

quarrying
today

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Cover photo:
Trowbarrow – an award-winning quarry with a 340 million-year-old story to tell (see page 5)



Pumping is needed to allow many sites to be worked dry

Water bill **threat**

PLANS to impose water abstraction licences on quarries could have serious financial implications for the industry and threaten its capacity to maintain aggregate supplies across the UK.

The stricter regime for quarry de-watering, which has previously been exempted, emerges from a new bill targeted at major consumers of water. The licence time limit currently suggested is 12 years.

Operation of many quarries is dependent upon the need to pump out water in order to work them dry. Rock quarries cannot be worked underwater and for many sand and gravel pits, dry extraction is more efficient.

But while the industry does handle large volumes of water, it does not consume it because it is rapidly discharged again in the same condition, either into the original aquifer or into an adjoining watercourse. The aquifer recharge schemes employed are often highly sophisticated in order to ensure that the effects of de-watering the same water body are minimised or eliminated.

Two of the largest limestone quarries in the country – Hanson's Whatley quarry and Foster Yeoman's Torr quarry, both in Somerset – employ such schemes. Both are strategically important in supplying stone by rail to the south-east. QPA director general Simon van der Byl believes the threat to such quarries is

a significant one. "Quarries depend upon long-term planning permissions that may last 30 or 40 years and investment is made accordingly," he says. "But if this bill becomes law in its current form, the right to abstract water could be terminated after just 12 years, which would make it impossible to operate.

"While we are prepared to accept the loss of exemptions, we must have safeguards. In particular, 12-year licences would be inadequate – the length should match that of the planning permission."

The industry also believes it is essential that there should be a right of appeal and provision for compensation where licences are curtailed or their provisions made more stringent.

Given that abstracted water is quickly discharged again, the industry also believes that it should not be subjected to charges based on volume.

"If a proper regulatory impact assessment had been carried out, it would have identified the very serious financial consequences of the threat to limestone quarries in particular," says Simon van der Byl. "The implications for other types of quarries and for the landfill industry are also considerable."

"There have been some encouraging signs from ministers. We now need to translate that into action."



Streamlining plans slow the business

Building a new plant takes time

THE Quarry Products Association has mounted a campaign to persuade the government to make an about-turn on crucial new planning legislation.

Its concern is focused on the Planning and Compulsory Purchase Bill which, as this issue went to press, was awaiting its third reading in the House of Commons before passing on to the House of Lords. The Bill has already faced a barrage of amendments during its first two readings but the government has so far given way on only one point.

Of major concern to the industry is the proposal that the time limit within which planning permissions have to be implemented should be reduced from five years to three years.

"For the great majority of permissions for new mineral sites it would be nearly impossible to get your first load of material out of the gate

within three years," says QPA planning officer Duncan Pollock.

"The award of planning permission is only the beginning. You still have to negotiate a number of reserved matters with the planning authority and that can take a long time. You may also have to agree access with the land owner, and you may then have to build new plant."

The industry is also contesting the suggestion that local authorities should be allowed unlimited scope to levy fees for planning work.

While accepting that – in addition to application fees – it may be reasonable to charge for specialised monitoring and enforcement work by mineral planning officers, operators do not see any justification to make them pay for routine pre-application meetings, for example.

"Our members already pay business rates which should cover that type of activity," says Duncan Pollock. "The correct solution, as the Quarry Products Association sees it, is for local authorities to be properly funded rather than impose an additional tax."

He added: "The irony is that the Bill is intended to streamline and simplify the planning system. In our view, it will make it more complicated and slower."

The Bill is expected to be given detailed consideration in the House of Lords during the summer, with royal assent predicted in the autumn. Implementation is planned by spring 2004.

The association is contacting ministers and House of Lords to seek support in pressing amendments as the Bill progresses through the upper house.



Conservation through quarrying

Keith Duff is science director with English Nature and is leading its newly launched geodiversity initiative with the Quarry Products Association and the Silica and Moulding Sands Association.

FEW, if any, industries have delivered more in terms of contribution towards the UK's biodiversity targets over recent years than quarrying. No-one should under-estimate what is being achieved where it matters most – on the ground.

I am, therefore, excited that the partnership we established through the Minerals and Nature Conservation Forum now has a further focus through a campaign to conserve our geodiversity.

