

mineral

products today

Adapting to change
strengthening resilience



Photo: Images of Birmingham

Broken market
fix for housing

Perfect storm
road death action

Firm foundations
industrial strategy

WELCOME

THERE can be few if any other industries that contribute in such a fundamental fashion to the resilience of a nation as does our own. It is very obvious when it comes to issues such as standing up to climate change, when the unique strength and durability of mineral products enable us to fight back against the floods, storms and sea-level rises that result from climate change.

The thermal mass that is inherent in concrete resists rising temperatures, making a real contribution to keeping our homes and business premises cool in summer as well as warm in winter. It holds back fire, improves water quality, and offers the means to harvest rainwater and so reduce our consumption of a precious resource.

Resilient also means being able to withstand the demands of our rising population by

helping to satisfy our need for more, as well as better, homes. As we demonstrate here, traditional masonry homes that use sustainable British materials from local sites help provide one of the solutions as well as those manufactured off site.

We and our partners in the construction industry stand ready to help meet some of the most testing challenges of the new Parliament. Britain's capacity for growth is very much in our hands.

To achieve that we need the confidence to invest in our production facilities and to do so despite the continuing uncertainties of Brexit. This edition carries evidence of MPA members who are already committing to costly factories, production facilities and planning applications. But much more is needed if we are to meet the demands for mineral products that will be made by the new generation



of energy and transport infrastructure of all types. None of it can happen without our products.

This industry will certainly play its part in making Britain resilient to the challenges that lie ahead irrespective of the uncertainties as and when we adapt to change.

*Simon Vivian
Chairman, MPA*

Charter to unify ambition

MPA has developed a new Members' Charter as a vehicle for 'driving change, raising standards and improving perceptions'.

The charter looks forward to 2025 and sets seven new strategic priorities designed to sharpen the focus of the association's work and ensure that change is embraced. The priorities are: health & safety; people; resource use; climate change and energy; natural environment; built environment; communicating industry value.

Each priority drives a series of objectives and targets to enable the association to measure progress. The charter forms part of a new members' handbook that sets out to 'clarify, simplify and consolidate' expectations members have built for themselves over many years of policy development.

Chief executive Nigel Jackson, sees the charter as a key moment for the industry. "Now that MPA represents over 90% of the non-energy mineral extraction and mineral products sector, it has a unique opportunity to harmonise thinking and behaviours in a way which can improve industry performance in key areas whilst improving perceptions externally," he said.

"Getting everyone on the same page with a unified ambition for the future has been a key aim of our board for many years. Publication of the charter is only the end of the beginning. It is what happens over the next few years that will determine whether the sector can raise its game and become rightfully recognised and valued for the great and essential work that it does and is an industry that will attract the brightest and the best for the future."



**Health
& Safety**



People



**Resource
Use**



**Natural
Environment**



**Built
Environment**



**Climate Change
& Energy**



**Communicating
Industry Value**

Mineral Products Association

Gillingham House, 38-44 Gillingham Street
London SW1V 1HU

Tel: 020 7963 8000 Fax: 020 7963 8001

Email: info@mineralproducts.org

Web: www.mineralproducts.org

Chairman: Simon Vivian

Chief executive: Nigel Jackson

Mineral Products Today

Managing editor: Elizabeth Clements

Email: elizabeth.clements@mineralproducts.org

Editor: Barrie Hedges

Barrie Hedges PR

Flintstones, School Lane, Colyton,

Devon EX24 6NT

Tel: 07899 923756

Email: barrie@barriehedgespr.co.uk

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

Copyright: Mineral Products Association 2017

Printed on recycled paper

Page 1 photo: Shutterstock



Safety challenge

TEENAGERS across Wales are being invited to take on a vital new challenge in helping to carry a water safety message to younger pupils and the wider community.

The challenge was initiated by the MPA which has worked in partnership with emergency services and other organisations concerned about drownings in coastal, inland and other open waters. It comes as the industry launches its own annual *Stay Safe* campaign to discourage young people from venturing into quarries and other sites.

The new initiative sees comprehensive schools making water safety a part of the Welsh Baccalaureate from the start of the new

academic year in September. Pupils will commit up to ten hours to this as one of a number of baccalaureate challenges, planning and undertaking activities that will educate not only their peers, but their communities.

Drownings are the biggest single cause of deaths at quarries which often have water-filled areas that attract swimmers who do not recognise the implicit dangers of extreme depths and chilling temperatures. Wales has particular problems with accidental drownings, and accounts for around 10% of the total across Britain in a typical year.

The new challenge was launched at CEMEX's Wenvoe Quarry in Glamorgan by the Welsh Government's cabinet secretary for education, Kirsty Williams AM. "Safety in and around



water has become a priority to ensure that tragic deaths from drowning are minimised across the coastal, inland and open waters across Wales," she said. "It's so important that the education system also plays its part."

Agencies participating with MPA include the Royal Life Saving Society (RLSS), the three Welsh Fire and Rescue Services, the RNLI and Welsh Water. The launch event included a demonstration by the South Wales Fire and Rescue Service (SWFRS) on the different water rescue techniques that specialist crews use to rescue individuals in trouble in the water.

Mind the gap

CONTINUING decline in permissions for land-won sand and gravel will place increasing pressures on the supply of aggregates in Britain over the next 15 years.

An MPA study of supply and demand over the period to 2030 anticipates a cumulative need for between 3.2 billion and 3.8 billion tonnes of aggregates. Projections suggest that, by 2030, 267 million tonnes of aggregates might be needed each year, of which 60% (201 million tonnes) would still need to come from primary sources, including crushed rock, land-won and marine sand and gravel.

