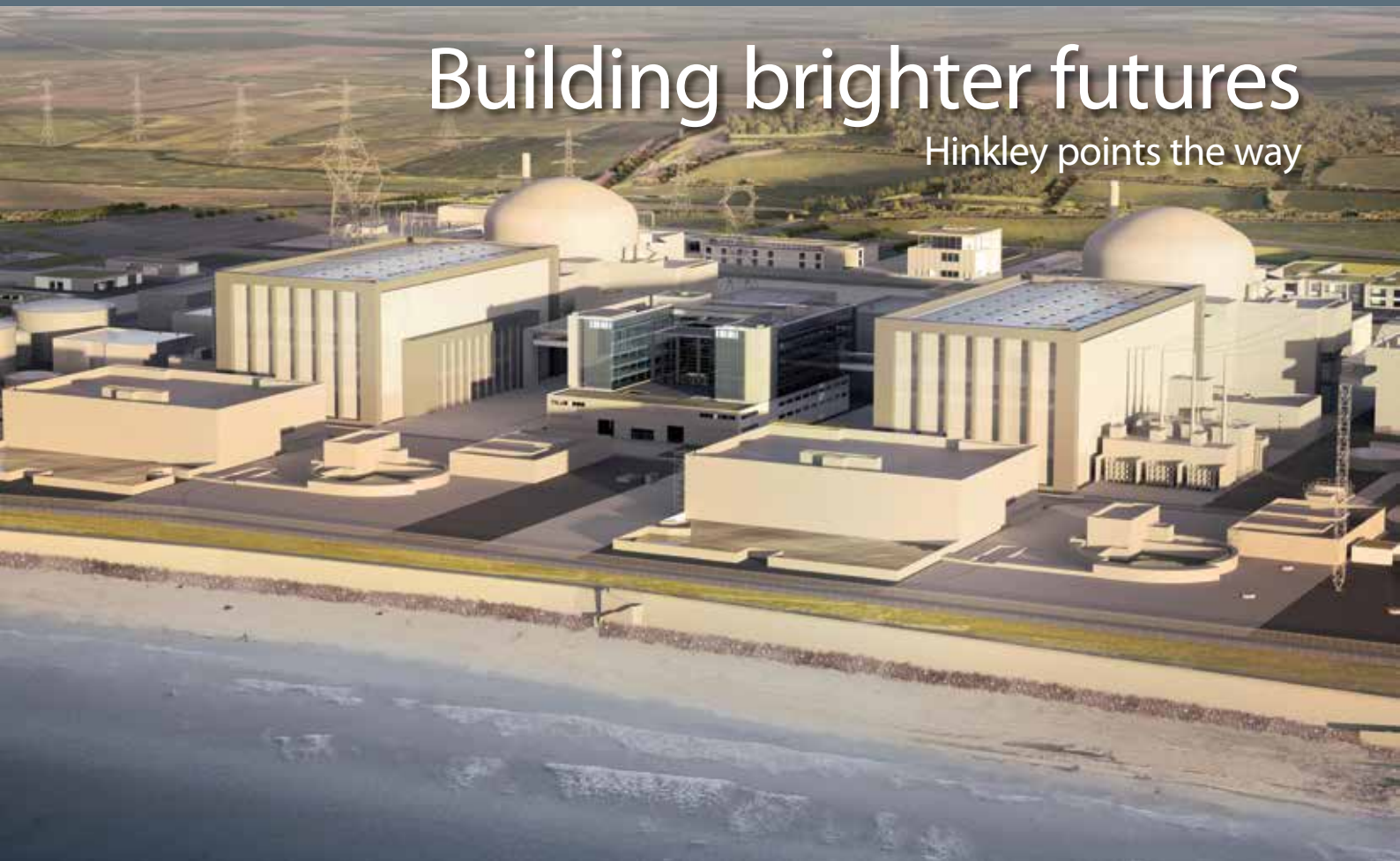
The magazine of the Mineral Products Association

mineral

products today

Building brighter futures

Hinkley points the way



Tomorrow's roads
a new era

Making Brexit work
pursuing opportunities

Workforce wellbeing
safe AND healthy

WELCOME

I WAS delighted to see that, overall, our members' markets held up in the second quarter of 2016. While July was disappointing, anecdotal evidence suggests that activity has since picked up in many areas and across the various product lines. However, until we have compiled actual data for quarter 3 we remain cautiously optimistic.

One thing is for sure: our data tends to be a more reliable indicator of construction activity than many of the more sentiment-based surveys and even the Office for National Statistics. As by far the largest supplier to the construction industry, MPA members supply the bedrock and fabric of our built

environment, so our data should be taken seriously.

Ensuring demand remains and strengthens is critical given the new political landscape post the EU referendum and we hope that the priorities we address in the article on pages 5 to 7 are reflected in the forthcoming Autumn Statement. It provides a crucial opportunity for the Chancellor to set out the new Government's development agenda for this parliament. He can now build on the recent welcome announcement on Hinkley Point by setting



*Simon Vivian
Chairman, MPA*

firm plans for large iconic transport and energy infrastructure projects as well as the shorter term and high impact work needed locally, particularly for repair and maintenance of our road network.

Our industry stands ready to support and enable the delivery of the Government's ambitions at a time when confidence needs boosting to encourage more public and private investment.

Feeling positive

MPA's latest mineral products sales figures have cast doubt on the previously gloomy official ones from the Office for National Statistics (ONS).

While the ONS reported a flattening of construction activity since the beginning of the year, MPA's respected analysis from within the industry shows that the market for asphalt increased by 11.5% over the second quarter while ready-mixed concrete grew by 3.3% and aggregates by 1.5% when compared with the broadly flat markets in quarter 1. Influenced by slow housing activity, mortar remained broadly flat for the second successive quarter.

Annual sales volumes are also generally positive in the 12 months to June 2016, with aggregates and ready-mix sales up by 3% to 4% compared with the previous 12-month period, and mortar sales up 2% over the period. Asphalt, which is suffering from workload materialising at a slower pace than suggested by Highways England's spending plans, fell by 1% over the period in spite of

the second quarter improvement.