You might think that, unlike biodiversity, the UK's geological heritage doesn't need a lot of conserving. The reality is that, while rocks are all around us, the only place that many of us see them is at the coast, and that is why inland quarries are so important because they too afford important opportunities to study and enjoy geology.

Some 2,300 sites in Britain have, since 1949, been designated as Sites of Special Scientific Interest on account of their geological interest – and no fewer than 500 of them were exposed by quarrying.

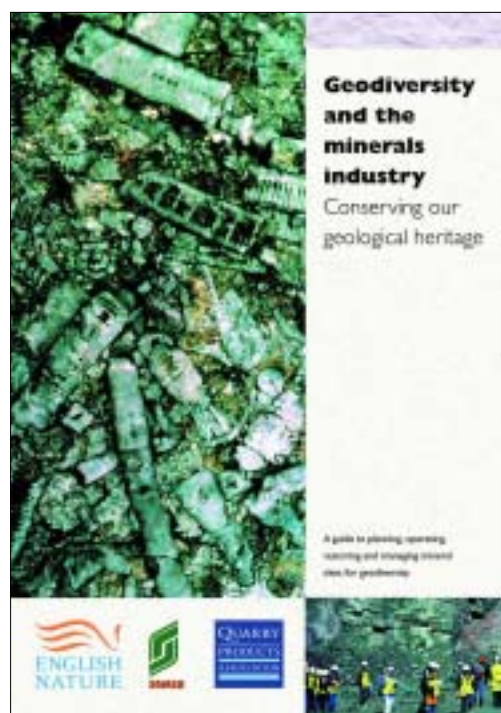
Understanding rocks is, however, not just about enjoyment. By revealing the story of our past, it also helps scientists to predict and prepare for the future. Studying rocks is also at the heart of training programmes for the geologists of tomorrow who will help satisfy our future needs for raw materials.

The new initiative between English Nature, QPA and SAMSA is based on a publication which sets out to do three things: to explain why geological conservation is important; to deal with the legal ramifications; and, most importantly, to provide guidance on what to do and how to do it. In particular, how to design restoration work in a way that benefits geodiversity.

What we want individual operators to do is to look at the circumstances of their own sites and, having considered any health and safety implications, determine what prospects there may be for active geological conservation.

While closed quarries are likely to offer a greater range of opportunities, I know of operational sites where viewing platforms and mineral collection areas have been established, and where open days are held. If real costs are involved, then grant support could well be available.

Geological diversity is another important step forward in our highly positive partnership with the industry. In my view, this represents a huge opportunity through which the industry can create better understanding of its work, and leave something of real benefit to future generations.



The new "Geodiversity and the minerals industry" guide can be viewed and downloaded from www.qpa.org/natureconservation/geod.htm

Rock of ages

Rock climbers love its unique range of challenging ascents – many of them named after David Bowie songs. And nature sings its own approval of a Lancashire quarry that has recolonised to provide a fascinating array of habitats.



HIDDEN in countryside just outside Carnforth, Trowbarrow is a beautifully regenerated quarry. But it also has less obvious attractions because, through its rocks, you can track a story that stretches back 340 million years. (To put that into perspective, you need to appreciate that dinosaurs became extinct just 65 million years ago.)

Credit for revealing its fascinating history must go to generations of quarrymen who worked it almost entirely by hand over a 100-year period up to the 1950s. Now owned by Lancaster City Council and opened for public enjoyment, the site won a restoration award for Tarmac and the council several years ago.

To fully understand the significance of Trowbarrow's geodiversity you need the interpretive skills of someone like Ian Henderson of the Arnside and Silverdale Area of Outstanding Nature Beauty Service. It was climbing that first attracted Ian to the site. He loved it so much that he was instrumental in bringing together the funding

and enthusiasm that brought it into public ownership. "Most of us have difficulty in getting our heads around the fact that continents have moved enormous distances over history," he says. "Through its geology, you can track Trowbarrow back 340 million years when it was part of a warm shallow sea somewhere south of the equator.

"At the end of the carboniferous period rocks that had been formed horizontally as part of the seabed were squeezed and folded so that they became upright.