The MPA assessment looks at a series of supply scenarios to respond to the challenges of declining availability of land-won sand and gravel. Under one such scenario, marine sand and gravel supply could by 2030 be required

to increase its contribution from the current 12 million tonnes to 24 million tonnes, with crushed rock rising from 104 to 146 million tonnes. This significant shift in the supply mix of aggregates shows what it would mean for alternative sources of aggregates if the supply of land-won sand and gravel was to decline from the current 46 to 21 million tonnes.

The MPA study stresses that supply shortages could become especially apparent if long-term replenishment of sand and gravel permissions remains below 100%. Currently, for every 100 tonnes of sand and gravel used, only 61 tonnes are being replaced with new permitted tonnages. It also expresses caution over the potential level of contribution from recycled and secondary aggregates – while they have a role to play, they are unlikely to be a game changer given their constraints. The share of recycled and secondary aggregates varies between 28%-37% of overall demand over the projection period.

Import volumes could also potentially increase from their current level of five million tonnes per annum, but they are limited by port and transport infrastructure to receive and distribute them.

On a wider front, the industry sees other challenges, notably on the availability of drivers and vehicles and the ability of rail freight to cope and future availability of wharf capacity. Skills availability is a further industry issue with particular concerns about possible stricter immigration post-Brexit.



Hanson is investing €70m in two new marine aggregate dredgers

Brexit priorities

MPA has updated the Brexit priorities that it believes the Government should take on board as it begins the process of withdrawing from the European Union.

Since last year's referendum, MPA has continued to adopt a neutral position, focussing on providing unbiased information to inform its membership. After consulting with them, it has set out six priorities:

- Build confidence for investment
- Boost growth
- Maximise access to markets
- Maintain access to labour and skills
- Maintain regulatory and standards equivalence
- Rebalance regulation post Brexit.

MPA chief executive Nigel Jackson, says: "Much has happened politically since last summer but we are no wiser as to the likely outcome of Brexit negotiations. More needs to be done, both politically and economically, to give the clarity needed by businesses to sustain investment confidence."

"The economy has remained resilient in the short term, but the issue remains: what will happen post-Brexit? We have set out our priorities for the new Government which are necessary to ensure stability and sustained growth in the long term."

Building prosperity from uncertainty

MPA chief executive Nigel Jackson believes that the resilience and 'can do' attitude of industry can help Britain achieve post-Brexit success.

THE UK and its economy have proved resilient despite two general elections, two referenda, a number of local and EU elections and the loss of three major party leaders in less than three years!

Each election result was acclaimed as potentially 'seismic' or evidence that the 'political tectonic plates' were shifting (as if this meant something). With the exception of the EU referendum and possibly the Scottish vote, I remain sceptical. Firstly, because the prospects of a new landscape of 'progressive rainbow politics' is diminishing rather than increasing, and secondly that there are more echoes of the '80s and some say the '50s in the main party manifestos than most expected.

The return to two-party politics currently looks more likely than not. Irrespective of the final outcome each of the manifestos, whilst seeking to set out clarity of vision and intent, brings uncertainties in equal measure.

Business dislikes uncertainty because it can corrode confidence and in turn weaken investment. I have been in the choir singing various versions of this song for many years because by and large it is true. However, maybe we need to refine our approach to risk assessing these challenges in future.

Parking the question of when did we last experience certainty? I have been drawn to reconsider the words of 'the Donald'. Not that



one, the other one. Rumsfeld. His 'known/unknown' thesis could quite easily be recast as 'uncertainty/certainty'. Without rehashing the entire stanza, it is worth a moment's thought.

I have previously recommended a 'mitigate and adapt' strategy as the means of weathering the period from pre-Brexit to post-Brexit. Assuming the worst but preparing for the best. Given the 'torrential' commentary from career politicians and a mischievous media, it is easy to submit to an 'it's all too difficult' point of view. That is where Rumsfeld comes in. That is where the remarkable resilience and 'can do' attitude of British business also plays its part.

I believe that those who actually create our wealth – the entrepreneurs and risk takers – have an embedded filter tuned to distinguish between 'uncertain uncertainties' and 'certain uncertainties' and combinations in between. Given that most people seem to be over the outcome of the Brexit vote itself and, irrespective of their persuasion, now just want the job done, energy is best focussed on the Rumsfeld proposition as a means to address 'uncertainty' more analytically.

We can readily identify and prioritise the key certainties such as building capacity and capability to compete in known and emerging markets. We know that ability is a function of many factors but most are clear and manageable. For most mineral product manufacturers, the markets remain largely local and indigenous. Health in these markets is more about a growing economy with low taxation, proportionate regulation and access to skills and mineral resources.

The UK has shown its ability to keep growing despite all the 'political moving parts'. Brexit is undoubtedly a big moving part. But if we think of the EU as our main customer, given that our net £9bn payment leverages nearly £600bn in total trade, the question is how much of that trade is at risk and can we find



new customers to replace it or do better?

These challenges are capable of being quantified sufficiently well to inform decision-making using well-worked business methods. It is far more difficult to determine the availability of the right skills to be able to seize both the local and export opportunities. The line between low-skill and highly skilled is becoming blurred as automation and innovation works its way through production and logistics processes, and only business really knows what is needed on the ground. Whether local or distant, Government has a responsibility to foster operating conditions that encourage investment so that our economy thrives.

The new Government must move on from a mainly political approach to one informed by economic, trading and operational realities. Industry really can help here and must be given the chance to play its part in building future prosperity. Governments do not create wealth, but they do have a key role to play in enabling it to be created. Business participation and collaboration would help boost confidence in itself and encourage investment. An integrated approach will better address 'uncertainties' by focussing on markets, products, capacity and capability.