The overall positive trend in these markets reported by MPA and based on actual sales volumes indicates an improvement in general construction activity as its materials are used across all major construction sectors, particularly in the earlier stages of projects.

Looking forward, and given current economic and political uncertainty, MPA expects ready-mix sales to remain relatively flat over the next 18 months, due to slower housing activity and commercial construction. Aggregates and asphalt are expected to see some declines. In the longer term however, the current pipeline of infrastructure work is positive for the industry, though confirmation



of Government's commitment is urgently needed.

MPA's chief economist Aurelie Delannoy says: "These materials are ubiquitous in construction, so we are very surprised that the ONS construction figures for the quarter were negative. Whilst it is difficult at present to understand the full implications of the Brexit vote for construction activity, longer-term needs for increased housing supply and greater infrastructure investment remain and will need to be delivered."

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Front cover: Now given the green light, the Hinkley Point C nuclear power station is one of a string of major projects needed to take Britain into the future (see pages 5-7). Image: EDF Energy.



Regional economic gap: concrete evidence

THE economic gap between London and the other British regions is widening and the Government needs to take positive action to stimulate growth outside the capital, says MPA in its submission ahead of the Chancellor's Autumn Statement.

The association uses sales of ready-mixed concrete as the basis for its assessment and has sourced figures from over 700 plants across Britain. Analysis shows that, while London is running more than 40% ahead of pre-recession levels, the regions are all at least 20% down and several have suffered a drop of more than 40%.

"Initiatives to date appear to lack some strategic consistency, and to date experience on the ground of, for example, the Local Enterprise Partnerships is very mixed," says MPA in its submission to Chancellor Philip Hammond. "While it is appreciated that large-scale projects such as the Northern Powerhouse are long term in their nature, it is nonetheless evident that in many parts of the

UK development and growth since 2009 has been very limited and that significant progress remains geographically limited."

MPA has also highlighted its concern over the Aggregates Levy which adds £350m to construction industry costs and is regarded as an ineffective environmental tax. Calling for the levy rate to be frozen at £2 per tonne for 2017/18, the association says the need to stimulate growth makes it the wrong time to increase costs along the supply chain.

MPA is calling on Government to extend the scope of the levy to include the aggregates content of imported precast concrete in order to reduce unfair competition from abroad. It also presses its proposals for a new Aggregates Levy Community and Biodiversity Fund in order to feed a small proportion of the Government's income from the fund to

initiatives in quarrying areas.

Other planks of MPA's Autumn Statement submission include a series of suggested measures to maintain the competitiveness of energy intensive industries in the UK such as cement and lime. "We fully support the drive towards a lower carbon and more resource-efficient economy," says MPA. "But there is little merit if domestic manufacturing is replaced by imports, which merely outsources the carbon emissions to other countries."



Steel crisis knocks on

THE dramatic decline of the UK steel industry is having a serious knock-on effect on lime producers.

Having invested heavily through difficult economic times, operators recorded product sales for 2015 of some 1.2 million tonnes – over 20% below recession levels. Sales in 2016 are expected to fall further to 1.1 million tonnes.

Lime is used extensively as a flux for removing impurities in the production of iron and steel and until recently about 35% of all industrial production was used in that way. The downturn and closure of some steel operations has come as a serious blow to British Lime Association members who are traditionally located in rural areas with limited employment opportunities.

With the steel industry collapse blamed on policy-induced energy costs, MPA has warned that lime and cement are similarly threatened by the EU Emissions Trading Scheme reform proposals. With the sector suffering increased production costs of at least 30%, the industry says it is vital that measures are put in place to build confidence to invest.

Lime is critical to the delivery of the Government's plans to build more homes and renew national transport and energy infrastructure, as well as repairing and maintaining local roads, schools and hospitals.

Writing in the BLA's latest sustainable development report, chairman Richard Stansfield says: "We have urged Government to take the necessary steps so that the UK remains an attractive place for inward and domestic investment and both the steel and construction sectors regain their previous momentum. We need to minimise uncertainties by encouraging and boosting both public and private investment and by building confidence as the top priority."



BREXIT STRATEGY: mitigate and adapt

MPA chief executive Nigel Jackson assesses the fallout from the Brexit decision and calls for positive action from the Government to create the conditions needed to ensure that Britain overcomes the obstacles it now faces and thrives.



WHEN politics and religion let you down I recommend geology. As a geologist, I am naturally biased but bear with me.

The backdrop: a fundamental question asked for the wrong reasons to a mixed audience misleadingly advised by people who had little idea what they were talking about and goaded by a biased and ill-informed media. Some might say!

The result: new uncertainties; new threats; new opportunities; accompanied by a torrent of new opinion, prejudice and speculation.

How to react?: assume the worst; prepare for the best.

Whatever your point of view, the new reality is that Government has to get a grip fast and ensure that it creates the right conditions to ensure that the UK thrives whatever the obstacles. The evidence suggests that it may have its work cut out. The first failure by Government has been not to make clear that Brexit has not actually happened yet. Indeed, it has not even started and all the post-referendum market indicators have little to do with what may happen once we really have left the EU. We deserve more authenticity and more honesty.

Businesses – large, medium and small – need to focus on issues they can control whilst trying to influence those they can't. But what assumptions should they make as the pre-Brexit positioning and UK strategy and objectives are developed over the coming months. The real negotiations start post the exercise of Article 50 in 2017, and may last until at least mid-2019, and possibly beyond. With an election looming in 2020, how will all this play out?

My advice: park the political rhetoric and 'take back control' of your focus, due diligence and business strategy. Assume, this process will take far longer than it should and will

generate far too much heat and not much light. Assume we will not achieve full access to the single market nor the degree of free movement of labour that we have now; that tariffs and non-tariff barriers will emerge and trade agreements will take far longer to agree than most are willing to admit.