"If you look at the main quarry face you can see fossilised colonial corals – wheel-shaped and trace fossils of burrows left by creatures which burrowed through the muds on the seabed. Trowbarrow is one of the few places in the world where you can see what is known as 'paleokarst', which is a fossil-based limestone pavement similar to the more modern limestone pavements found elsewhere in the area.

"Another fascinating feature of our geology trail is an area in which the smooth and

reddened rock face has a number of depressions and fissures. This is a fossil land surface on which fairly large trees grew in a soil cover which has been removed."

He adds: "Trowbarrow is a wonderful place to bring schools because it's one of those rare places where they can actually see how rock was made and understand how the world we now live in evolved."

On the biodiversity front, Trowbarrow boasts a rich patchwork of wildlife habitats, including many plants and animals that have few refuges left in ever-more intensively farmed countryside.

The developing grassland of the quarry floor is particularly interesting – its lime-rich spoil has been colonized by many species, including some rare orchids.

Meanwhile, climbers have nearly 100 highly varied climbs including "Jean Jeanie" which is classed as very severe and "Aladdinsane" (extremely severe). More information on Trowbarrow is available from the Arnside and Silverdale AONB Service tel: 01524 761034.



Peter Sissons interviews Simon van der Byl

Projecting the **issues**

Quarry Showcase has become the shop window for the UK quarrying industry – an event through which key audiences gain a better insight into its main issues of the moment and the standards of its environmental performance.

A GRILLING for QPA director general Simon van der Byl by the BBC's Peter Sissons was one of the highlights of a 2003 Quarry Showcase which focused in turn on a series of front-line challenges.

None is more important to the association's members than **health and safety** as they chase the Health and Safety Commission's *Hard Target* of cutting accident rates by half between 2000 and 2005. The good news,

time when the industry, driven from the top, was already making its own moves. It was proud to have been the first industry to sign up to the challenge.

"We are an industry which relies upon heavy machinery, much of which is mobile, and the slightest slip can lead to an accident," he said.

"But that is not acceptable and we have now made health and safety our absolute top priority.

Peter Sissons switched his focus to legislation and to the association's campaign on the **European Working Time Directive** which it has estimated will cost its members some £300 million. Was the industry, he asked, opposed to the 48-hour week.

"We are not opposed to the concept because we accept its social and safety values," stressed Simon van der Byl. "Our problem is that we rely very heavily on drivers whose

health and safety – "we are ahead of schedule but we are not complacent"

which Simon van der Byl was able to reveal at the half-way point in the campaign, was that latest statistics show that a 37 percent reduction has already been achieved.

He acknowledged that the industry's historic accident rate, in common with other construction-related sectors, was not a particularly good one. The launch of the HSC's cross-industry *Hard Target* initiative came at a

"We are making ground by placing increasing emphasis on training and awareness, and by sharing not just best practice but information about near-misses so that we can learn from each other's mistakes.

He stressed: "We are ahead of schedule in terms of the targeted reduction but we are not complacent. The easier part is probably behind us and we know there is more to do."

working hours often include substantial waiting time and that will now be covered by the provisions of the directive. We are, therefore, going to have to open a new box of drivers that doesn't currently exist." The major task for the association was, he said, one of education for members and also for customers who needed to understand the added costs passing to them and the requirement to minimise waiting time.



QPA chairman, Lord Stewart Sutherland (right), with Steve Wallis, who received the QPA's premier restoration award on behalf of Tarmac Southern

planning – “operators need to build understanding of need and confidence in their ability to operate responsibly”

working time directive – “ we have to open a box of drivers that doesn't exist”

The cumulative impact of new legislation from Brussels and from within the UK was, said Simon van der Byl, a daunting prospect for already hard-pressed operators.

Asked if the industry faced any “nonsensical” legislation from Brussels, he responded: “In a word ‘yes’. We don't suffer from demands for rounded aggregates or anything like that but there is a huge array of new legislation coming out of Brussels. Something like 70 percent of new environmental policy comes from there.

“But we also face a huge amount of new legislation from Whitehall, Edinburgh, Cardiff and Belfast and, while it may not be in the same league in terms on nonsensicality, we do need to secure changes to some potentially harmful proposals.”

The association was particularly concerned about the new Water Bill and the Planning and Compulsory Purchase Bill (see pages 2-3), both of which had serious implications for its members.