Perhaps the greatest uncertainty right now is Government itself, which seems reluctant to fully engage for fear of compromising its negotiating strategy as we prepare to leave the EU. We need Government not to just hear, but to listen and engage more fully with business and industry. This can be done without weakening its hand as we all have the same aim of getting the best possible deal for the UK.

The big question remains: 'what does that deal look like?' That ultimate variable can be converted into a certainty and let's hope that as the new Government gets to work there will be more constructive and purposeful engagement than hitherto.



Fixing a broken market

There is general agreement that England's housing market is 'broken' and that a rapid acceleration is needed if the promise of one million new homes by 2020 is to be achieved. But there is rather less consensus over how the fix should be achieved.

WANDER through a typical block manufacturing plant right now and you would see little sign of the slow pace of activity that former Communities Secretary Sajid Javid attributes to the traditional house building industry. The rapid pace of automated output appears to belie his view that product manufacture, along with traditional on-site construction, is a key reason why just 190,000 home completions were achieved in 2016.

One important answer, the Minister says, is to place increasing emphasis on off-site construction – what used to be known as 'prefab' homes. His department's White Paper even suggests that taxpayers' money might be used to help fund companies specialising in that work with land and factory construction.

The suggestion has been refuted by the Modern Masonry Alliance (MMA) which is part of MPA British Precast. The MMA response to the White Paper says: "We support the broad analysis of past

problems limiting growth and helpful recommendations such as the promotion of aid for small and medium sized builders. But it incorrectly attributes delays to shortcomings in traditional construction and is misinformed as to the contribution off-site construction methods can make in terms of numbers, long-term quality and immediate delivery.

"It is a matter of concern that Government policy is about to incentivise certain construction methods at taxpayers' expense, most of which are likely to lead to increased imported materials. But with masonry construction there is ready availability of local product and labour and the factories exist.

The submission adds: "It is an argument that fails to recognise the long-term benefits of masonry and potentially gives rise to the dangers of focusing on numbers and speed in place of long-term quality, durability, long life and whole-life carbon reduction."

Some 80% of new homes are built using masonry – made in Britain and supporting

British jobs. Blocks and mortar products may well come from sites within 30 miles, so the sustainability argument is a strong one. With a timber frame home in particular, the main raw material is imported. The case

THE CASE FOR MASONRY HOMES

- Long-term quality and durability
- Sustainable materials from local sources
- Good sound insulation
- Fire resistance
- Thermal mass – cool in summer, warm in winter
- 100% recyclable at end of life
- Flexible design, construction and extension
- Accepted by lenders, insurers and warranty providers.



is supported by both the Home Builders Federation and the Federation of Master Builders.

The Modern Masonry Alliance points out that many of the factors behind the shortage of new homes – notably finance, land and planning issues – are outside the control of product manufacturers. In addition, until now, delivery has been concentrated within private sector housing for purchase.

Potential new players may, however, now change these dynamics well beyond the changes proposed by Government in the White Paper. Of particular significance are the build-to-rent sector, housing for the growing over 65 population and the potential re-entry of local authority action led by the newly

Extra shifts to keep up

THE commitment to manufacturing sustainable products from which traditional homes can be built has never been stronger amongst members.

Operators large and small are investing in new plant while also bringing previously mothballed production lines back into full production. Extra shifts are being worked to meet the demand for blocks that have undergone big changes in specification over the past decade to achieve exceptionally high standards of energy efficiency and acoustic insulation.

The Thomas Armstrong Group, the largest block manufacturer in the UK operates eight factories across northern England and into Scotland from its base in Cumbria. Founded in 1830, the group launched itself into aggregate blocks some 66 years ago and has, says company secretary and financial director Paul Armstrong, been investing heavily in increasing its capacity since the recession eased its grip in 2012. It is planning a further £10m investment in 2017.

In recent months, the group's Stocks Bros subsidiary has launched a new £15m factory at Cross Green in Leeds where it now operates 15-hour days to meet demand. The factory is pressing more than 130,000 blocks a day – enough to build

60 to 70 average size homes Overall, the group supplies sufficient for up to 200 homes per day.

"We have seen good demand since the world returned to normal in 2013-14," says Paul. "The house builders are out there and we are doing all we can to satisfy demand. The problem lies in the need for more affordable housing but the solution to that is down to Government policy and not to product manufacturers."

He adds: "If people want to invest £300,000 or £400,000 in a property they are going to be more receptive to buying a traditional brick and block home rather than a prefab."

Paul sees sustainability as one of the block industry's big advantages. His company aims to lead the way and plans to further strengthen its own case through the increasing use of carbon-neutral aggregate made from household incinerator ash waste. "We think that will stand up well against timber frame or any other type of construction," he says.



created Homes England.

One benchmark for quality should surely be that homeowners and occupiers of the future are able to be assured that their homes provide high quality, healthy, comfortable and affordable accommodation in a quality environment capable of adaptation.

The Modern Masonry Alliance welcomes the White Paper's ambition of delivering more housing and supports the analysis, relationship to planning and the encouragement of new entrants to the market. Its concern is that existing solutions are ignored, as is the need for resilient housing that can withstand flood, fire and overheating while lasting well into the next century.

Companies investing heavily in block production include Tarmac which has boosted its output of aerated blocks by reopening the second of its two existing Durox factories at Linford in Essex. Due to start production later this year, the factory is being upgraded as a key element of Tarmac's nationwide block supply capabilities.