By contemplating dramatic change to the status quo we have been accustomed to over the last 43 years, it may be easier to focus on what needs to be done to firstly mitigate perceived downside risks, take advantage of potential upsides and identify how best to adapt to the new operating environment. If things turn out better than your 'worst case scenario' then that is all to the good.

Given time, I am convinced that most of the predictions of both the 'remainers' and the 'leavers' will prove to be wrong. Things will neither be as bad as predicted by one camp nor as good as by the other. They will just be different, with elements from both sets of arguments.

The EU remains on course for its own instability. It needs to evolve from the moribund bureaucracy that it has become, albeit worthy in intention, to a far more energetic market-orientated organisation that can enable healthy competition within the European arena but, just as importantly, with the emerging and established economies beyond.

Provided the UK can retain the pre-eminence of the 'City' and London as a global magnet for capital and talent, develop its internal hard and soft infrastructure and boost all regions within England and within our own UK union, we can thrive. We are an open enterprise economy that is far more

innovative than we give ourselves credit for. We are, in spite of 'everything', the 'fifth-ish' largest economy in the world and the second largest in Europe. We will eventually develop new rules of engagement with the single market and beyond and we will have to crack the skills gap one way or another – but it will take time. Our Government negotiators need to be innovative and creative as do the EU's for our own good and theirs. The loss of £9bn of net income into the EU budget should eventually cause some change in thinking.

We must all stay clear-headed and recognise the rules that govern survival. Diversity trumps monoculture. The power to mitigate risk and adapt quickly to changing environments distinguishes resilient entities from the weak who will perish.

Government would be well advised to listen to pragmatic and innovative industries like our own who 'do stuff' rather than those who just talk a good game. For too long, a privileged political elite who have far too little practical experience of the real world – particularly business, production and manufacturing – have crafted political thinking. They have been too remote from all parts of the UK who have, for a raft of reasons, upset their 'applecart'. This is a time to listen, to be honest, to mitigate and adapt if we want to continue to thrive. Government would be well advised to consult properly over the coming months and should resist allowing any Minister to 'prove they were right'.

Our members want to continue to play an active role in helping build a better Britain with a bright new future. I hope that we are given that opportunity.

Time to listen, to be honest, to mitigate and adapt if we want to continue to thrive



Making Brexit work

Image: Shutterstock

THE referendum vote finally settled one of the biggest debates of our times. It is, however, a decision that has generated new uncertainties. For an industry like mineral products that has international dimensions, it leaves a host of questions currently unanswered. The immediate challenge for MPA on behalf of its members is to make sense of a currently confused new playing field – and then to make Brexit work.

Very little is known about when, how and what post-Brexit Britain will look like, or about its impact for the economy.

Stephen Hawking is widely credited with a statement that is particularly apt: *'The greatest enemy of knowledge is not ignorance, it is the illusion of knowledge'*.

Economists and commentators are scrutinising every piece of data available – mostly short-term indicators such as surveys – hoping for an early insight on the direction that the UK economy will now follow. But, says MPA chief economist Aurelie Delannoy: “This is missing the point. The impact of leaving the EU is a long-term issue, not a short-term one. Instead, we should focus on making the best of opportunities that lie ahead.”

So, what do we know so far? Despite some concerns prior to the referendum, we know that the economy was at that time in good

shape: GDP grew by 0.6% in the second quarter on the back of strong household spending and capital investment. Both employment and wages continued to rise too. Official statistics suggest construction may be flat since the beginning of the year but an array of alternative data on sales of construction materials, including those from MPA, point to more positive trends. So the UK economy started the summer on a positive note.

Post-referendum, following a dip in industry surveys across sectors in July, robust data on retail sales indicated little sign of “*Brexit blues*” for shoppers. The sterling depreciation may, says Aurelie Delannoy, have even helped the manufacturing sector by making its exports more competitive.

“Some may think it is now time for celebrations – that the Brexit impact may have been overdone,” she says.

“But that rather simplistic view has some shortcomings. The immediate market response to the outcome of the referendum may have been mitigated by the swift formation of a new Government and the Bank of England’s response to support activity: a cut in the main Bank rate to 0.25% and additional quantitative easing measures aiming at lowering borrowing costs and reinforcing the pass-through of the cut to household and firms.”

But she believes the real test will come next year. The bank expects the sterling depreciation to lift consumer inflation back to 2% in the first half of 2017, whilst the UK economy is forecast to slow but avoid a recession. GDP growth of 2% this year is forecast to fall to around 0.8% in 2017, as heightened uncertainty weakens business investment, before bouncing back in 2018. Prior to the referendum, the Bank thought

the UK economy would grow by 2.3% next year.

More positively, Government has indicated that the Brexit vote could create economic opportunities. Whilst obvious opportunities lie in Britain's renewed ability to negotiate favourable trade deals with partners beyond the EU borders, it is also a crucial time to review public spending plans. Early decisions on major infrastructure projects and further government support to housebuilding should simultaneously stimulate the medium-term economic activity and boost productivity and long term potential growth.

"Focussing on trade only would be a mistake," insists Aurelie Delannoy. "It does not only depend on our negotiating ability but also on the global outlook, which responds to much wider forces than the Brexit challenge. Sluggish productivity growth has been a long-standing issue for the UK economy; encouraging both public and