The interview turned finally to **planning** and to the forecasts of demand, which will shape

government policy on aggregates for the coming years.

Simon van der Byl said that QPA had contributed during consultation and looked forward to the apportionment which would follow and which was vital to the future of its members.

Asked about use of recycled and secondary aggregates, he said it had long been QPA policy for such materials to take the lead role in satisfying demand. Their portion of the market had grown from around 10 percent 10 years ago to 20 percent two years ago, and was generally agreed that 25 percent was a realistic target.

“But that still leaves the largest chunk of the 250 million tonnes a year of aggregates which we need to come from primary sources,” he said.

“Our members still need to be able to gain planning consents at local level and to do that they have to build understanding of the need and confidence in their ability to operate responsibly.”



Planning minister Tony McNulty told the Showcase audience: “Even allowing for imports and recycling, there will remain a huge appetite for your products as we rebuild our infrastructure, improve our flood defences, build new homes and repair our roads.”



Nature benefits from the man-made Jubilee River

Flooded with relief

January's floods brought anguish to many people all over the country. But in the communities of Maidenhead, Windsor and Eton there was a sigh of relief that a £20 million Environment Agency scheme offered them additional protection from the rising waters of the River Thames. Four quarrying companies played a vital role.

JUBILEE River is the Environment Agency's biggest inland flood defence project. It looks and acts like a natural river but is entirely man-made. Its purpose is to augment the capacity of the River Thames in the eastern part of the Thames Valley.

Local residents knew that flooding could be expected every five to seven years. In Maidenhead alone, estimates were that 5,500 homes and 12,500 people were at risk. In 1990, severe flooding did affect 500 homes.

So, following approval from the Secretary of State for the Environment, work on a flood relief scheme started in 1995 and was completed by landscaping work last year.

"In January, the scheme saved over 350 properties in Maidenhead and a further 1,000 from flooded gardens or problems with access," said Peter Borrows, the Environment Agency's flood defence manager for the area. "It also operated successfully in February and November last year."

The Environment Agency awarded the £20 million contract to build the main stretch of the Jubilee River channel to Edmund Nuttall. Four quarrying companies – Lafarge, RMC, Tarmac and Summerleaze – joined forces as Eton Aggregates to handle the two million tonnes of sand and high quality gravel extracted from the site.

The partnership has now moved on to build a £10 million rowing lake at nearby Eton College. Once again, aggregate extraction is



The man-made river meanders around Maidenhead



Eton rowing lake will host World Championships

“an excellent example of co-operation within the quarrying industry for the benefit of the wider community”

the medium through which social benefit is being achieved.

As Summerlease managing director Peter Prior points out: “The coincidence that the flood relief scheme and the rowing lake were to be built at roughly the same time presented a serious challenge to our industry because 7.5 million tonnes of gravel had to be disposed of in a short period of time. We have managed to solve the problem by working together and this has also provided great benefits to the local community.”

Eton Aggregates chairman, Mike Saunders from Tarmac said: “These two projects are an excellent example of co-operation within the aggregates industry for the benefit of the wider community.”

The river flows along an 11.6 km channel, which is up to 50 m wide and 4.5 m deep. By taking a small but constant flow of water from the Thames, it has also created habitats and breeding areas for wildlife.

The Jubilee River looks and acts like a natural river, except that its capacity is controlled so that it will not flood.

Recreational features such as walks, picnic areas and fishing sites, all with full access for the disabled, were included in the plans. Site work on this project has also included construction of five road bridges, six footpath or bridleway bridges and several water control structures.

In order to reduce road movements, 800,000 tonnes of mineral was taken direct to the Summerlease processing plant at Bray along a conveyor which runs across a newly-constructed bridge over the Thames. The balance was hauled unprocessed along the line of the channel and directly onto junction six of the M4 in order to minimise disruption to the local community.

Meanwhile, the international standard rowing lake at Dorney is fast taking shape and is generating 4.5 million tonnes of minerals over the period to 2006.

The bridge that carries the material to the Summerlease plant has created a bonus for the community because it is also available as a cycle and pedestrian crossing between the Berkshire and Buckinghamshire banks of the Thames.