Bevan Browne of Tarmac Building Products sees strong potential. "It represents exciting news for our business, and will ensure that we are well placed to continue to meet customer demand for our high quality block products and support the delivery of UK future housing targets," he says.

Andrew Minson of the Modern Masonry Alliance points out that the needed increase in block manufacturing is already in hand. The situation will be further aided by the measures proposed in the Housing White paper designed to encourage small and medium-sized contractors back into house building. The size of projects undertaken as a result is most likely to favour flexible off-the-shelf masonry solutions.

"Offsite construction has hitherto been limited in its application," he adds. "It needs high throughputs and significant repetition to be cost-effective. It also requires long term certainty to attract investors for the appropriate investment in essential research, production facilities and trained operatives. Whilst it will have a role to play in housing, masonry was and will always remain the main solution."



THE Government's housing ambitions depend upon planning permissions not just for construction sites but for the raw materials from which they will be built.

MPA's comments on the Housing White Paper therefore include a stark warning that if the "dislocation" between minerals strategy and housing/infrastructure provision continues, delivery of key policies could be prejudiced by supply interruptions.

"This is a consistent concern that the MPA has identified in other recent consultations," says the association's submission. "The unwritten assumption appears to be that if you create the demand for construction materials this demand will just be met."

The submission acknowledges that the UK has a rich resource of indigenous construction minerals. But in order for them to be realised, MPA says both the industry and the mineral planning system need clarity over the scale of demand so that investment can be made to provide for them beyond base levels in the market. Forward planning is needed to ensure that the most cost-effective and sustainable solutions can be put in place.

"The unwritten assumption appears to be that if you create the demand for construction materials this demand will be met."

MPA points out that the concept appears to be in place in the Government's approach to steel, where a practical guide has been published on how the public sector can design major infrastructure and construction projects to ensure best value for money by recognising relevant wider social and environmental benefits.

"It is argued that a similar approach should be put in place in respect of the supply of minerals to the housing and construction sector," says the MPA submission.

The submission stresses that mineral product resources are not evenly distributed around the country and that much inter-regional trade movement already occurs to meet the base demand. It is consequently likely that many areas of primary mineral supply will be required to support the demands from increased housing and infrastructure construction.

"Housing construction, and other construction projects, must be aligned with the mineral planning system to ensure a steady and adequate supply of construction minerals," says the submission.



Perfect storm

Vulnerable road users on all sides

While deaths on Britain's roads have been reducing in recent years, those involving pedestrians, cyclists and other vulnerable road users have been on the increase. Experts describe it as a 'perfect storm', the ingredients of which are growing populations, more people walking and cycling, and increased construction activity. Put it all together and you have potential for conflict, injuries and deaths.

IT'S not what you expect to see at a safety training session: lorry drivers under personal instruction from their managing director before going out onto the streets of London on bikes. Swapping seats is, however, one technique followed by O'Donovan Waste Disposal to tackle one of the big issues of our time.

The fact that Safe Urban Driving Courses (SUD) of this advanced type are now common amongst MPA members of all sizes is a measure of the extent of the industry's determination to be proactive. It's happening not just in London but right across the UK, and it's compulsory for operators who aspire to the coveted gold standard set by the Fleet Operator Recognition Scheme (FORS).

It's a crisis in which construction-related vehicles are disproportionately represented in fatalities involving vulnerable road users

and HGVs. In London, latest figures show that 20% of pedestrian fatalities and 78% of cyclist fatalities involved an HGV. This comes despite the fact that they make up only 4% of the road miles driven.

Provisional data for 2016 shows that 13 pedestrians and four cyclists were killed by HGVs in London. Across England and Wales as a whole, 477 vulnerable road users were killed or seriously injured in accidents involving HGVs between 2013

and 2015. Some 40% were pedestrians, 35% motorcyclists and 25% cyclists.

MPA's Cycle Safe campaign was launched five years ago. The association is now an active supporter of the Construction Logistics and Community Safety (CLOCS) initiative through which its members and the wider construction industry are working to improve vulnerable road user safety. There is no slacking off in momentum with an intensive further campaign planned for

The CLOCS standard

- Improving the safety of vehicles
- Addressing imbalance between site health & safety and work-related road safety
- Encouraging wider adoption of best practice across the logistics industry.



2017 to reinforce the message, and support via a Transport for London (TfL) grant to help delivery of benefits of CLOCS throughout the UK. New MPA resources will include an app for drivers.

MPA's involvement is being led by executive director Jerry McLaughlin. "It is becoming increasingly common for contractors and clients to require suppliers to be CLOCS compliant," he says. "A key benefit is that it is now an established standard which can be implemented consistently across the UK so that there is a common national approach to improving vulnerable road user safety. As awareness increases it is likely that local authorities will include compliance with CLOCS as a planning requirement.

"Ultimately the CLOCS initiative will only achieve its full potential road safety benefits if everyone associated with the mineral products and construction industries plays their part."

Active supporter

O'Donovan Waste Disposal, which includes recycled aggregates amongst its activities, is an active supporter of both the CLOCS initiative and the allied fleet management-orientated FORS scheme which together aim to revolutionise work-related road risk.

O'Donovan MD Jacqueline O'Donovan is passionate about the cause. "As a family business, ultimately we want to be able to lay our heads on the pillow at night and feel we have done what we can on safety," she says. "Site safety has come on in leaps and bounds over the years but road safety has been left behind. Clients have

tended to think their responsibility for safety ended at the gates of their sites but it had to be addressed."

Frustrated by external trainers who she felt didn't engage with her drivers, Jacqueline took on the role herself and underwent TfL training to give her the expertise to run courses including the SUD course.