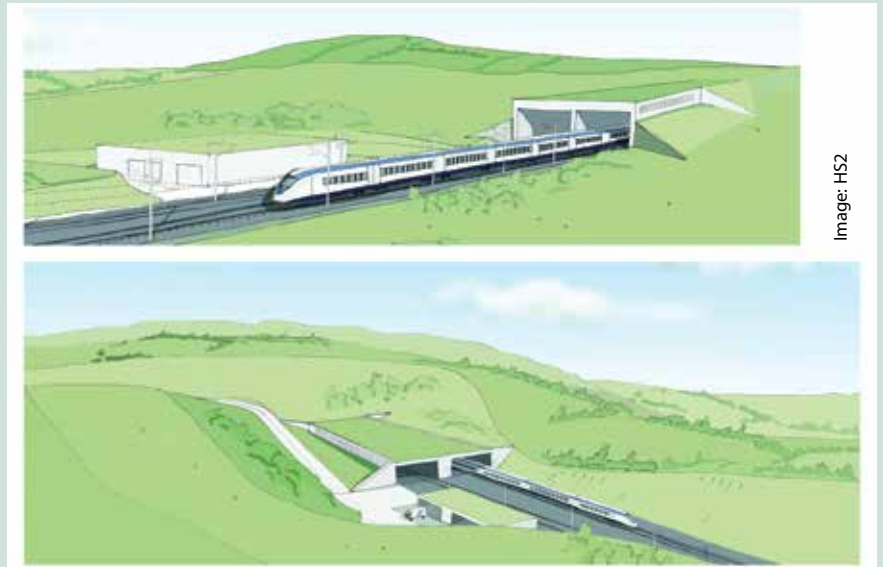


Image: HS2

HS2: a major priority

private investment should help. Needless to say, the Government's Autumn Statement will be the focus of many."

STANDARDS

The other big question is the impact of Brexit on product technical standards and design codes. Through its lead role on standards committees such as those for aggregates, cement, concrete, asphalt and other products, the UK has built a high degree of respect and influence amongst our European counterparts over a number of years.

Dozens of different products fall under MPA's remit. The design standards used by specifiers and engineers are created and governed by the European (EU & non EU) standards body Centre Européen de Normalisation (CEN). Its work is mirrored for use within the UK by the British Standards Institute (BSI). Many, if not all, standards now have the dual classification of BS/EN, recognising this mutualisation process. MPA products are covered by over 200 BSI and CEN standards which govern our 'licence to place on the market'.

"The impact of leaving the EU is a long-term issue, not a short-term one... we should focus on making the best of opportunities that lie ahead"

MPA priorities

MPA has identified six areas of priority for inclusion in the Government's response to Brexit:

World role

- Maintain the UK's international reputation and influence

Investment

- Ensure the UK remains attractive for inward and domestic investment
- Encourage both public and private investment

Infrastructure

- Make early decisions on major infrastructure projects such as HS2, the third runway for the south east and the Swansea Tidal Lagoon

Housing

- Take further action to increase house building, including more affordable housing

Regulation & standards

- Work with industry to improve the efficiency and implementation of current regulation
- Ensure due diligence on post-Brexit regulations to improve current competitiveness and productivity
- Recognise the need to continue to engage with EU standards and code setting processes in order to protect UK interests

Skills

- Guarantee UK residence for valued EU workers
- Think creatively and innovatively to enable the UK to balance access to the single market with proportionate and sufficient free-movement of labour to help fill our skills gap.

MPA's assessment of the situation is:

- It is highly unlikely that there will be a reversion to national standards, due to the time, effort and cost applied by the UK over the past 27 years which has led to highly evolved and advanced European standards
- Through BSI, the UK will remain a member of CEN as already applies to other non EU countries such as Norway, Switzerland and Turkey. While involvement will continue, influence may be weakened as a participant from outside the 'club'
- UK will have no direct input at Commission / European Parliament / Council of Ministers levels, so weakening our position to influence revisions of product regulations and directives with a knock-on effect on codes and standards and industry practice
- MPA will need to maintain its involvement within other European trade associations; if anything our input through those organisations becomes even more crucial.

MPA's executive director Dr Pal Chana is monitoring the situation and believes the UK will continue to take a lead role in CEN and the equivalent BSI standards. "UK industry has made a major contribution to European standards applying its practical and technical knowledge and has benefited from mutual collaboration in CEN to develop best practice. I expect the UK to continue to take a lead role in the development of European standards.

"It is important to understand that no trade is possible between member states unless the products concerned comply with the appropriate CEN standards. In addition, it would be prohibitively expensive, labour and time-intensive to opt out of the current standards framework in order to generate solely UK-relevant new standards. Involvement in CEN enables UK industry to remain at the forefront of new developments. We are in close contact with BSI and have been assured that they intend to remain fully engaged and maintain influence in CEN."



THIRD RUNWAY: A decision was expected as this issue went to press on whether the long awaited third runway in the south east would go to Heathrow or Gatwick. The airport commission recommended a £17.6 billion expansion of

Heathrow but David Cameron delayed the decision until the summer, and it is still pending. Heathrow bosses say the Brexit vote has strengthened the case for a third runway because it is a private sector infrastructure project that will spread growth across Britain. A survey of 150 MPs found that two thirds believed the project would strengthen the wider UK economy. Gatwick believes it can cap the number of people affected by airport noise at a much lower level and says that ground could be broken before the next General Election.



HINKLEY POINT: Now finally given the all-important Government green light, the £18 billion project that leads a new generation of nuclear power has been dogged with delays and doubts. Amidst all the machinations, there is general agreement that Britain desperately needs to take positive action to ensure that the

nation's long-term power needs can be met. The big concern is that two-thirds of existing power stations are expected to close by 2030 as coal, first-generation nuclear and gas fired stations all reach the ends of their lives. Rapid progress is now needed on the ground if the prospect of Britain's lights going out is to be avoided. Hinkley Point C is scheduled to deliver its first power in 2025 though some analysts are now suggesting that it could run up to four years late. It will be the first new nuclear reactor to be built in Britain in two decades. Decisions are still needed on the further nuclear capacity that must follow.



SWANSEA TIDAL LAGOON: The tidal lagoon planned at Swansea is one of six that could have a key role to play in helping to satisfy Britain's long term energy needs. Supporters say it is an opportunity

to harness indigenous, low-carbon electricity that is both affordable and sustainable long term. It would provide power equivalent to the needs of 155,000 homes for 120 years. While the Conservatives committed to the project in their Welsh election manifesto, there have been signs that government backing is cooling due to the level of subsidies that it would need. Its future was thrown into doubt in February by a six-month review of the wider tidal power sector.