Royalties paid by the companies for gravel excavation offset the £17 million cost of the project, which is being borne by Eton College. That figure includes £3.8 million for the construction of a boat-house which has storage and repair facilities, plus kitchen and meeting rooms.

The eight-lane rowing course is well on the way to completion later this year and the site has already been chosen to host the 2006 World Rowing Championships.

It is not simply elite rowers who will benefit from the facility. The lake is available as a training centre to all levels, from beginner to high performer. The gymnasium, which can cope with 50 people at a time, is also available for hire to local groups.

There were significant archaeological finds during excavation work at Dorney. The remains of two timber bridges were discovered, one Bronze Age and one Iron Age. Both have been dated by archaeological experts at the British Museum using latest radiocarbon techniques. There were also signs of a Bronze Age cemetery and Middle Bronze Age cemetery and settlement.

Restoration rewarded

The QPA unveiled its latest restoration awards as part of Quarry Showcase 2003 at the Royal Lancaster Hotel in London. The following is a summary from a comprehensive brochure that can be viewed at www.qpa.org.

Cooper-Heyman Cup



TARMAC SOUTHERN

in partnership with Thames Chase Berwick Woods, Rainham, Essex

Since Tarmac inherited the virtually derelict site in the 1980s, 12,000 trees and shrubs have been planted to create a community woodland, existing reed beds have been enhanced and a pond created with a safe dipping platform for children. The site now has London's largest area of wet woodland. Some 2,000m of surfaced pathways and a bridleway have also been built. But perhaps the greatest success of the project is the level of community involvement and enjoyment it has achieved.

Award with special merit

LAFARGE AGGREGATES

in partnership with Lincolnshire Wildlife Trust, Lincolnshire County Council and Kesteven District Council.

Whisby Nature World, Leicestershire

Lafarge and its restoration partners have created a nature park of over 150 hectares, The Natural World Centre and the Lafarge Education Centre. Thousands of people every year derive enjoyment and education from these old sand and gravel workings which are a haven for nature. More than 60 species of birds breed at Whisby every year and many more visit.



TARMAC NORTHERN

Cheviot Quarry, Wooler, Northumberland

An old airfield that is being progressively restored following quarrying and now boasts the finest gliding facilities in the north east.

LAFARGE AGGREGATES

in partnership with Hertfordshire County Council, East Hertfordshire District Council, Groundwork Hertfordshire, Herts and Middlesex Wildlife Trust and the local community.

NEWS

New chairman

The Rt Hon Lord Sutherland of Houndwood has been appointed as the QPA non-executive chairman.

Lord Stewart Sutherland, who was appointed a life peer in 2001, recently retired from the University of Edinburgh, where he was principal and vice-chancellor.

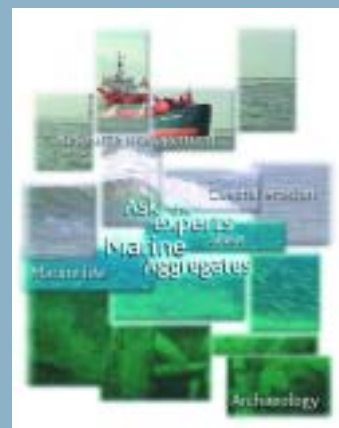
"The QPA represents best practice and this reputation will stand it in good stead for the many challenges that industry is currently facing," he says. "I am particularly looking forward to working with the association in response to the Government's review of mineral planning guidelines, tackling the issue of increasing regulation

from the EU and, of course, working to persuade the Chancellor to limit rises in the aggregates tax.

Meanwhile, Ian Reid, a former chairman of QPA and managing director of Lafarge Aggregates, has retired after 38 years in the industry. He played a key role in the establishment of the QPA and in pioneering health and safety and environmental campaigns.

Issues videos

The British Marine Aggregate Producers Association (BMAPA) BMAPA has produced a series of four *Ask The Experts* videos designed to make the industry's case on key issues.



Waterford Heath, Hertfordshire

A former sand and gravel site dating from the early 1900s that has naturally regenerated with some help from the various partners and enthusiastic community involvement.



HANSON AGGREGATES

Forest Rock Wood, Whitwick, Leicestershire

Restored from quarry to hillside using 360,000 cubic metres of fill material and then planted with 15,000 trees and shrubs to become part of the National Forest.