"The course puts drivers on bicycles for half-a-day to pre-empt what a cyclist may do," she says. "It's only when they sit in the saddle that they understand that if a cyclist sees a pothole in front of them, they may swerve into a lorry driver's path. The drivers have responded really well and they have also welcomed the recognition the course gives them as professionals with a challenging job to do.

"Drivers feel the finger has been pointed at them by the media coverage of deaths involving cyclists and they want to prove that as a group they are not to blame and are doing all they can."

At CEMEX UK, 700 drivers have completed SUD courses, which it piloted in 2014. Some drivers are about to do a compulsory three-year refresher.

Day Aggregates, which handles up to five million tonnes of aggregates a year in London and across southern and western England, is another MPA member with a

strong commitment to both CLOCS and FORS. It was one of the first to sign up to FORS and is accredited to its gold standard.

Transport and distribution director Dominic Day particularly welcomes the CLOCS focus on encouraging construction site operators to ensure that they can safely



Jacqueline O'Donovan gets involved in a training session

accommodate the latest road-going delivery vehicles which in turn carry sophisticated vulnerable road user detection and warning equipment. Considerate Constructors Scheme compliant sites can also help to manage traffic that may otherwise pass schools and hospitals at key times. While applauding the CLOCS ideas, Dominic says it now needs to be policed to ensure true effectiveness.

"Compliance with FORS and CLOCS has to be at the heart of every decision you make," he insists. "If you properly embrace it then it becomes embedded in your company culture."

Driver appraisals

Day Aggregates takes the need for driver training particularly seriously and has recruited a team of RoSPA-accredited driving instructors whose job is to undertake driver appraisals. The company has recently put 170 drivers and 15 others (including Dominic) through a Driver Certificate of Professional Competence qualifying course.

MPA's commitment is praised by CLOCS project director Derek Rees. "The importance of MPA as representative organisation for the largest element of the construction supply chain is huge," he says. "Its commitment to health and safety is to be commended, in particular the recognition that vulnerable road user safety has not yet achieved the same levels of commitment as employee or contractor safety.

MPA members are strongly represented amongst the current 425 CLOCS champions. Key to each champion's effort is a commitment to ensure the whole of its supply chain manages its sites and projects in a way that enables the safest delivery.





Foundation for the future

Photo: Images of Birmingham

MINERAL products may be one of Britain's longest-standing industries but it is also a foundation on which others build their own strengths, and an enabler that can help post-Brexit Britain to secure its position in the world economy.

The sentiment comes in MPA's response to a Government Green Paper that aims to put in place a new industrial strategy to address the challenges that currently stand in the way of the nation's economic growth.

As Prime Minister Theresa May says in the consultation document: "Active government will build on Britain's strategic strengths and tackle our underlying weaknesses, like low productivity. This is vital because if we want to increase our overall prosperity, if we want more people to share in that prosperity, if we want higher real wages, and if we want young people to get on – we have to raise our productivity."

In its submission, MPA highlights the fact that, while the industry it represents is often undervalued, its productivity is in fact outstanding. The last available figures show that each worker produces around £82,000 – 1.6 times the national average. That level of contribution comes despite the fact that its employment is often in rural areas where the disparity

between local earnings and the national average is likely to be greater.

MPA says that the present industrial framework in Britain is deficient and too heavily reliant on the finance and service sectors. Its own particular needs for the future involve changes across each of the ten "pillars" set out by the Government for its new strategy:

Science, research and innovation – while mineral products has a history of providing innovative solutions and materials, Government support is often focused in other sectors. MPA wants a 'Mineral Sector Deal' to invigorate R&D and innovation, especially related to increased automation.

Developing skills – though the industry has raised skill levels, more can be done to improve STEM skills that advanced mineral production relies upon, especially in rural areas.

Upgrading infrastructure – mineral products has a huge role to play but MPA believes that the different sectors (eg housing,

transport, water, floods defences) need to be analysed and treated separately with individual suggestions for long term growth.

Supporting businesses to start and grow

– mineral products provide the chemical and physical building blocks for others but a broad industrial mix is needed to identify opportunities for industrial symbiosis. MPA asks that the new strategy effectively values and measures the contribution of sectors by forecasting growth for each region.

Improving procurement

– MPA says the Government needs to adopt a 'UK first' policy in which UK produced goods are first choice for public projects. It also believes that performance benefits such as durability, fire resistance and through-life energy efficiency are key components of procurement guidelines.

Encouraging trade and inward investment

– the association calls on the Government to address the increasing trend of imported mineral product consumption which it says is undermining future investment in some strategic British production assets.

Delivering affordable energy and clean growth

– UK electricity is amongst the most expensive in Europe and worldwide. When not constrained by EU state aid restrictions, MPA would like to see cement and lime placed on a comparable basis with other energy intensive industries such as steel.

Cultivating world-leading sectors

– MPA suggests the new industrial strategy should be neutral and avoid trying to 'pick winners'. In doing so, it should create the right conditions to support investment and growth by businesses of all types.

Driving growth across the whole country

– the geography of the mineral products industry is nationwide, and MPA would like potential to be analysed by both regions and industrial sectors.

Creating the right institutions to bring together sectors and bodies

– MPA suggests that Government should focus the taking forward of the strategy on trade associations that represent 75% or more of the sectors covered. Representing some 90% of its own sector, MPA is ready and willing to participate.

Essential to ... life

Each year, 360 million tonnes of mineral products are made in the UK – more than any other material flow. Around half go to public sector projects for social housing, schools, hospitals, roads and railways. The remainder goes to the private sector for housing, commercial, industrial and leisure development. Mineral products are also essential as the source for hundreds of everyday items – from paper and plastics to food and medicine.