Tomorrow's roads

MOST of us relate to the business of road building only in terms of miles of contraflow. We have little awareness of the true scale of the industry that maintains Britain's vital arteries, and we quickly forget the benefits that flow from it when the cones disappear.

Look beyond the gangs in hi-viz on the front line and you have a network of 500 quarries supplying the raw materials. They in turn supply some 275 asphalt plants where the stone comes together with bitumen to produce asphalt, and hundreds of ready-mix plants that provide concrete for road pavements and structures. Both asphalt and concrete are key elements in the wider mineral products industry, which has a £20 billion turnover and employs 78,000 people.

Also hidden in the supply chain are a string of supporting industries that provide the tools, plant and equipment to get the job done. And while you might be aware of the road deliveries to site, you won't usually see the increasingly important enabling deliveries by rail, sea and river.

The reality is, however, that our roads could be an awful lot better if the investment promised by the Government over the next few years makes the transition from promises to reality. The road investment programme announced at the end of 2014 added up to £15 billion and was hailed at the time as "the biggest upgrade in a generation". "Roads are key to our nation's prosperity," said the announcement. "For too long they have suffered from under-investment."

More than 100 schemes were identified, with every part of the country benefiting.

It included a £2 billion promise that drivers would be able to drive from London to within 15 miles of Land's End on dual carriageway. There were 12 projects to improve access to major international gateways such as the Port of Liverpool; turning the M62 from Manchester to Leeds into a smart motorway along its length to boost the Northern Powerhouse; and the dualling of the A1 all the way from London to just short of the Scottish border.

In Scotland, the plans include a peripheral route for Aberdeen and the dualling of the A9. Wales will similarly invest heavily in a string of major schemes that include the upgrading of

the A465 Heads of the Valleys Road west of Abergavenny and the M4 relief road.

Achieving all these ambitions poses a big challenge for the national roads agencies in England, Scotland and Wales. They have to meet a tough target to keep 97% of all network lanes available at any time.

For its part, the asphalt industry is forecast to need to increase its annual output to around 25 million tonnes and supply not just the major road building projects but also local maintenance schemes and infrastructure works. The response from operators has





End for quick fixes?

CHANGING public and political perceptions about roads maintenance is one of the big challenges according to a new report from Audit Scotland.

Given competition for limited funding with health, education and social care, it is vital that maintenance of the road network is recognised not just as a travel safety issue but as crucial to the economic prosperity of the nation, says the report 'Maintaining Scotland's roads'.

With Transport Scotland already planning a report on the socio-economic benefits of the industry, one of the key recommendations of the report, is that details about the impact on road condition of agreed spending levels, is made more readily available to the public and budget setters.

MPA Scotland's chief executive officer Paula Coopland is encouraged. "The urgency to demonstrate a much greater commitment to innovation and collaborative working is highlighted with an apparent move away from cosmetic quick fixes in recognition that it does not represent long term value for money.

"From 2016-17, councils will also be changing the way they value local roads so that it aligns with that of trunk roads. This means that the value of local roads will be based on depreciated replacement cost – or, put more simply, the cost of replacing all roads to their current condition. Consequently, the change is likely to lead to a significant increase in the value of Scottish councils' road network, meaning that local roads will be the highest value asset

on their balance sheets.



been highly positive with a string of major investments in new asphalt plants and in the quarries that will feed them and projects like HS2.

There has been a big investment in skills, with hundreds of new apprentices and graduates recruited. Asphalt producers have also been prominent in pursuing ever higher levels of health and safety including enthusiasm for MPA's "Safer by" suite of initiatives.

MPA Asphalt is meanwhile calling on the roads agencies to recognise the industry's position on a series of what it regards as critical issues to assist the delivery of their programmes. Its requests include:

- Clarity over the pipeline of forthcoming demand so investments can be made to the right level, in the right place and at the right time
- Early project engagement at local level to ensure that resources are available

- Basing road design and specifications on a realistic assessment of requirements to help optimise local sourcing, only using primary and premium aggregates when essential
- Planning deliveries within available working windows to optimise available transport
- Acceptance that some weekend and overnight closures and contraflows are inevitable and communicating that to road users.

Says MPA Asphalt director Malcolm Simms: "Our members have a key role to play in a new era of road building and repair and making that happen will depend greatly upon close relationships with the national and local highways authorities. If we get the partnerships right then the benefits will come in terms of efficiencies for the clients and roads that deliver for the nation."

decibels. Existing concrete roads can also be ground and grooved to restore the performance of surface properties.

Meanwhile, roller compacted concrete (RCC) is another option within the structure of the road. While the basic ingredients are the same as for traditional concrete, the mix is designed to produce a "zero slump" variation that is placed using standard asphalt pavers and compacted with ten-tonne rollers. BRMCA Members have been working closely with Highways England to develop a design method and specification for RCC for use on its network.

Concrete options

BOTH asphalt and concrete have important roles to play in the future of Britain's roads. While asphalt leads the market, the cost volatility of bitumen has brought concrete increasingly into play.

Once regarded as a surface that generates more tyre noise, concrete now has quieter options to add to its potential for long-lasting performance. "Whisper concrete" differs from conventionally textured concrete surfaces in that coarse aggregate is deliberately exposed at the surface, and can deliver noise reduction of up to three



Mystery & intrigue

... a story told through quarrying

IF you are an enthusiast for ancient British history, the talk of the moment is of a Bronze Age community in eastern England that was built on stilts over a river, prospered and was then dramatically destroyed within a matter of months.

Whatever disaster it was that caused them to flee, these people left behind what was at the time extraordinary wealth – clothing, jewellery, tools and furniture. Their meals, still in their cooking pots, crashed through the burning timbers into a tributary of the River Nene at what is now known as Must Farm at Whittlesey near Peterborough.