WOODHALL SPA SAND AND GRAVEL CO in partnership with Lincs Wildlife Trust.

Kirkby Gravel Pit Nature Reserve, Lincs

A reserve created by quarrying and consisting of three lakes and surrounding areas. Water levels are artificially controlled by a weir.



HANSON AGGREGATES

Brockholes Quarry, Samlesbury, Lancashire

A nature conservation area consisting of the first of a progressive series of lakes surrounded by new woodland and hedgerows.

TARMAC WESTERN in partnership with the Countryside Council for Wales.

Carmel Woods, Llandybie

Carmarthenshire An ancient lime quarry where substantial aggregate quarrying rights were given up to allow the site to become a country park appreciated for its natural beauty and geological wealth.

Ranging from eight to 13 minutes in length, the programmes are based around interviews with independent experts on the impacts of dredging:

- Dr Alan Brampton of HR Wallingford on coastal erosion
- Dr Richard Newell of Marine Ecological Surveys on marine biology
- Dr Antony Firth of Wessex Archaeology on marine archaeology.

The fourth video concentrates on responsible resource management. Copies are available from Richard Griffiths on 0207 730 8194.

Guaranteeing restoration

The Quarry Products Association has launched a comprehensive new commitment to the restoration of quarries in the UK. The QPA Restoration Guarantee Fund has been extended to cover all aggregate operations, including rock, and provides a £1 million



overall guarantee to planning authorities against restoration default. The fund, membership of which is a condition of QPA membership, commits to provide financial indemnity to planning authorities where a rock, sand and gravel or silica sand producer member of the QPA defaults on restoration obligations by virtue of becoming insolvent.

It is set up as an arms-length limited company and provides for a £1 million overall guarantee against restoration default with a single claim limit of £500,000.

The original fund covered only sand and gravel quarries operated by QPA members. While it has been in operation since 1975, it has never been called upon.



Tracey Taylor

Me & my job

Tracey Taylor is an area sales representative with RMC Aggregates Southern and is based in Southampton. She didn't know what aggregates were until she applied for her current role.

After leaving school, I gained sales and business experience with a tour operator before going to college to study for a BTEC national diploma in business studies at Colchester Institute. I then enjoyed a career in car sales up in Yorkshire where I won an outstanding achievement award.

When I moved to Hampshire, I decided to look for a company that could offer me the chance to work as part of a team and progress up the career ladder. I must admit that I didn't know what an aggregate was when I applied for the job but the company sounded interesting and the advert said that they were looking for someone with a lively personality who could work well in a team, which sounded right up my street.

I applied for the job and joined RMC in 1994 as an internal sales representative, based at our head office in Winchester.

I really enjoyed being part of a team, trying to turn enquiries into sales, passing orders to our shipping office along with carrying out various other office-based tasks such as filing and photocopying.

After three years in this role, I was given an opportunity to leave the sales office and spread my wings in the outside world as a sales representative in the Wessex area team.

Although I liked being based in the office, I wanted a chance to show everyone, especially myself, that I was capable of achieving sales targets and that I could succeed in what can sometimes be a male-dominated environment.

There are three of us covering the Wessex area, which runs from the Dorset to the Sussex borders. I am responsible for the profitable sales of aggregate within the central Hampshire area.

The team is supported by a sales and distribution team at our area office in Southampton and we all report to the Wessex area sales manager. Although we often work on our own, we have regular meetings to discuss sales, production and transport issues as well as career and training opportunities.

So far, I have passed the foundation award in sales and marketing management with the

Institute of Sales & Marketing Management and have completed a health and safety management course. I am currently studying for a City and Guilds in aggregates in construction.

My job is varied and no two days are the same. I am expected to call on any customer who is based or has an office in my area to maximise the sales potential for our company. I am also responsible for keeping up-to-date with all potential construction sites through from the planning and tender stages to when the contractor places an order.

As well as getting out and about, meeting customers and creating new sales leads, I also spend a couple of hours each day on admin – normally an hour in the morning and an hour at the end of the day to write out quotes, make appointments and follow-up existing quotes.

I love the variety that my job brings – one minute I could be up to my knees in mud on a building site and the next in a meeting with a senior buyer discussing major motorway or house-building projects.