Essential to ... jobs and the economy

There are more than 100 companies making mineral products in the UK – from multi-nationals to small independents – operating well over 2,000 sites and employing 78,000 people, many in rural areas. Combined, they generate over £6 billion in GVA (Gross Value Added) into the economy. Industries supplied have turnover of nearly £500 billion with 3.4 million jobs supported through the supply chain.



Essential to ... sustainability and energy efficiency

Making efficient use of available resources is well-established in the UK mineral products industry. More than 25% of all construction aggregates is from recycled sources – three times the European average. UK cement operators have led the world in finding alternative waste-derived fuels which deliver the same performance yet have lower carbon emissions. Concrete has unrivalled thermal mass properties which easily offset carbon emissions during manufacture.



Essential to ... environment and biodiversity

Few industries can have such a profoundly positive impact through both their products and the legacy of their operations. More than 5,000 hectares of priority habitats, many open for the public to enjoy, have been created through restoration of quarries. A further 6,000 hectares of priority habitat is already in the pipeline for the years ahead. This is among the biggest contributions to biodiversity targets of any UK industry.





WET, WET, WET

ANYONE who has lived through the agonies of a flooded home will tell you that the pain lasts for a very long time. With the experts all predicting that climate change will make floods a regular feature of life in the UK, many more of us can expect to suffer in the years ahead.

But what if it were possible for a flooded home to be a much shorter-term event? What if a home that previously took many months to dry out and be made good could simply be washed out and disinfected rather than the fabric having to be replaced wholesale?

The good news is that, with MPA The Concrete Centre (TCC) very much involved, the UK is taking steps to making flood resilience standard practice within five years. The initiative is led by Defra and the Environment Agency who have already published a Property Flood Resilience Action Plan that has agreed a raft of measures that can help prevent water ingress or aid rapid recovery.

TCC's involvement has ensured that a review group made up of experts such as mortgage lenders and insurers from a range of other disciplines are aware what mineral products have to offer. TCC is also working on its own 'Resilient Housing' guidance and the subject is a prime one at roadshows and in webinars and is communicated by TCC experts acting on behalf of the Modern Masonry Alliance.

So what does the industry have to offer to the new generation of resilient homes? Concrete/masonry construction solutions that provide flood resistance without significant changes to current practice, as well as thermal mass energy benefits and fire resistance.

Elsewhere, the industry has a major role to play in reducing the risk of flooding in the first instance with:

- A range of solutions for improving sea and river flood defences
- Permeable pavement external hard standing to soak up floods
- Durable attenuation systems for storm drainage

The benefits are in contrast to timber framed homes, where the structure is at risk of rotting or warping following a flood incident. The worst floods in recent memory were those that ran from Christmas 2015 through into

early 2016. The Association of British Insurers estimated the total pay-out at £1.3 billion, with the average settlement running at £50,000. Much of that was for the 3,000 families who needed alternative accommodation.

TCC senior architect Elaine Toogood believes that concrete and masonry structures have much to offer the flood resilient home of the future. "Concrete and masonry have the strength to keep water at bay," she says. "It can be designed to resist very high loads, and is robust enough to withstand impact from debris. It's also easier to wash and disinfect, which reduces costs and disruption, particularly for short-duration floods."

She points out that reinforced concrete or concrete blocks can be employed as a solid-wall solution or as both leaves of a cavity-wall construction. TCC, through MMA, is developing guidance details to help designers and builders ensure the inherent flood resilience of masonry construction is delivered on site.

"Concrete and masonry have the strength to keep water at bay"

All-round progress

THE mineral products industry's sustainability drive continues its impetus with significant achievements being recorded in each of the main product areas in which it operates.

With 480 companies now making up its still growing membership, MPA has an ever stronger story to tell on sustainable development via the individual reports recently produced for cement, concrete, lime and marine aggregates.

Its overall summary does, however, acknowledge one key area in which there has been a reverse with an increase in the overall lost time injury frequency rate from 3.25 to 3.79. The figures from 2015 also show five fatalities.

Positive achievements include:

- Recycled and secondary aggregates achieved a 28% share of the GB market
- Average delivery distances for aggregates increased to 35 miles, asphalt to 27 miles, ready-mixed concrete seven miles
- 469ha of land restored to priority habitat, 2,748ha planned for the future
- All cement sites and 92% quarries have certified environmental management systems.

Cement

MPA Cement reports domestic production increasing to 9.2 million tonnes in 2015, with evidence that sales in the south east are growing faster than the rest of the UK.

Its sustainable development report focuses on the industry's contribution to environment and the economy using the 'circular economy' as its theme. It uses graphics to show how cement manufacturing: recycles mineral and metal content as well as recovering energy from fuels; takes wastes at the end of their valuable life adds value via a quality product; and is mainly used in durable and 100% recyclable concrete products.

On the environmental sustainability front, the report shows big reductions in non-CO₂ emissions compared with 1998 – dust by 82%;

oxides of nitrogen by 69%; and sulphur dioxide by 88%.

Concrete

Data shows many indicators now close to targets for 2020. Those for emissions and community liaison have been achieved, while others such as responsible sourcing and environmental management systems are ahead of schedule. Good progress has been made on biodiversity, quality management systems and reducing waste. More progress is needed on health & safety and is being treated with urgency.

The next step is to carry out a significant review of strategy and set new milestones beyond 2020.

Lime

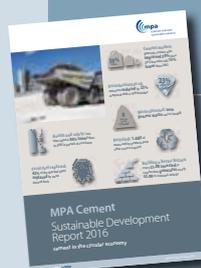
The lime industry has been seriously affected by the downturn and closure of some steel operations with 2016 sales of 1.2 million tonnes some 20% below pre-recession levels. The sector has urged Government to ensure that the UK remains an attractive place for investment so that both the steel and construction sectors regain momentum.