Fast forward 3,000 years and this intriguing story is being hailed by archaeologists who have never seen anything quite like it as a big step forward in understanding of the Bronze Age. It is being told as a direct result of quarrying – and specifically through a close partnership between MPA member Forterra, the Cambridge Archaeological Unit, Historic England and the University of Cambridge.

Must Farm is now a working brick quarry, and it is the geology that has preserved what

happened on that fateful day around 1,000 years BC. Built on wooden piles sunk into the river bed, the fire that ripped through the settlement caused it to drop into the water below, quickly quenching the flames. The treasures that now tell the story were covered with layers of thick silt that preserved everything from clothing to wooden utensils. The artefacts that have emerged over an intense eight-month excavation have amazed not just those conducting it but the wider archaeological community world-wide.



“In cases like this the mineral industry is enabling us to get to places we never used to be able to get to. The opportunity is a massive one”



The long-established quarry had been closed for a time and was serving as a local reservoir when in 1999 a local archaeologist spotted and noted timbers sticking out of the water. In 2004, Forterra's predecessor, Hanson Building Products sought permission to reactivate the quarry and agreed to leave the timbers out of the extraction area while also creating a protective bund to shield the site and keep the area wet.

Where other Bronze Age sites have typically produced the odd pottery shard and spear heads, this one has given up a complete spear, a superbly preserved wooden wheel, woven linen that is finer than the lightest of today's fabrics and most amazing of all are the five round huts – right the way from their wicker floors to the clay chimneys, all still lying where they collapsed 3,000 years ago.

Project director Mark Knight from the Cambridge Archaeological Unit regards it as a once in a lifetime project. “It didn't feel like archaeology any more,” he says. “More we were simply walking into a village that had been burnt down. It blew everyone away.”

“It is the sort of site we thought the Fens would one day produce but no-one had ever found,” he says. “The sediment is contemporary with British prehistory, and because it is predominantly a wet landscape it buries the evidence deep and preserves it.”

He adds: “Our relationship with Hanson and then with Forterra was one of extreme good

fortune because the very landscape that we wanted to research was the one they were venturing into for the Jurassic clays. Normally, if we go into the Fens and dig a hole it is going to fill with water very quickly and it is going to be very dangerous whereas the brick industry does it with great skill, pumps out the water and extracts the clay, so that veneer of prehistory that lays across the top is made available to us in safe conditions.”

There is in Mark Knight's mind no shadow of doubt about the contribution being made to archaeology by the mineral products industry. “We have left behind this idea that a developer is a threat to archaeology,” he insists. “In cases like this the mineral industry is enabling us to get to places we never used to be able to get to. The opportunity is a massive one.”

Forterra says that the professional and practical approach of Historic England and the Cambridge Archaeological Unit has made working with them a pleasure. Quarry personnel input on an almost daily basis, gaining a fascinating first-hand insight into the history of their site.

Head of land and mineral resources Brian Chapman says of the project: “While we acknowledge our responsibilities, this project may be considered unusual in that it provided significant new learning rather than a repeat of already understood archaeology.”

What happened?

FOR all the amazing discoveries that go with Must Farm, there remains one tantalising mystery. What brought about the fire that destroyed this community?

Archaeologists know it was built and then destroyed very quickly. But was the blaze a catastrophe that originated in a single kitchen? Was it deliberately destroyed by the residents? Or was it an attack by invading enemies? Longer term analysis may hold the answer.

Whatever the cause of its destruction, the unprecedented richness of the finds paints a vivid picture of how the people lived, what they wore and ate. There were lamb carcasses hanging from the rafters and a slaughtered red deer sprawled on a patch of gravel. The people reared animals and planted cereal crops. They chose to live over water but seem to have largely ignored the fish that swam beneath.

Given the sheer magnitude and significance of the artefacts, discussions over their future will be a big part of the deeper analysis that will now follow. The project will certainly warrant its own display space but whether that will be a devoted museum remains to be seen.



A HEALTHY INVESTMENT

Image: Shutterstock

WHILE the mineral products industry continues to achieve steady progress towards its goal of “Zero Harm” on the safety front, there is a growing realisation that similar focus is now needed on the health and wellbeing of the workforce.

A major agenda item at last year’s MPA Health and Safety conference, the hot topic of health and wellbeing has since been the subject of numerous industry workshops and the focus of the MPA’s stand at *Hillhead 2016*, one of Europe’s largest quarrying exhibitions. But, despite the level of interest, the industry has a long way to go before its action on health-related issues comes close to its safety performance.

One stumbling-block is simply how difficult it is to measure improvement in health and wellbeing. While safety improvements can be seen in reduced fatalities and lost time injuries, musculoskeletal disorders arising from repetitive strain or poor working posture, and the consequences of occupational health risks, such as dust, oils and chemicals may not be apparent for decades.

Occupational health risks can be identified by employers at the time of conducting the risk assessment and steps taken to reduce exposure, but they can only be eliminated if the workforce adopt responsible behaviours

to protect their future health. MPA’s health and safety manager Kevin Stevens explains: “Legal compliance has a limited effect in influencing individual behaviour. Indeed, the workforce may see it as something that only applies to management so that is never going to be enough, and hitting the workforce with a constant barrage of negativity is also ineffective. People become desensitised by facts and figures about how many deaths occur due to smoking, obesity, alcohol or exposure to hazards at work.

“Instead companies should encourage healthy behaviours, and assist by educating their workforce to develop ‘healthy habits’ that reduce the individual’s health risk. Better outcomes will also be achieved if they offer positive messaging that focusses more on what healthy people can do with their lives rather than on what they risk if they don’t take care.

“Investing in health for retirement is key,” he adds. “Encouraging people to look forward to a fulfilling, healthy retirement is far more influential than adopting fear tactics – that just doesn’t work in the macho world of the mineral products industry.”

Understanding and supporting workers suffering from mental health issues is another challenge for a male-dominated industry.

Stress is often hard to identify unless the sufferer will talk about it. Without vigilance, stress can go unnoticed, but can have tragic consequences.

“Stress can come from any aspect of an individual’s life, not just his or her work,” explains Dawn Collins, who has been a regular presenter on the subject at MPA events. “If someone has problems at home, perhaps due to financial worries, relationship issues or bereavement, his or her mind may not be on work. Concentration slips and accidents occur or the individual can suffer breakdown, emotional distress or worse.

“Employers can help by training their workforce to recognise the symptoms of stress and encouraging people to talk to one another. Specialist training can also be offered to mental health first-aiders, who can offer immediate support and advice.”

Under the banner “Securing sustainable health and wellbeing together”, the MPA stand at *Hillhead 2016* helped raise awareness within the industry. The stand offered free health screening, checking blood pressure, BMI, lung function and eyesight. Participants were asked to donate their results anonymously to help build a bigger picture of the industry’s health – an ongoing project. The stand also promoted exercise and healthy eating, featuring a smoothie bike using pedal power to drive a smoothie maker. Over 1,000 health and wellbeing leaflets were distributed and videos on health issues such as heart disease and prostate cancer were shown.

“... companies should encourage healthy behaviours, and assist by educating their workforce to develop ‘healthy habits’ that reduce the individual’s health risk”

ANNIVERSARY

Flagship birthday

AGGREGATE Industries' flagship coastal quarry, Glensanda has celebrated 30 years since its first shipment of granite. Since then, over 5,500 shipments have been made to projects across the UK and Northern Europe, including the Channel Tunnel, Schipol Airport in Amsterdam and the motorway from Gdansk to Torun in Poland.

With an annual capacity in excess of nine million tonnes and a reserve of 760 million tonnes, Glensanda is the largest granite quarry in Europe. The site is only accessible by sea due its location on a peak near Oban on Scotland's west coast. Granite is

crushed at the top of the mountain then fed into a tunnel which takes it 300 metres down, before travelling 1.8 km to the foreshore where it is washed, screened and stored ready for shipment. A fleet of purpose-built ships transports products directly to customers in deep-water ports around the UK and Europe.

Philippe Freney, AI's managing director, UK and Overseas, said: "Glensanda has come a long way over the last 30 years to become one of the most valuable exporting businesses in Scotland, accounting for almost 100% of all aggregate exported from Britain."



INVESTMENT

New HQ



SOME 250 FM Conway employees, including the senior management team and all the company's support staff, are moving into the company's new headquarters in Sevenoaks, Kent.

The company purchased the three-storey building in March last year and has since carried out an extensive refurbishment to provide state-of-the-art office facilities. The former head office in Dartford will be converted to provide an expanded logistics hub for the business, alongside the materials recycling and crusher facilities already located at the site.

FM Conway's chief executive officer, Michael Conway, said: "Thanks to this move, we now have a headquarters that reflects the scale and ambition of the company as we look to continue our success in the years to come. Our people are at the heart of our business and we want to make sure they have the best working environment possible."

WILDLIFE

Now it's nature's sound

CEMEX UK has handed its former Denge quarry – a unique site with three historic early warning 'sound mirrors' – to the RSPB. Located next to the existing RSPB Dungeness nature reserve near Lydd in Kent, the site now known as Lade Pits is a restored quarry covering some 70 hectares, from which approximately four million tonnes of sand and gravel was extracted since the early 60s.

Between the two world wars, the MoD developed an aircraft early warning system consisting of huge concrete structures, known as 'sound mirrors', designed to pick up and

amplify engine roar from enemy aircraft coming in off the sea. The system was never fully operational and was soon made obsolete by the introduction of radar, but the structures have remained and are listed as a Scheduled Ancient Monument. They have also featured in music videos and fashion shoots.

RSPB south east regional director, Chris Corrigan says: "Where the mighty sound mirrors were once used to listen out for man-made noise, they will now symbolise just how important it is to listen and look out for nature."



COMMUNITY

Camooflaged truck

TUDOR Griffiths Group has unveiled a unique new vehicle in a pledge of solidarity with local dairy farmers. The family-owned business, based in Ellesmere, has invested in a new concrete truckmixer that has been especially sign-written to resemble the markings on a Holstein Friesian cow.

Managing director, Tudor Griffiths says:

"We've been in business for over 140 years and we're based in the heart of rural North Shropshire, with many of our customers involved in the dairy farming industry. I felt it was important that we made a very visible gesture of our support for the agricultural sector in these tough times, and I'm sure our new-look truck will be the perfect way to draw attention to the plight of our farmers."



The "camooflaged" truck can now be seen delivering concrete to customers across the English/Welsh border in Shropshire, Cheshire, Worcestershire, mid and north Wales.

WILDLIFE

Spreading their wings

A PROJECT to arrest the decline and isolation of dragon and damselflies in Wiltshire has achieved remarkable success thanks to funding from The Hills Group via the Landfill Communities Fund and a collaboration between the Wiltshire and Gloucestershire Wildlife Trusts.

New ponds and scrapes were created in the Sandpool area of the Lower Moor Farm complex near Cricklade, which is run by the Wiltshire Wildlife Trust, to help dragonflies move more freely and encourage them to populate other parts of the country. Sandpool was dug for gravel then used as a landfill site before being acquired by the trust in 2009.

The new habitats have enabled a variety of species including the hairy dragonfly, downy emerald and red-eyed damselfly to exploit new

territories. Up to 20 different species can now be found at Lower Moor Farm.

"The funding from Hills has allowed us to create dragonfly habitats and make links for species across the landscape," said Neil Pullen, Wiltshire Wildlife Trust reserves manager. "Over the winter, volunteer working parties will help cut back and pollard willows and other vegetation growing around the ponds to ensure that the dragonflies always have somewhere to lay their eggs."



HERITAGE

Discovering the past

A TV production company visited Hanson's Condover sand and gravel quarry near Shrewsbury to film scenes for a primetime documentary series for Channel 4 called 'Walking Through Time', which will be broadcast later this year.