Lime producers have nonetheless made significant technical improvements to their processes and are seeking out innovative products and markets in areas such as water and effluent treatment, soil stabilisation and use of hydraulic lime in road binders.

Marine aggregates

The British Marine Aggregate Producers Association (BMAPA) reports growing demand, with overall production increasing by 13% in London and the south east. There was also a marked increase in demand for beach nourishment and contract fill projects.

It comes at a time when the sector is playing a growing role in the overall market, with more than 10% of all primary aggregates in England and Wales now coming from marine sources. The industry satisfies 25% of sand and gravel



CEMENT

Domestic sales improved 30% since 2012

CO₂ emissions reduced by 23% (compared with 1998 baseline)

1.6Mt of waste and by-products from other sectors recycled

42% of thermal input replaced by waste-derived fuels.



CONCRETE

93% of sites covered by an ISO 14001 environmental management system

29% of total cementitious materials used were additional cementitious materials

6.4% of aggregates used in concrete were from recycled or secondary sources

99 times more recovered and waste materials consumed than waste sent to landfill.



LIME

79% reduction in SO₂ emissions for high calcium lime production

76% reduction in SO₂ emissions for dolomite production

30% reduction in total waste for lime disposed landfill

64% reduction in NOx emissions for high calcium lime production.



BMAPA

19.48mt dredged in 2015 – up 12.9%

Over 4mt delivered to support beach nourishment and fill projects

Reduction of 28% in landings to near Continent

Area licensed for dredging up by 28.4%
Area actually dredged reduced by 3.5%.

needs in England and 49% of the equivalent needs in Wales.

A major contributor to *Crossrail*, the industry is well placed to support elements of HS2 and to play a key role in the development of tidal lagoons for large scale renewable energy generation.

PRODUCTS

New affiliate

THE British Calcium Carbonates Federation (BCCF) is joining MPA as affiliate members. Representing the interests of nine producers of chalk, limestone, marble, dolomite and precipitated calcium carbonate, the BCCF agenda aligns closely with MPA's industrial mineral product groups, including cement, lime and silica sand.

Nick Horsley, the MPA director responsible for industrial minerals will be coordinating cross-product group dialogue to raise the profile of BCCF members' products while strengthening alignment on common issues.



Calcium carbonates help keep our fields fertile

Calcium carbonates are hugely versatile and feature in products ranging from fertilizers to food and from paints to pharmaceuticals.

BCCF chairman Mick Stovin of Francis Flower said: "I am delighted that this important development is happening and am confident that future working with MPA will ensure that important industrial minerals – particularly calcium carbonate and lime – can cooperate more effectively on policy issues of common interest."

MPA chief executive officer, Nigel Jackson said: "Industrial minerals are an essential

constituent of the mineral products family. Facilitating the exchange of ideas and identification of common issues must only serve the interests of each product group better. We anticipate further growth and development in this area of our work."

BIODIVERSITY

Rare flies make quarry a home

A PROJECT analysing the DNA of insects has revealed two rare and two scarce species of fly at CEMEX UK's Rugeley quarry site at Cannock Chase in Staffordshire.

The company is working with the RSPB to restore lowland heathland at the site. In what is believed to be the first project of its kind in the UK, it worked with the Biodiversity Institute of Ontario (BIO) and SAP (System Applications Products) to capture insects using special nets. By comparing the DNA sequences of the insects to BIO's database of over 5.5 million species, an accurate map was created for the collection site.

The results revealed the presence of two nationally rare flies, *Eurthyneura albipennis* and *Platypalpus pulicarius*, both species only recorded on three UK sites, plus two nationally scarce species *Meromyza*

mosquensis and *Rhaphium micans*.

"Both this ground-breaking technology and the results are of tremendous importance and it has been fascinating to find such rare species present at Rugeley," says CEMEX UK's director of sustainability, Andy Spencer. "The DNA analysis of insects could offer the next generation of solutions in managing and conserving the biodiversity around our 400 operational sites."



CAMPAIGN

Committing to health & safety



LEADERS across the mineral products industry have reaffirmed their commitment to achieving "Zero Harm" in the workplace.

The mass signing of a pledge document came at the MPA Health & Safety Conference and Awards which also saw the launch of a new 'Safer & healthier by leadership' initiative. Chief executive Nigel Jackson told the 285 delegates who attended that the combined effort of members across 12 product groups represented "the most powerful opportunity to deliver change on the ground ... and the most powerful factor in that process is leadership."

Hosted by BBC Presenter Sybil Ruscoe, the keynote conference speakers were Jesus Ortiz, UEPG president; Phillip White, head of the HSE's operational strategy division; Lawrence Waterman OBE, director of health & safety at Battersea Power Station and Nicky Moffat CBE, formerly Britain's highest ranking female Army officer and an expert in leadership roles.

Awards were presented by Martin Whitmarsh, former CEO of McLaren F1 Racing now CEO of the Land Rover BAR America's Cup team. The coveted John Crabbe Memorial Trophy for outstanding excellence in health and safety, went to Lhoist UK while the Hills Group was announced as the winner of the Sir Frank Davies Trophy for companies with less than 1,000 employees.

PROJECTS

Keeping it in the family

THE Shropshire-based Tudor Griffiths Group is supporting a major scheme on one of the biggest dams ever built in Britain – over 50 years after it first won a contract for the project.