The series explores significant geological and palaeontological events that have shaped the landscape and influenced how we understand the past. One episode focuses on Shropshire and looks at the discovery and preservation of the famous Shropshire mammoths, which were found at Condover in 1986.

The film crew interviewed mobile plant operator Andrew Edwards, who was on duty the day the first bones were pulled up by the underwater drag line operator nearly 30 years ago. It led to discovery of the remains of an adult male mammoth and three juveniles – one of the most important geological finds in Britain during the last 100 years. The skeleton remains are now housed in a climate-controlled area at Ludlow museum.

Meanwhile, a woolly mammoth tusk discovered at Tarmac's Clifton quarry in Worcestershire, is about to go on display at Worcester City Museum. It was spotted by one of the plant drivers and Worcestershire County Council's Archive and Archaeology Service were called in to investigate. The size of the tusk suggests that it was from a young male, which could have grown up to eleven feet in height and weighed up to six tonnes.

CAREERS

Degree success



SEVEN Tarmac employees have completed a minerals management foundation degree at the University of Derby, achieving six distinctions and one merit between them.

The successful seven, who are based across Tarmac's UK operations, say completing the degree course has helped them progress their careers with the company. Dannika Bannon, who began her career working on a weighbridge and is now quarry manager for Tarmac's Bestwood and Calverton quarries said: "We are all absolutely delighted to have achieved the results we have. It's very rewarding to see everyone's hard work pay off."

Robert Kelly, , has used the knowledge acquired to progress from weighbridge supervisor to assistant quarry manager at Tarmac's Howick quarry within two-and-a-half years.

The minerals management degree is a three-year distance learning programme developed for the industry by the University of Derby to support the education and development of future managers and professionals within the industry.

"We are all absolutely delighted to have achieved the results we have. It's very rewarding to see everyone's hard work pay off."

COMMUNITY

Tourist trail

VISITORS to the Lake District have enjoyed a new attraction this summer – the Go Herdwick public art trail, comprising over 60 statues of Herdwick ewes and their lambs. The sheep were designed and painted by a local artist, then put on display outside business premises between Keswick and Windermere as part of fund-raising initiative by the Lake District Calvert Trust charity.



Businesses supporting the project include The Holker Group which sponsored one of the Herdwick ewes, naming her 'Burly', after the natural Lake District stone quarried by Burlington Slate Limited, and a lamb named 'Pebbles'. Burly depicts a dry stone wall as commonly found across the Lakeland fells that are home to the Herdwicks. Lionel Playford, the artist who

created Burly, said: "I built her from the feet up as if I was a waller."

Visitors and locals alike have been encouraged to go 'Herdy spotting', and the herd is to be rounded up for public viewing and auction in the autumn. The charity hopes to raise £1.3 million.

ACQUISITION

Breedon's big step

BREEDON'S recent acquisition of Hope Construction Materials for £336 million marks the biggest development in the company's history and a transformation of the group into a truly national business.

The iconic Peak District cement works becomes a key asset in the Breedon network which has now grown to include around 60 quarries, 27 asphalt plants, nearly 200 concrete plants and a major surfacing

and road contracting operation. The company now has operations across the country, extending from Stornoway in the far north of Scotland to Exeter in Devon, from Pembroke on the west coast to Great Yarmouth on the east.

Group chairman, Peter Tom CBE said: "We're delighted to complete the acquisition of Hope – it's a great business and will add a lot of value to everything we have achieved.

It gives us an even stronger platform for growth through a broader geographical footprint, increased scale, improved product mix, greater financial capacity and some highly talented people."

Peter Tom (left) is pictured with Ashley Bryan and Pat Ward.





Fast track for Britain

Innovation – CEMEX UK's pop-up depot at Warrington

DELIVERING the new age of infrastructure that Britain needs will depend not just on mineral products but on moving them to the places they are needed economically and with minimal environmental impact. Rail freight can help to achieve both ambitions – but can it respond to the challenge?

The question is one that MPA will shortly be putting to Rail Minister Paul Maynard and to Parliamentarians on behalf of worried members who are calling for new investment in the network, regulation to ensure reasonable access for freight trains and safeguarding of the land needed for depots.

“Sustaining and expanding the rail freight of aggregates, cement and other materials brings direct environmental benefits through reductions in road traffic, congestion and emissions including carbon dioxide,” says MPA’s director of economics and public affairs, Jerry McLaughlin. “Each freight train removes up to 76 HGVs from long haul deliveries and reduces CO₂ emissions by 76% compared to road delivery.”

The potential benefits are clear but the reality is that the rail network has not been able to keep up with the rate at which the construction industry came out of recession. With both passenger and freight growth all

coming together on the core trunk routes, it has become harder to find the capacity that is needed.

Experts acknowledge that construction has been a Cinderella sector over recent years, but rapid growth means that it needs its share of the available rail slots. MPA members are concerned that rail operators are increasingly unable to meet their requests for trains. While network access is one issue, there have also been driver and wagon shortages.

Former Rail Minister Claire Perry has suggested that users of the rail freight network lack visibility in Parliament, prompting the MPA reception that is scheduled for November. She said in June: “I believe there is a real opportunity for rail freight to contribute to sustainability in an age when one of the greatest environmental challenges resulted

from particulate emissions from vehicles”.

Operators are willing to play their part and to use innovative tactics to satisfy the growing demand for their products. At Warrington in the north west, CEMEX UK has bolstered its supply capability by setting up a “pop up” rail depot capable of handling 125,000 tonnes a year. Set up in partnership with rail operator DB Cargo, the temporary facility involves little more than a weighbridge, office and generator on land next to the West Coast Main Line. Aggregates are offloaded with a grab and stockpiled for road delivery.

Says head of CEMEX rail and sea, Mark Grimshaw-Smith: “A pop-up rail depot can be installed in weeks rather than months and gives us the flexibility to move aggregates from quarries to areas where they are needed, especially in the short-term.”

“Each freight train removes up to 76 HGVs from long haul deliveries and reduces CO₂ emissions by 76%”