The company first supplied sand and gravel to the Clywedog Dam when it was built in 1964 to eliminate flooding in the upper Severn valley while supplying water over a wide area of England and Wales and generating electricity. Now, the family-owned business has once again been called upon to supply its products as part of a scheme to install a new 100-kilowatt hydro-electric system in the lower basin of the dam.

Managing director, Tudor Griffiths says: "It's a great feeling to be working on the dam so many years after my grandfather first won the initial contract. When the dam was built, it really was an incredible feat of engineering, and to ensure we could supply sufficient amounts of sand and gravel, my grandfather hired every available tipper within a 30-mile radius of Ellesmere."



VOLUNTEERS

Peak partners

TARMAC is committing £20,000 each year for the next five years and is directly providing the money and volunteer hours needed to care for and protect the special landscape of the Peak District National Park.

INVESTMENT

A concrete move

THE Kent-based Gallagher Group has opened a new £1.5m ready-mixed concrete plant in Ashford, able to produce a full range of mixes and floor screeds for the surrounding area.

The investment marks phase two of the redevelopment of a former factory site. The new plant, which was built to a bespoke Gallagher specification, can produce 100m³ of concrete per hour through a single pan



mixer with two loading points. With three 80-tonne silos, the plant has the capacity to produce large pours in excess of 200m³. Most of the aggregates will come from the company's Hermitage Quarry near Maidstone.

As well as ready-mix concrete, the new facility will supply flowing screed and bagged aggregates and will be a transfer station for demolition material to be returned to Gallagher's site in Maidstone for recycling.

Gallagher Group chief executive Nick Yandle said: "This marks an important phase in the evolution of our aggregates business and shows our commitment to serving the housebuilding and development community of Ashford and the surrounding area."

ENVIRONMENT

Up on the roof

MATERIAL from the floor of a dormant Hanson quarry in Northumberland has been used to help create a natural roof for The Sill – Northumberland National Park Authority's flagship £14.8 million Landscape Discovery Centre and a new YHA youth hostel, due to open this summer.

The building has been designed to reflect the distinctive Northumbrian landscape. The roof aims to replicate the unique natural grasslands of the surrounding area and will be accessible to visitors, giving them a view of the landscape and the UNESCO World Heritage Site of Hadrian's Wall.



The free-draining soil from the Swinburne quarry floor was found to have the right characteristics to support indigenous grasses and wildflowers. Pine bark was added to the quarry soil and blended with whin chippings – also provided by Hanson from its nearby Keepersfield quarry – before being spread on the roof. The first phase of seeding and planting was carried out in April with a second phase planned for September.

Employees will help the new volunteer projects assistant one day each month for the duration of the partnership.

Sarah Fowler, chief executive of the Peak District National Park, said of the commitment: "We are absolutely delighted to be working alongside Tarmac to help look after this wonderful place. It's a great

example of a business determined to invest back into its local communities."

To launch the partnership, employees from Tarmac's Tunstead Quarry, near Buxton, are helping to repair a section of dry-stone wall. The company has set a national target to deliver 50,000 volunteer hours per year by 2020.

Science informs gravel debate

KINGMERE sits high in the league table of fragile underwater environments around Britain's coastline. Situated between five and ten kilometres off Littlehampton in West Sussex, its particular type of rocky habitats and sub-tidal chalk reef systems make it a favoured spawning ground for black seabream, which migrate there in spring.

Such is the significance of Kingmere that it is one of a still relatively new group of Marine Conservation Zones (MCZs) designated by Defra in 2013. It covers an area of 47km² – about twice the size of the City Of London. Within it lie two top ranking marine conservation features for which the MCZ provides statutory protection.

But Kingmere also contains an important potential source of aggregate, and the designation raised a crucial question over its future. Marine sand and gravel is a resource that satisfies 35% of the total construction aggregate needs of south east England. With land-based reserves now diminishing, the industry has an increasingly vital role to play.

The good news for the industry is that the Marine Management Organisation (MMO) has now decided that the two needs can be compatible and aggregate extraction can

take place alongside the neighbouring black seabream.

The decision means that Tarmac Marine and CEMEX UK Marine can extract a total of 6.75 million tonnes over 15 years. It is a milestone for a sector that long ago recognised the need to support rather than contest the emerging legislation that now protects the marine environment. But it didn't just put its voice behind the cause, it went so far as to invest heavily in obtaining the high resolution scientific data needed to define the most sensitive habitats.

Sharing knowledge

It then went further still by sharing that hugely important bank of knowledge with the Sussex Inshore Fisheries and Conservation Authority, Natural England, regulators, academics and other marine industries.

Mark Russell, executive director of the British Marine Aggregate Producers Association, has been closely involved. "Marine protected areas, including MCZs, do not necessarily mean blanket exclusion for aggregate extraction, but the decisions on any activities proposed to take place within them need to be informed by a proper scientific understanding of the marine



Kingmere is five to ten kilometres off Littlehampton

Photo: Shutterstock

features being protected and the potential impacts on them," he says.

"Our industry has, therefore, provided new evidence that otherwise would not have been available. Not only has this ensured that informed decisions can be made, but it also significantly improves the definition of the features that are being protected."

In the case of Kingmere and the permissions now granted, that meant demonstrating that aggregate extraction would not significantly impact the features designated at the site. CEMEX UK Marine and Tarmac Marine will continue to collect scientific data to contribute to management of the MCZ.

Dr Andrew Bellamy, resources manager for Tarmac Marine, said: "With the new licences, we can maintain marine aggregate supply into the south east for decades to come without having any significant effect on the fish spawning grounds in the MCZ. With CEMEX UK Marine, we have volunteered not to dredge during the spawning period as an additional safeguard."